

**U.S. Veterinary Immune Reagent Network**  
**Complete and Partial CDS for Cytokines, Chemokines, and Cell Surface Molecules**  
**September 3, 2008**

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## CATFISH

Start and stop codons are underlined. Probable coding errors are highlighted in red. Nucleotides in lower case indicate deletions with respect to reference sequences.

Header format:

**(Gene Name)**

(Complete/Partial CDS) (Clone ID if available) (GenBank Accession Number if available)

### IFN type I

#### Complete CDS AY847295

TGGACACTGACATGGACTGAAGGAGTAGAAAAACAAGCTCAACGAGCCGAGAACGCGAACATGGACAT  
CAAAGTGTGATGGATCTGTCTTTATTTTCTGCTGTTTTTCACCGTGCAGGAGCGAAGCGAAGCCTGCAAC  
TGGATGATCAGCCAGTACAGAGCGAAGAACGACTACTGTTTGTCACTGCTGAATGAAATGGGTGGAGA  
GATTGTTCCAATGACAGGAAACACCTCTTTCCCACGTCGGGCATACCATGAAATCGAGAAGGCCGAGGT  
ACAGGCAGAAGATCAGGTGAGGTTTCTGGCTGTGGCCACAAACGAGATCATCATTCTCTTCAGTGCTGT  
GTCTCATGTGGATGATGTAATAATGGGACAGCAGGACACTGGATAATTTCTGAACATACTTAGTACTCG  
GCAGTTATCAGAGCTTAGAAATTGTACATCAACATATGCTGAAAGAGCAAGACGTTTCATCCACTGAGAA  
AAAAGTGAAGAAACACTTCAAGGATTTGAGGAAATACCTGAAAAACTCTAACTACAGCGCAGACTCTTT  
GGAGCAAATCAGGAGTGTGGTACAGCGTCACCTTTGGAGGATGGACACAATTGCTGCCATTGTGAAGC  
AGAAACTACTGAAAAGGACCAACTAAAAAAAAATCCTTCTAGTTTTGTTAAAGAAGAACAAGCAGAACATT  
TAACCATATATGTTATTATTATTATTATCTATAAATTGGACCAAATATGGGAATATAAGAATATGAATCTG  
TAAAAAAAAAAAAAAAAAAAAA

### IFN type II 2a

#### Complete CDS DQ124250

GCATTCAGACTTTGACAGAGGCGCAGTGAGCACAGCAGTGACTTCAGCCAAAGAGAACCAACAGGTGA  
CGCGAAAAGACAACCTTTGTGTACGGCACTTGGGAATATCTGTGGGAATTTGGTAACAGGCTGAAACTTG  
CATAAGAAACGAATTATGACTCTGTTTTGGAGAATATGTTTTGTCTTTTTTGAATGATGGCGTACTCTGA  
GGCCTTCTCCCGAAGAACATCAAGGAGTCTATTGACCATCTGAATAATCATTATGTAAGAAAAAATCCC  
AACCTGGCAAATTGTACGATGGTCATTCTCTTCTAGACAAGCTAACAAAACAAAAGTTTGAGGAGA  
GTGAACAGAAGCTCCTGATGACTATTATTCTCGATGCATACAACAAAATTTTACCAAGATGGAGAATGA  
GACTCAGGATGAAACGCTGAAGAATCACTTGCACGAAGTGAAAGACCAAATGAACAAGCTGAAAGAAC  
ACTACTTCTCCGGCAAACATGCAGACATCAAGAAATATGTCACTGAGCTGCTGGACCTTAAGGAAAATG  
ACCCACGGATCCAGAGCAAAGCAATATTTGAGCTGAAGGCCGTCTACAATAAGGCAACGAACCTGGGG  
CGCATGTCAGCAGAAAACCCCGGAGACGACGTCAAGCTAAAAGCTCCAAAAGCAGCATTCATAACCA  
AAAAGCTCATTGTTAGATTGTTACCTAGGAGGTGCTTTAAGGTGTAGATTTATTTATTCTAATACAGTA  
CCTCATATTTTATATTTAGTGATACTGACATAATTTATTAAGTGTTTAATTCTGAATGTGTTAATTTATTT  
AATTTGCTATTTATTTGTGAAAGAATGTCCATCGTCTTATTTGGGTTTAGCAATTGTTTATTACTTGCTAA  
AGCAAATGTTGTAAGGTCTATGACTAAATAAATTGAAAATATTTATTATAAAAAAAAAAAAAAAAAAAAAA  
AA

## TCR alpha

### Complete CDS TA28 U58505

ATGTTACTCTTCTTCATTTTTATAGTTGTTAAAAACATTGCTACTGTTGACAGCAGCATTACACCAGATCA  
GGCCATCATATCTTCAAGTGAAGGCAGCATCACCACACTGACCTGCACTTATAATCAATCAGCTGACTCT  
CTCCATTGGTATCGACAAAAGCCTCAATCAGGACCAGATTTTCTGTTGCTAATTATTGTATCTTCAAATTA  
TGTCATTGAAGCTAAACAACCTGATCCAAGACTGTCTATCAGACTTCGTAAGGACAATAAAGTAGATCTG  
GAGATCTTTCCTGCTGCAGTATCAGACTCTGCACTGTACTACTGTGCCCTGCCTACTGTAGGATATGACA  
AAATTATCTTTGGAAGGGCGACAAAACCTGATAGTGCAGTCAGAAGAGAAACGGGAGCCGTCAATTTAC  
AAACTTCCGTCTGATGAACAAGAATACTGCCTGGCCACGCGCTTTACAGTTCACAATACTACCAATGGCA  
CTTGGCCAACTAACGAATACAAAGAAGATGCAGTTCGGTTTGAAGGCGAGGGATATTACAGCAGGCTTT  
TACGGAATATCAAGGACTGTCCTGAAAATGAGACCATGTGTGATAGTAGTAAGAGTGAAGATGGGGGT  
TTCAAATCAGATGCCAAGACCAACTTTTTGGGACTGAGCATCTTTTGTTGAGGGTTCTTCTTGAAGA  
CCATTGTGTTCAATATCTTGATGACGCTGAAAGTCTGGATGAGCTAGTGCATTTGAATTGGTGACACAAT  
CCCAAATTGGAAGACCTGGATGAATATTGTGCTGCCTATGTGAAGAAAGTGAATGTTCTGCATAACAT  
GACAACATGGTTGCTGAAATGCAATATTATACAATCTTTGTTCAATTAAGAAATAGTGCTTTCCTTTTTAT  
CTGATTAATAATACTTACTATTCAATAGAATTCAATTTTATTTCCATAACTTTTTATTTACACTTTGAA  
CAATAGACTTTTTCACAATGTACTACTCGAATCTAGACCTGTTTACTTTTGACTGTTTGTTAAATCTGAATT  
CTACTTTCAATTTGCCTGCATGTAATGTCTGTTTTTCTGTTTATTATTATTTTTACTCAGTGTTACTAATCCT  
CTCATTTTTTTCTTCATCTATCATTTATCATTTATATTCCCATATTGGCTCTTCCGCATAGGTATCTCACT  
GAAATCATTAAACAGATATGCTAAGATGCATGCACATGCATATACAATGTATGTGTTTTATATGTATAGA  
TCATTGTTCAATTTATTTAGGACTGTCTTTTGGCACATCAAATAAATA

## TCR beta

### Complete CDS TA18 U39193

ATGATCAGGATTATAATAATCTTTCAGTCACTTTACTGGATTCAAGGAGTTGCAGGGGCAAATGATGTCT  
TGCAGCCTGATATACTCTGGGCTCAATTCGGCCAATCAGTCACAATTAAGTCTCACACACCAAGGGTTC  
AGTTTACAGAGAAATGTACTGGTTTCGTCAGTATCAAGGAGAGAGTATGGAGCTCATCGTGTACACTAC  
CAGCTTTGGCACTCAAGACTTTGGAAAATCCGACCAAAGAAATTCTCAGCTATTAACAGTTCTCTGAG  
AACGGCTCATTACAGTGAAAGACGTGGATTATAATGACAACGCTGTGTATTTCTGTGCCGTGCGGGAC  
AGGGGGACTCAGCCTGCATACTTTGGCCAGGGACCAAACCTCACAGTTCTTGACCCAGACATGAAACTC  
CAAGCACCAACTGTCACCGTGCTAAATGTTTCAGAGAAGGAAGTGTGCACAAAGGAAAACGTCACTG  
GTGTGTGTGGCTAAAGGTTTTATCCTGACCATGTGAAAGTGTACTGGACAGTTGATGAGGTAAATCGT  
ACCATTGATGTTAGTACAGATGAAGCTGCCGTCCAAGTCTGACAAGTACTACACCATCAGCAGCAGA  
CTGAACATCGATTACAAGACGGAATGGACTAGAGGCCAAAACATTCACCTGTATTGTCAACTTCTTTAATG  
GGACAGGCATCAATTATAAGGACTCTATAACAGGACCAAACCTACGATCGACGAGGATAACTACGAAA  
CATATGTTTCGATCAGTGAAAACAACATATGCTGCGCTATGGCATGTTGTTGCCAAAAGTATTGCATACGG  
CATATTCATCATGTACATCGTTAGGAGACAGGGTTTTATGTGGAAGTAAAGGTGATGAGACTGGTGTGG  
GCATGATGGAGAGCTGCCATATGGTCACATGA

## TCR gamma

### Complete CDS TS32.17 DQ435303

ATGTTTATAGCCATATATGCTGTTCTATTCTTTGCTCACAGAAGCTGTCCTGGGAGTGCACTGGAGC  
AAAAAGATCTCTCCATGACTAAAGAGGAGGGCAAAGTGTGTATATAAGCTGCAAAGTGACCGGATTA  
GCCACCACTTATGTCCACTGGTATCAGCAGAAAGATGGTGAAGCTCTACAAGGATCCTATATGTCAGTA

GTGGAAGCAAACCTGTTTCATGATACTACCCATCCTGTAGCAAAGGACTTTGATGTGAGGCTACAAGCTG  
ATAAGTTTGATCTAAAGATAGCAAACCTGAAGAAAAGTCACTCTGCAGTTTATTACTGTGCCAGCTGGG  
AGTCAGATAGAAGTGGATACAGCTACAAAGTATTTGGATCTGGAAGTTCGACTTTTCGTCAGTATCCTGT  
GAAGGAACGGGTCAAAGAACCTCAAGTGTACGTGTACCCAGTGTCCACGCCAGAAAAAGGAGAAAAAT  
CTTTTTGCTGTGCCATGCGAGAGGCATGTTTCCAGACCTGGTGAGATTCACATGGCAAGCAAAGATC  
AGGGTGGAAAAACGTGGACCTGAGAGGTGATGAGCGGCTGGAGCAGAGAGACGAGTTCCAGAAGT  
CCGAATAACCAGCATGCTCATTGTAGGGAAGGACAAAGCAAAGAACAATAATTTTCATCTGCACTGTAA  
ACATGACAGCAGTGTAAAGACAAGGAATTACCCATTCCAAGAGAAGAAGACACTTCTAAGTCAAACGC  
TGGTGTCTTAATACCTGTCCAACCTCAAAAAGCAGAAGAAGCAGAAGAAGTGGGAAGAAGAAATCATGA  
ATTTTGGTGTGTTGAGCACAGCCGCGAGTCTGTACCTATTCAGTGTGACATACGTGTTACTGCTGGTGAA  
AAACGTGTTGTATTTTTGCACTGTCTTTGTCTTACTGTTCAAGAGAAATCCTGCTAAGATATAGATGATTA  
GAGTCAAAGTTCGCTGATCAGTCCATCAGCCAAAGAACACAACCTCAACACCAACTTCTTTCAGAATTA  
TCTACATGTATTTTTACTCTTAATTTTTAAATTCAAAACCTTTCACCTGGATTACCTGACAATTCATTTGCC  
TACCTTTTACTATTAATATTTTTTTGTGTTTAAACAATTTGAAGATTCTAATCATTTGCATATTTTTAAACGTA  
CGTCAGTTTGTATGCACAGTTAAGTTGAAACTTTCTTTCAACTCGTGATATCTTATAACCATTCTTTGTATT  
TGGTGTCTATAACAATTGGTTTATTAACGATGTGCTACTGTTTTATTAATA

#### **TCR delta**

##### **Complete CDS (in publication, Miller et al.)**

ATGTCTCAACTATACAACTTACTGTACATAGTGAGATACATAACCACTGATTCTCACTGTAACAAAAGGCA  
GTTTTGCAGATAAAATCTGGCCGACAGATGAAGATGCCAACATTGTCAGGCATGAAGAAGACACTGTTA  
CTTTGAAATGTTTCATATGAGTCAAGCAGTGAAAACATTTGGCTTTACTGGTACAAACAATATCCTAACAG  
CGCACCACAGTTTTTACTGTATAAAGGCGCAAGGTCAATAGTTCTGGGAGCACTCCTACTGACACTCGA  
TTAGAGACAAAAACAAGCAGAAACTCTACTGAACTTACTATAAGAGGTCTAAAGCTCTCAGATTCAGCA  
CTCTATCACTGTGCTCTCAGAGTAAAGGCATATATACGGGCTTTGGGGTTCGAAGCTCTGACATTTGGAA  
AGCCGATAACTCTTCGCGTGAACCAAAGGATGTGCCTAGGTCTTTCCTACTTTATCAATATTAACCTCT  
CATGACAGCAATGAGAAGCTGGAAATATGTCTGGCTGCAGGCTTCTTTCAAAAGAAGGCGAAGTATCT  
CTGTACACAGGTGACAATGTTACGCCTGAAAATCACACTGTTGAAAATGCTGCGATGTCCGAGCTGGG  
ACTTATTACTATGCTGCATTTTCAAAGATGGAATTAATAAATGTGCAATGAAAGATGTTTCCCTTGATA  
AAAACGATGTAAAACCCACAGCACAAATCCCATCCTGTGACCAGAACAGCACTCTCGGTATCAGTACTTC  
TAATAATCTGACCAGTCCAAACAAAATCAAATTTCTGGTATCCTAAGGGGAACACCATGCTTTTGATT  
GTGACTGGTCTCAGACTTCTGTTGGCTAAAGCAGTTGGTATAAATATATTGATGACAATTAAGCGTTTC  
TTGTCTAAAGTTAGACAAGTCCAGAACCTTCCCTTCAACCTTCTGCCTAATCTAATACTGCTGATATCAA  
CTACACAGCAAAACCTCCAGTAAATTAACATTTATGCTGTTTATATAAGTCTAGATGGACAGAAATGAAA  
GCTGTAGACAGTTAATTTCAAATTGTAAGTGTTTCATAGGTGTTTCATTGACATTTCTAAGAAAATAACAT  
TTTATGTTTTTGAAGCTTATTTCTGCGTTCAAATTTCTCGGTTTGATGCATAAA

#### **IgD**

##### **Complete CDS M5 U67437**

ATGATGTTAGGACATTGTATTTTATTTCTTCTCATTTTCATATTCTTATGGACAGTCCCTGACCTCCTCTGCT  
TCTGTGGTGAAGAGACCTGGAGAGTCACTCACTCTGTCTCTGACTGTCTCTGGATTCTCAATGGGCAGCA  
ACTACATGCACTGGATCCGTCAGAAACCTGGAAAAGGATTGGAGTGGATCGGGCGCATTGACCGTGGC  
ACTGGCACAACATTCGCTCAGTCTCTGCAGGGCCAGTTCTCCATCACTAAAGACACAATAAAAAACATGC  
TGTACCTAGAAGTGAAGAGTCTGAAAGCTCAAGAAACGGCTGTTTATTACTGTGCAGGAGAAAATATTG

TTATGACTGGGGGGGAGACTGGGCTTTTGATTACTGGGGAAAAGGCACAGCTGTCACCGTAACCAGC  
GCTGTGCAAAGCGCCCCGAAATCCCTGTTTCCCGTGTGGCAGTGCGGCTCGGCCTCGGACGTTTAGTC  
ACTCTTGGCTGCGTCACGCGCGATTTGGCCTCCGCCGACGGTGTGAGCTTCATATGGAAGGATGCGAGC  
GGGAGCGCGCTGACTGACGTGCAATACCCGCGGTGCAAGCGACCGGAGGGTACACCTCGGTGA  
GCCATGTGCGCTCAAGGCTTCTGACTGGAACGGGAACAAGAAGTTCACGTGCGAAGTCAAAAATGGC  
CTAGGATCTAAAGACGCGTCCTTGCAAAGCCAGCTCAGCGTGTGACTGAGCCCAACATCACCATGAGC  
ACCAATACAATGGACAACAACGTTAATCTGCTTTGTTGGTTGGATGGTTTTCTCCGAAAAAATAAGTG  
TTGAGTGGTACAAGGGTAATACGTTGCACACAAAGAAGACAACCATGAAGATATTCGAAAGTCTCAACA  
ATGGAGAAAAGACGTTTGGTGCCTGAGCCAACTCAGCATTAAATGCAGAGCAATGGAATGAAGGCACA  
GAGTTCACCTGTAAAGCCACACACATCTCCAAGATCTTCAGTCAAACATGGAGCAAGTGCAAAGCTGAA  
CCAACATCCAACCACTGATACGTCTGGAGAAACCTGGTCTCATGTCAGTATTGACAGATTCAGAAGTAA  
CAGCTTCTGTGTTGTTGAAACTGTGCACAATACCAAAGTGCATGGTTTGTAGATGGAAAGGAAAAA  
CAGACAGAGTCACCTTGAAGACTGAGCGGAGAACTGTTAGCAACCTGACTATCTCGACAAACGATT  
GGAAAACTGGCAGACAATAAAATGCACCGCTGCACATCTATGTTTTGGCACAGTAGAGAAGACAATTA  
ATATTCTAGAACCTGTGCAGAAAACCTACAGTGGTGATCAGGAGGAATCTGGCAGACATACTGAAGG  
GAGACAGTGCAGTACTGGAGTGTGCTGCAAGAGATCTGCCCTCTGGTGGAGCTCTCGGTCATCTTACAGG  
CCAATGGAATAAGGGTCTTTGAACCTCAGTATGTGGATCTGCCAAAGGAGTGGACACTCTGACTGCAC  
GCTTCACTGTTTCCACAACACAGAGAAAACAAAACCAACGGTTCACCTGTCAGATTCAGCAAAGCCGTTT  
CAAACAGTGGACGTCCAATTCTATAGAAAACCTTTTTGGTGACCCTTCAGTGGAACTTTTAGTTATTTCCA  
GTGTGGATAAATCTGCATCAGCGACACAAAACTTATTTGCGCTGCAACTGGACTTAACCCAAACATAAA  
GTGGCTCCCTGAATCTGTAGTAAATGCTCTCAATGGTCTCAGTAAAGTAACAGTGGATTACAGATGGACG  
TGTGAAAGTGTCCAGTGAGATTTAGTTCACAGCAACAGTGGAAATAATAGAGTTACATTTACCTGCCG  
AGTCAGCGATCAGGATCCTCTGAAACCAGTTGAGAAGAGCACCAGTATTTGTGCAGTGAATCCAGATTT  
TGCTCAGAAGGCACAGGTTTATCTGTTGGCTCCCTCCATCAGTGACATGAGAGCAAATCATGTCTCTGTC  
ACCTGTCTGCTATTGCGCCACAGGCTCAATGACTTCTCGATTGTTTGGAAAATAGGAAAGGACAACACCT  
CTCAGGTGGTGACCACACAACCTCTCAGAGTCCACAGCAATGGAAGAGAGAGTGTCCGAAGTATTCTAA  
AGTTCCAGCTAGAAAGTGGAAAGGCATACACAACCTGTTTCTGTGAAGTGACACACCTCTGCTCCACCA  
CAAAAATGGAGCACACCATCTCTAAAACCAGAGACCGCAAAGTCCCACCGTCCGAATTCTCAGTCCTA  
GCGATGACGATCTGTCAGGAGTTCGCAACACAAATCTTCTCTGCTTGGTCGACGGCTTCCGCCCTGCTGA  
TATCTCTGTGCACTGGGAGCTGAATGACAGACAGCTGGATGCATCCAAGTTCATCAACAGTCCAGTCGG  
CAATGCCTCTGCGTTGGGTGATTATTCCATGCACAGCGTACTGATATTACCAGCATCAAAAAGAGAGAA  
CAGCACTTTTTCTGTGTGGTCCAGCAGTCACTGAAAAGCCAATCAGGAACTCGATTAACAACGTA  
TACGCCTCTGTGACTGAAAATCGTCCCTCTGTGGTGTGCTGCAGGGTCAAATAAACTGGTGTGTCTGG  
TGTACGTTATAGCCCTCAGCTATTAACATCACCTGGCTCCTAAATAGTGTGAGTGTACAGCATGACAA  
CAGCACCAGAGCTCTGCCAAAAGGCCTGATGGGAAATTCAGCATTAAAAGCCATCTGAAGGTCCAGGC  
CTCTGAATGGGCACCTGGTGACACTTACACTTGCCAAGTCAAGCACATCACTGGCATCGTACTCGCGAC  
ATCTCCAAAAAAGAATTTACTGAAGAGACGATATACTTTGATGAGAACACGTCTGAAACTAGCACACTG  
GATCAGGCTGAGGAAACCTGGAACATGGCCTGTGCCTTCATCATACTCTTCGTCATCTCTCTCTCTATGG  
ATGTTCAAGTACTCTGGTCAAAGTGAAGATTGCTGATCAGCTGTTTAGGGCACACCGTTTAGAGTTAG  
ATGAAGACTTATGTAATGCTTTATGGCTGTATTTTTTAAACAAATTTTTTTTTTATTATTTTTAAGTCGAT  
AAAAGCAAGTGAATAAAAAGAGGAGTAAAAATAACTTGTACTTGATTATTTTCTTACAGCTGTTTTTC  
TTTTTAGTCTTATTCAAATCAATGATATATATTCAAACACTATTCATTAATTTAATTACATTTGTATTATGA  
ATGTTTTTTTTAATCTATTGTTAACAGCAATGCCAGTATACTTCTTATTATTAATTATCACTATTTACCAG

ATGATGGAAACATCTCAAGTTTTCTAATCAAATGTAATATATGAATGAATAAAATAAAATTAATATACA  
CATTCAATAAAAAAAAAAAAA

**CD4-1**

**Complete CDS DQ435301**

ATGAGCTTCTTATTGGGGTTATTGCTTCTTCTGGCTCCATGTCACCTCAGCTGCAGATGAACCAAAGGGGA  
TTTTTGCACAGTTCGGAACTCTGTTACTCTTCCCAGGAGGATATGGGGGATAGAAGGCCAAAATTCATGT  
CAACTGGTACTTCCAGGATAACTTACTAATTAGTAGGAATCCTACATTATCCGCTTCAAAAACAGTGCAC  
AACCGATTCTCTTTTCATCAGACTCATCTCTTATYATTTCTAATGTTGAAAAGTCTGACTTTGGAATTTTC  
AAATGTGAACAGCATCACCTTGTGGAACTATTACAGACACATATAAACTTTATGAAGTAATGATGTCTA  
CACCGCCACCACTGCTGGTTGGTGCCAGTCTCGATCTGTCCTGTGAAATTGAAAGTGAAGGATTTAACT  
TGTTTCATGAAATAAAATGGTTCCGGCCTGATAATACATTGTATGTCGGATCATCTTCTTCAACCAACGC  
ACTCTCAGGGTRACCAAAGTCTCCAGCATTACAGTGGAAAGTGGACCTGTGCAGTGCAGGTATGGTGTCT  
AGCATCACATTAAGGCCAGAACAGATGTCATCATTGTAGATCTCGCCTCTCTTACCAGGATCCCATCT  
ATACATCTGACTCCTCATTAAATTTCTTATCCCYTGTTCTTATCCTCAAAAATTCCTGGTCCACAGTGA  
ATGCCACAGGTGTGACGGGAGGTAGCTGGCATTTCCTCCATTTAAATCTTCTGAATCCTCGCTCCCTCTC  
CTCAAAATACAACCAATCCCTCCCTGCCTGGAAGTTCCCAAGTGGCACACACACCTTGCTCATGGAGA  
CTGATTTGAAAAATCATGAACTCGGTGTGAAGATTTCCAAGGTGTCTATAAATGAAAGGGGGAACTACA  
CCTGCAGTCTCGAGTTCGGGTCAAGAACACTCAGCAGGAGCGTGCAGGTAGAGGTGCTGCAAGTTATTT  
CTTCAGAAGGTAAAGTTATATATGAGGGTAACACAGTGAACCTTGACCTGCACGCTGGGTTCATCATGA  
CCCCTGACCTGGAAGTGAACCTGGATACCTCCCTATGGTTCATCTCTGTCAAACTCAGCCCTCCTTATACC  
ACAATGCTGTCTATCCCTGGAGTAAGTGTGAAGGACAGCGGGCGATGGACATGTCAACTCAAAAAGAA  
TGCAACATTGCTTACATCAGCTACAATCAGTTTGAAAATAGAGAAAGCTCCAGTGAATATTTGGCTTGTT  
GTAGCTATTATTGGTGGTCTTCTGGTCTTCATCTTGATTGCTGTAATAACTGTCTTCATCATTGAGGCA  
CAGACAGATGATGAGGTATAGATGCCGTAAGGGGAGAGTCTGCTGCTGTAAGAATCCCAAGCCCAAG  
GTTTCTACAAGACCTGAATGAAGCCTCTTCTTGAACAAAGGAACCTGCTGGACTGAAAAAGCTGGAGTC  
CCACATCATAAATGAAGCTTGCTGAGCTGGAGTTTAAAAAATCAAGACAGTAGAAACAATTCACAA  
AAAAACATGTAATAAACATCAGTTACCAGAAATGACTGTATCAAAAACAAGAAGACGTCATGTAATGC  
ACTTCCTTTACAGCTGTACATACATAAAAGCTTGGTGTAATATGTGCTTAGTATAAAACAGTATGAAACA  
GTACACAAAAACAGTATGATAAACATTTTATTGAATATATATATTTTTTATATATAATCATATATTATCA  
TTATAATATCACATAATTCATATTATTAGATTATTTTATATTTTATATACCAAGAAATTCATATACTTAGCTATA  
CATGCAGCATACTCTATGTGCTTAGCTAAACTGATAAACTGATGGATRTATATGTGAGTGTGTTTAAAGT  
GTGTATTCTGTGTAATAAATATTTAAAAATATTTTAAAAAAAAAAAAAAAAAAAAA

**CD4-2**

**Complete CDS DQ435302**

ATGTTTAGGTCTAAAAACATCCTTTGGATCACCTTTGCTTTTTGTTAACCTCAGGAAGTTGTACAGACAT  
TTTTCAACAAAGTGGCAGTGACGCAAAAATGGACTGTAGTGGTGGGGATCCGAAAAAAGCCATAGAAT  
GGAAACGCGGCAACGTCCTGTTGATAGGCAAAGCCCATCAGGAACAGTGCAGAGGTATAATGGAA  
ACTACTAGCAGGGCACGGATAGATGGAACCACGTTGAAAATCACCCAGCTGAAGACTAGCGACAATGG  
AGTCTACACATGCAACTCATATACTTACAACTGTATGTTGTATCAGCCTCTGCGAACCCATCTTCAGTTC  
TGTAICTGAGTGAAACCACCTAAGCTGTGATGTTGCTGGAGACTTTAAAGGAACATTTAGTGGCTTG  
AATCAGGTTCTAAACCATATAGCCAAAGTAGGGAGGTGACTGTAAAAAATGTGACCTCAGATACTGCAA  
GAATCTGGACCTGCCTGATCAAAAATGAAAAGAGCAAAGAAATTATTAGGCTAGACGTGAACATCGGT

GTTGTTGGTCCTTTGAACACACCAAGGGAAGTTAAGACTCATGAAGGGGGCAGTGCAGTGCTCCCGTGT  
TTTCTACCTACCAAGAGCCAACCTGCCTATAACCGGGGGCTCATGGAAGCGTGAGTCCCCTCTGACATCC  
GCTTCCCTGTATTAATGAGGAAACAGAATGCTGTCCAGTGGAATAGCACTGATGTCAGCATTGATAAAG  
TCACCTTCACTGAACAGGAAGTGATGACAACTTTAGTGTGACACTGAAAAAGGTGAAGGTTGCTGATG  
CTGGTGTGTATGTGTGCAGTCTGAAGTTTGAAAATGGGAAAGCTTTGACTTCTTCGTTGAATCTGACAGT  
TTCAAAAAGGGATGGTGATGATCCTGATATGGATTCTAGAGTTCTACAGTAACGAAAAACAACATGTG  
GAACAAACGTGTGTGGGGTATGCAGTTGTGGGTCTGGATTGCCGTGTCAGCATCTTCTTTTGTCTGATT  
GGCCTTGTGTCATCATTCTACTGATTCACTGCAGGAACAAACGGATGAAGAAAAAGATGATGAAACTG  
AAGTCTATGAGGCAACCCATACATCCAGGAATTACTGCAAGTGTGACAGGCCTGTGAGCCAGGCTGGT  
ACAGGTAAACGAGGCCCGCCTCCACCTTACCCAGGCACCAGTACAGCTCTTTAAATGAATAATGGATC  
AAAATGGAGTGGAGGACAATAACAGGAGATAATAGAGTTTCAGATCCACCAGGAAAATGCTGATCA  
TAACCTGTATATTTTCACTTACATTATCTTTTTTTGTTGTTATTCTTTGATTTGAATAATATGGAARCA  
TTTTAATAACCAAGAATAAGCACATCCTTTGCTGAGTTTTCTWCGTCTGTAATTTGTAATAAGATCTTT  
TTCTGAAAATGTTTTATGAAATTTAGGTTTGCATAACTAGAGTTTCACGTTTTACATTTGCTTAACCTGAT  
TTAATGTATGTTCAATGTTTGTTTTTTTCTTACTTTAATTAACATTGAAATCCAAAAAAAAAAAAAAAA  
AAAAAAAAAAAA

**FcRI**

**Complete CDS DQ286290**

ATGCACTTTTTCCACATCTTCATCGTTTTTATAACATTGCTTGCATGTGTCAGGATGGATGATATAGATCC  
CACACCACCCCAAGTCAAAGCCAAAGCCACAGTGAGTTTGGGAAAGCCGCGGCTGTTCTCAGGGGAAG  
ATGTGCAGATGACTTGCAGTGTCCAGATGACCCTTCATCCAACCTGGACGTATGAGTGGTTCCATGATG  
GTGAACTCTTGAGCGCCACAGAAGTGTACAGTTTAAACAAGGCACAAGTCTGCAAAGTGGAACTATA  
CCTGTAAAGGATTGAAGACGATAAAAGCTTGGCCCTATATAGTGCCATCAATTCCAAGCGACCCTCTTAA  
AATACATGTTGATGGTGGTTGGTTCTCCTACAAACCCATTTGAGCCATTAATTATTGAGGAAAACATG  
ACTCTGACCTGCCGTGTCCGTGATGACCCCTCCTGTCAAATGTGATCTTCTACAAGGATGGGGTGGAGT  
TCAATAAGCAGAAAGGCACAGATGTGGTGTTCACCAAACCTCACGCTTGAGGATGCTGCCATTTACTCAT  
GCAGGGCCACATGGATTAAGAACATGGAATATCAGTCTTCCAGTCTCTGCCTTCTTATGTGACTGTATT  
AGATATATTGGAAACACCCACGATGACGATTGTCCGAGGTCCGGGTAGAGTAAGGAGTGGGAACAAA  
GTGGAATTGAGATGTATTACCAAAGTAAATGCTAGAGAACAAGACCTGAATATAGAATACTTCTACTTAA  
AAAATGGCAACAGGCTAGGACCTGCTTCTGCCAGAGACACATACGCCATCTCAGAGGTGAACATAAATC  
ATACCGGAAACTACACCTGCAAAGTCCGTATAAGGGCTCTGAATGTGGAGCGGTGGAGTAACCAGGTA  
AACCTGAAGTCTGCCTCCTCTGAACTGTAGACCTTGGGATGTAAGTTTCTGAGAGCCAGTGTACCAA  
TGCTCCAGCCCTGGAATGCACGAAGCAACACAGCTATTCAGCTATCATCCAAGTTCTTCACTATTTTAGA  
ATACTCTTGCAATTGTTCACTGTTTTCTGCCTTTCTCCCATCCATGTGATCACAATTCTGACCTTTAAACGTA  
TGTTATATACTGGATTGATGATGCAAATTATATTTTGAATCTGAGAACTTTTATACTTTTTATTTTCACTTT  
ACAAGAACAGAGATATAACCCTTAAATAACAGTTTTCTATTTGATTTGAATACATATGCATGATTGGCTTA  
TTTAAATCTTAAAATGCAATACTATTTTACTTTGGAACTATGTGTAATAAATGTTTTTTTTGTTTTTTTACA  
ATCTATCAATAAACACATGGAACACATGAAAAAAAAAAAAAAAA

**LITR2**

**Complete CDS AY885644**

CAAGATGGAGCTCCGTCCACTCCGTGTGATGATCTTGCTTATTTCACTTATCCGAGTCGGACAAGCTCAA  
GAGTTTAAACCAGTTCTGTCTGTGGAGCCGAATTCACCACAAATATTCAGAGGAGCGACGGTTACTCTC

ACATGTAGGATTTTCAGGAGGAAATAGATGGTACTACTGGAGCAAAGATGGTGGTTATAGTCACACATCT  
TCTGAAAATTTCTACACTATAAAAGTAGATCAGAGTCACAAATACAGATGTTATGGGTCTATTGATAAAC  
GGCAAACGACACTGAGTAATGAAGTGAAGTCTCTCAGTGATAGAGGCCGTTCTGACTCTGCAGCCTGATG  
GACAGATATTCAGTGGACAGGAAGTCACTTTCACATGTGAAATACGAGGACATGCAGACACTGAGTGG  
ATGTACAACCTGGTATGAAGATGGTGTAAATATCCGTCTACACTAAGAGTAGGCAATATTCATTCACGC  
CTGTAGAGTCTCTCAGCACTAAATACACCTGCAGCGGACAGAGAAGAAGCGACTCTCAGACCTCAGAGA  
CCAGCAACACTGTTACACTCACTGTGTCAGAAAAACCTAAACCTGAACTCACATCAAGTCGTGAAGGAG  
CTGTACTGAAAGGAACCTCAGTGAAGTCTGTCTGTACACTGAAGCCGCAGTCTGCTGGATGGAAGTTTTA  
CTGGATCAAACCCACACAGAGCACTGAGACTGAGACTGAAGCTGAAACAGACTACTACACTAAAACATA  
CAGCTCAGTTAGTGTCTCTGATGAAGGTGAGTACAGGTGCAGAGCTGGAAGAGGAAACCCAGTCTACTA  
CACACACTACAGTGATGCACTCTGGGTAAATGTTACTGATGTAAGCTCCACTGTCTGGTACTGAAGCTC  
CTCAGCAGTGCAGTAGCGCCTCTCCGTATGTGCTGGTGACCATCATTCTGGCAGTGAATGTTACAGA  
GCTCGAACTGACCCTGACGAGGACAACAGACCGTACAGAGTGATAGAAGCTGAAGCGTCTGTCTGAGT  
CTCAGGTTTTACATTATTTTTCATCATCTAGCTTTTAAATAACAGCAGCTCCCCGTGCAAATGAAAACGC  
TGCATTCAGCCTATGGAGCTGTGAGGTGATGAACGAAGGACTCTGACCCGAAGACTCGAGAGCAGGAG  
GTGAGATGAACTAACAGACTGTATAGCCTGAGGACCTAATGCTAAGCTATTAATGAATGATTTTCAGTTTC  
TCATAATTTGGCCTTAGCTGCATTAGCCTATAGTTTATTTGTTATTCCAAATGTGATCAATGGGGAAAATT  
GTTGATTGTTAATGCACGAAGGTTAGGTCAAAGTAACCATGAGACTTGCATGGAAGTGGAGATGCTGCC  
ATAGCTAATATTGTCTTAACTTTCTTAAACATTTTTCATGATTTTCATGATTTTTCTGCACTGTTTCTGTGACA  
AACTGCACGACTAGACTACTTTCTTTTTCCCACTGTATTAAGGCTATGTAAGCTATTTGTTAATTTCTAA  
GTCATATGTGATTCATTAATGTAATAAAGTGTGCTCCTAATATGCTCTTTGCTTTTAAACGTGAGAAGTGA  
GTTGCCCTGCAGGTGTGATAATGAAAACCTAATGATGACCTAAAAAAAAAAAAAAAA

## **NITR10**

### **Complete CDS AF397463**

ATGATCACACTCTTTGTCGCGCTTTACTCTCTTTTTCTCTCTGCACAGCTGTAACAACCTTCTGACATCAAG  
GAGCTTCATGTGAAAACAGTAAAGCGTGGAGAAAATGTAACCTATGGAGTGTAGCATGAGCAAGGTCAA  
AGACAAAGATAAGTTAGCTTGGTACAGACAGAGTTTTGGAAAAGTTCCTCAGTATTTTGTAAAGATATTAC  
AGCTCTAATAGTGGCTACAAATTTGCAGAGGGATTTAAAGATAGCCGCTTCAGTATGACTGTAATGAC  
CAGAAGTTTGATCTCAACATTATCGGAACGAGAGAAGATGATGGAGGAGAATATTTCTGTGGAGAAGT  
GGAGGGAAATACAATAAAGTTCACATCTGGAACACGTCTGCAATTTGAAGGTGAAGAGATGAAACACT  
GTCCTACACCTGGAACGGTTAAACAACAACACAGATTCTGTTACAGGGTCCAATGAGGGTTCAAAGAGCA  
GTGATGGAGAAGGTTCCAGTTGACTGATCAGATGCATGTGCTGGTCTGGCTCTCCATTTTTAGAGTTGG  
AGTTCTTGCCTTCATGCTTCTTATCTTTCCAATAATCCTGATTGTTTTCAAATTAAGATCAAATAG

## EQUINE

Start and stop codons are underlined. Probable coding errors are highlighted in red. Nucleotides in lower case indicate deletions with respect to reference sequences.

Header format:

**(Gene Name)**

(Complete/Partial CDS) (Clone ID if available) (GenBank Accession Number if available)

### CCL2

**Complete CDS TH295 EU438774**

AAGCCAGAAACCAACAACCTCTCAGGCTGAAGCTCCCATCCTTACCCTCCAGCATGAAGGTCTCCGCAGCC  
CTCCTGTGCCTGCTGCTCACCGCGGCCCTTACGACCCAGGTGCTGGCTCAGCCAGATGCAATTAATT  
CTCCAGTCACCTGCTGCTATACATTACCGGTAAGAAGATCTCATCTCAGAGGCTGGGGAGCTATAAAA  
GAGTCACCAGCAGCAAGTGTCCCAAAGAAGCTGTGATCTTCAAGACCATATTGGCCAAGGAGATCTGTG  
CTGACCCCGAGCAGAAGTGGGTCCAGGATGCTGTGAAGCAGCTGGACAAGAAAGCCCAAACCTCCAAAG  
CCTTGAACACCTACTCCAAAAGCCAAGATTC

### CCL3

**Complete CDS TH337 EU438775**

ACTCCATCCGCTCAGCATCATGAAGGTCCCCGTGGCTGCCCTTGCCGTCCTCCTCTGCACCATGGCCCTCT  
GCAGCCAGGTCTTCTCTGTACCATTCGGTGCCGACACCCCAACTGCCTGCTGCTTCTCCTACGTCTCCCGG  
CAGATTCCGCGCAAATTCATAAACGACTATTATGAGACCAGCAGCCAGTGCTCCAAGCCAGCCATCATCT  
TCCAAACCAAAGAAGCCGGCAGGTCTGTGCCGACCCAGTGAGGCCTGGGTCCAGGAGTACGTGACC  
GACCTGGAGCTGAGCGCCTGAGTGGCCAGTGACCTCGGCAGGCTGCCTGGAGCACAGGGCTGGGCCTT  
AGAAACAGCCTCGTAACCT

### CCL5

**Complete CDS TH360 EU744564**

ATGAAGGTCTTCGCAGCTGCCCTGGCGGTCATCCTCGCCACTGCCACCTTCTGCACTCCTGCATCTGCCTC  
CCCATATGCCTCGGACACCACGCCCTGCTGCTTTGCCTACATCTCCCGCCACTGCCCGCGCCACATCC  
AAGAGTATTTCTACACCAGCAGCAAGTGTCTATACCAGCAGTCGTCTTTGTCACCCGAAAGAAGCGCCA  
GGTGTGTGCCAATCCAGAGAAGAAATGGGTGCGAGAGTACATCAACACTTTGGAGATGAGCTAG

### CCL11

**Complete CDS TH419**

CCAGAAACCAACAGCTCTCACGCTGAAGCTCGCGTCCTCGCCCTCCAGCATGAAGGTCTCCGCAGCCCTC  
CTGTGCCTGCTGCTCACACGGCCGCTTACGACCCAGGTGCTGGCTCAGCCAGTTTCTATCTCGACCG  
TCTGCTGCTTTAACGTGGCCAGTAGGAAGATCTCTTTTCAGCGACTGCAGAGCTACAGAAAAATCACCA  
GCAGCAAATGTCCCCAGAAAGCTGTGATCTTCAAGACCAAACAAGCCAAGAAGATCTGTGCTGATCCCA  
AGCAGAAGTGGGTCCAGGATGCCATGAAGTACCTGGACGAAAACCTCCCGAACTACAAAGTATTCATCTT  
TTTGAGACCAAATCAGAGCCAGAGGAATGCCTGATTCATCTTCCCTGCTCTT

**CD40****Complete CDS AY514017**

TCACCTCGCCATGGTTCGTCTGCCTCTGCAGTGTCTCCTCTGGGGCTGCTTGTTGACCCCCGTCCATCCAG  
AACAAAGCCACTGCATGCAAAGGAAACCAATACCTATCTGGCAGTCACTGCTGTGATTTGTGTCCGCCAG  
GAAAGAACTGGTGAATGACTGCACAGGGATCACCGAAACAGAATGCTCTCCCTGCGGTGCAGGCGAA  
TTCCTAGACACCTGGAACAGAGAGAGCCGCTGTCACCAGCACAAATACTGCGACCCCAACCTAGGCCTC  
CAGGTCCAGGGGACAGGCACCTCAACAACAGACGCCACTTGATATGTCATGAGGGCCAACACTGTTCC  
AGCGATGCCTGTGAAAGCTGCATCCTGCACAGCCCGTGCGCCCCTGGTCTTGGGGTCAAGCAGCTCGCC  
ACAGGGGTTTCGATACCGTCTGCGAACCCCTGCCAGTCGGCTTCTTCTCCAAAGTATCATCTGCTTTGG  
AAAAGTGTACCCCTTGACAAGCTGTGATACCAAAGGCCTGGTGGAACTACAGGCAGGGACTAACAAG  
ACTGATGCTGTTTGTGGTTTCCGGAATCGGATGAGAGCTCTGGTAGTGATCCCCATCACGATGGGGGTC  
CTGTTTGTCTGCTGTTGCTGTCTGCCTGTATCAGAAAGGTGGCCAAGGAGCCAGAAAATAAGGCCCTC  
CATCGTAAGTTGGATGGCAGGATCCTGTGGAGACGGTTTATCCGGATGATTTTCTGGACCCCACTCC  
ATTGCTCCGGTGCAGGAGACCTTACATGGGTGCCAGCCAGTCAACCAGGAGGACGGCAAAGAGAGCCG  
CATCTCGGTGCAGGAGAGACAGTGAGGCTGTGCGTGTCCAGGAGCATGGCAGCGCGGGCCAGTGGGC  
ACGTGGCGGGGAGCTGCGGCTGCGGTTGAGGGCGAGGAGCTGGCGCCGGGCATATCCCCGGTCTGCC  
TGCACCCCTGCGGTTCAGAAACAGTTCACCTCGGAGAACCCCCGCCCTGGAGCTCATTGATCTCCCAAC  
TTGCTTTTAAAGATGGAGGCAAACCTTCTTGGAGGGCCGTATAGTAACAGCCGCCAAACCTCTCACGC  
AACAGGACGTCTCATCGTGGTTTCTGTGAGCCCACGGAGGCATATATACAAACGTCCAGAGCAGCGTGT  
TTGTGAACAGCTGGAACACTCACTGAACTGTCCACCAACAGGGGACTGGCTAAATAAAATTATAATATTT  
ATACAACGGGATCTCAAAAAGTGTGGGAAAAAAAAAAGCAGGTTGCAGAATGATGGGTACGGAAAC  
TTTTTTTTTAAAGCTTATACCCCAATACAATATGATATTATTGTT

**CXCL9****Complete CDS TH351 EU438776**

ATGAAGAAAAGTGGTGTTCTTTCTGTTTGGGTATCATCTTCTGACTCTGATTGGAGTTCAAGGAGCTC  
CAGTAATGAGGAAGGGACGCTGTTCTGCATCAAGACCAGCCAAGGGACGATCCGCCAAAACCTGTTA  
AAGGACCTTAAACAGTTTCTCCAAGCCCTTCTTGTGAGACAACCTGAAATCATTGCTACAATGAAGAATG  
GAGACCAAACATGTCTAAACCCAGATTCAGCAGAAGTGAAGAATTAATTAAGAGTGGGAGAAACAG  
GTCAGCCAAAAGAAAAGCAGAAGAAAGGGAAAAAACATCAGAAAACCAAGAAATTTCCCAAAGTTAA  
AAAATGGCAACGTCCTCGTCAAAGAAGGCTACATAAA

**CXCL10****Complete CDS TH345 EU438777**

ATGAATCAAAGTGTGTTCTTATACTCTGCCTTATCTTTCTGACTCTGAGTGGAACCTCAAGGAATACCTCT  
CTCTAGAAGTGCACGCTGTACCTGCATTAACATTAGTGATCGACCTATTCCTCCAAGGTCCTTAGAAAAA  
CTTGAAATGATTCCTGCAAGTCAATCTTGTCAACGTGTTGAGATCATTGCCACAATGAAAAAGAATGGG  
GAGAAAAGATGTCTGAATCCAGAGTCCAAGACCGTCAAGAATTTACTGAAAGCAATTAGCAAGCAAAG  
GTCTAAAAGATCTCTCGAACACTGAGAGAAGTATAAA

**GM-CSF****Complete CDS TH308 EU438778**

ATGTGGCTTCAGAACCTGCTTCTTCTGGGCACTGTGGTTTACAGCATGCCCGCACCCACCCGCCAACCCA  
GCCCTGTCACTCGGCCCTGGCAGCATGTGGATGCCATCAAGGAGGCCCTGAGCCTTCTGAACAACAGTA

GTGACACTGCTGCTATCATGAATGAAACAGTAGAAGTCGTCTCTGAAACGTTTGACGCCGAGGAGCTGA  
CATGCCTGCAGACTCGCCTGAAGCTGTACAAACAGGGCTTGC GG GGCAGCCTCATCAAGCTCGAAGGCC  
CCTTGACCATGATGGCCAGCCACTACAAGCAGCACTGCCCCCACCCTGGAACTTCCTGTGCAACCA  
GATGATCACCTTCAAAGTTTCAAAGA AACCTGAAGGATTTTCTGTTTGAGATCCCGTTTGACTGCTGG  
AGCCAGCCCAGAAGTAAGGCAGGCCTTCCAGCTAGGAGCTAGCCCTGGGAGCTCACCTCACAGATTGCT  
GCTGTCCCACTCACAAAGAACC GAACTCAGGATCTT CAGCTTGGAGGGACCAAAGGGTGGGCCATGG  
CTGTTGAGAACATGGACTTGCTCTGGGCCGTA CTGACCACGATATGGGTGTGGTAGGGGAGTAGGGGA  
TATTTTACTGCGGGGATCAG

### **IFN-alpha 1**

#### **Complete CDS TH382 EU682378**

CAGCATCTGCAAGATCCCCAATGGCTCTGCCTGTTTCCTTACTGATGGCCCTGGTGGTCTCAGCTGCCA  
CTCCATCTGCTCTCTGGGATGTGACCTGCCTCACACCCATAGCCTGGGCAACACAAGGGTCTTGATGCTC  
CTGGGGCAAATGAGGAGAATCTCCCCCTTCTCCTGCCTGAAGGACAGAAATGACTTTGGATTCCCCAG  
GAGGTGTTTGACGGCAACCAGTTCGGAAAGCCTCAAGCCATCTCTGCGGTCCATGAGACGATCCAACAG  
ATCTTCCACCTTTCAGCACAGACGGCTCGTCTGCCGCTGGGACGAGAGCCTCCTAGACAACTCTACA  
CTGGACTCTATCAGCAGCTGACTGAGCTGGAAGCCTGTCTGAGCCAGGAGGTGGGGGTGGAAGAGAC  
GCCCTGATGAACGAGGACTCCCTGCTGGCTGTGAGGAGATACTTCAAAGAATCGCTCTCTATCTGCA  
AGAGAAGAAATACAGCCCTTGTGCCTGGGAGATCGTCAGAGCAGAAATCATGAGATCCTTCTCTTCATC  
CACAACTTGCCGCAGAGTTAAGGAGGAAGAAATGACACCTGGTTC

### **IFN-gamma**

#### **Complete CDS BW143 U04050**

ACCTGATCAGCTTAGTACAGAAGTGACTGCTTCACTACTTAGGCCTAACTCTCTCCGAAACAATGAAT  
TATACAAGTTTTATCTTGGCTTTTCAGCTGTGTGCGATTTTGGTTCTTCTACCTATTACTGCCAGGCCGC  
GTTTTTAAAGAAATAGAAAACCTAAAGGAATATTTAACGCAAGTAACCCAGATGTAGGGGATGGTGG  
GCCTCTTTTCTGGATATCTTGAAGAACTGGAAAGAGGATAGTGACAAAAAATAATT CAGAGCCAAAT  
CGTCTCTTCTACTTCAA ACTCTTTGAAA ACTTGAAAGATAACCAGGTCATTCAAAGAGCATGGACACC  
ATCAAGGAGGACCTGTTTCGTTAAGTTCTTTAACAGCAGCACCAGCAAGCTGGAAGACTTCAAAGCTG  
ATT CAGATCCGGTAAATGATCTGAAGGTCCAGCGCAAAGCAATAAGTGA ACTCATCAAAGTGATGAAT  
GATCTGTCGCCAAAGCTAACCTGAGGAAGCGGAAGAGGAGTCAGAATCCATTT CGAGGCCGGAGAGC  
GTTGCAATAGTGGTCA

### **IL1-beta**

#### **Partial CDS DT111 EU438767**

ATGGCAGCAGTACCCGACACCAGTGACATGATGACTTACTGCAGCGGCAATGAGAATGACCTGTTCTTT  
GAGGAGGATGGCCCAAACAGATGAAGGGCAGCTTCCAAGACCTGGACCTCAGCTCCATGGGCGATGG  
GGGCATCCAGCTTCAATTCTCCACCAACTTTACAACAAGACTTTCAAGCATGTCGTGTCAATCATTGTGG  
CTATGGAGAAGCTGAAGAAGATACCCGTTCCCTGCTCACAGGCCTTCCAGGATGATGACTTGAGGAGCC  
TCTTTTCTGTCATCTTTGAAGAAGA ACCCATCATCTGTGACAACTGGGATGATGATTATGTGTGTGATGC  
AGCTGTGCATT CAGTGA ACTGCAGACTCCGGGACATATA CCATAAATCCCTGGTGTGTCCGGTGCATGT  
GAGCTGCAGGCTGTCCACCTCAATGGAGAGAATACAAACCAACAAGTGGTGTCTGCATGAGCTTTGTG  
CAAGGAGAAGAAGAGACTGACAAGATACCTGTGGCCTTGGGCCTCAAAGAAAAGAACCCTGTACCTGTC  
TTGTGGGATGAAAGATGGGAAGCCCACCCTACAGCTGGAGACAGTAGACCCCAATACTTACCCAAAGA

GGAAAATGGAAAAGCGATTTGTCTTCAACAAGATGGAAATCAAGGGCAACGTGGAATTTGAGTCTGCA  
ATGTACCCCAACTGGTACATCAGCACCTCTCAAGCAGAAAAAAGCCTGTCTTCCTAGGAAATACCAGA  
GGCGGCCGGGACATAACTGACTTCATCATGGAAATCACCTCTGCC

## IL2

### Complete CDS DT113 EU438768

TACTCACAGTAACCTCAACTCCTGCCACAATGTTACAAGATGCAACTCTTGGCTTGCATCGCACTAACTCTT  
GCAGTCCTTGCAAACAGTGCACCTACTTCAAGCTCTAAGAGGGAAACACAGCAACAACCTGAAGCAATTA  
CAGATGGATTTAAAGTTGCTTTTGAAGGAGTTAATAATAACAAGAATCCCAAACCTCTCCAAGATGCTCA  
CATTTAAAATTAACATGCCCAAGAAGGCCACAGAATTGAAACATCTTCAGTGTCTAGAAGAAGAACTCA  
AACCTCTGGAGGAAATGCTAAAAAACTTTCTCTCGAAAGATATCAAGGAATTAATGAGCAATATCAATGT  
AACAGTTCTGGGACTAAAGGGGTCTGAAACAAGATTCACATGTGAATATGATGATGAGACAGGAACAA  
TTGTAGAATTTCTGAACAAATGGATTACCTTTTGTCAAAGCATCTTCTCAACAATGACTTGATAATTAAGT  
GCTTCCATTTAAAATGCATCAGGTTATTTATTTAAATATTTAAAATTTATTTATTTTTGATTTTATGGT  
TTGCTACCTTTTGTAACTGTTAGTCTTCGGATGATAAATATGGATCCTTTAAGATTCTTTTTGTAAGCCC

## IL4

### Complete CDS DT117 EU438769

ATGGGTCTCACCTACCAACTGATTCCAGCTCTGGTCTGCTTACTAGCATGTACCAGCAACTTCATCCAGG  
GATGCAAATACGACATCACCTTACAAGAGATCATCAAAACGCTGAACAACCTCACAGATGGAAAGGGCA  
AGAATTCGTGCATGGAGCTGACTGTAGCGGATGCCTTTGCTGGCCCGAAGAACACAGATGGAAAGGAA  
ATCTGCAGGGCTGCAAAGGTGCTTCAACAGCTCTATAAAAGACATGACAGGTCCTTGATCAAAGAATGC  
CTGAGCGGACTGGACAGGAACCTCAAGGGCATGGCAAACGGGACCTGCTGTACTGTGAATGAAGCCAA  
GAAGAGCACATTGAAAGACTTTTTGGAAAGGCTAAAGACGATCATGAAAGAGAAATACTCCAAGTGTI  
GA

## IL6

### Complete CDS DT122 EU438770

ATGABCTCCTTCTTCAACAAGCACCGTCACTCCAGTTGCCTTCTCCCTGGGGCTGCTCCTGGTGATGGCTAC  
TGCTTTCCCACCCCACTACCCCTGGGAGAAGATGAAACCACCTCAAATGGACCACTACTCACCCTGCA  
GACAAAACCAAACAGCACATTAAGTACATCCTCGGCAAATCTCTGCCCTGAAAAATGAGATGTGTAAC  
AATTTTAGCAAGTGTGAAAACAGCAAGGAGGTACTGGCAGAAAACAACCTGAATCTTCAAAGATGGC  
AGAAAAAGACGGATGCTTCCAATCTGGGTTCAATCAGGAGACCTGCCTGATGAAAATCACCCTGGTCT  
TTCGGAGTTTCAGATATACCTGGAGTACCTCCAGAACGAGTTCAAGGGTGAAAAGGAAAACATCAAGAC  
TATGCAGATCAGTACCAAAGTCCCTGGTCCAGATCCTGATGCAAAGATGAAGAATCCAGAGGTAACCAC  
CCCTGACCCAACTGCAAAAAGCAGCCTGCTGGCTAAGCTGCATTACAGAATGAGTGGCTGAAGAACAC  
AACAACCTCACCTCATCCTTCGAAGCCTTGAGGATTTCTGCAGTTCAGCCTGAGAGCTGTTCCGATAATG  
TAACCTTGGCATCTAAGATTGTTGTAGTTCATGGGCATTCCTTCTCTGGTCAGAAACCTGTCCACTGGG  
CACATAACTTATGTTGTTCTCTATGAAGAACTAAAAGTATGACGTTAGGA

## IL10

### Complete CDS DT126 EU438771

ATGCCACAGCTCAGCACTGCTATGTTACCTGGTCTTCTGGCCGGGGTGGGAGCCAGCCGAGACCGGGG  
CACCCAGTCTGAGAACAGCTGCACCCACTTCCCAACCAGCCTGCCCCACATGCTCCATGAGCTCCGAGCC

GCCTTCAGCAGGGTGAAGACTTTCTTTCAAATGAAGGACCAGCTGGACAACATGTTGTTGAACGGGTCC  
CTGCTGGAGGACTTTAAGGGTTACCTGGGTTGCCAAGCCTTGTCTGGAGATGATCCAGTTTTACCTGGAG  
GAGGTGATGCCCCAGGCTGAGAACCACGGCCCAGACATCAAGGAGCACGTGAACTCCCTGGGGGAAAA  
GCTGAAGACCTCCGAGTGAGGCTGCGGCGCTGTCATCGATTTCTGCCCTGTGAAAATAAGAGCAAGGC  
AGTGGAGCAGGTGAAGAGTGCCTTCAGTAAGCTCCAAGAGAAAGGTGTCTACAAAGCCATGAGTGAGT  
TTGACATCTTCATCAACTACATAGAAGCCTATATGACAACGAAGATGAAAAACTGAAGCATCCTAGGGA  
ACGAAGCATCCAGGACGGTACTCTACTAGACTCTAGGACATAAATTGGAGATCTCCCAAATCCCATCCA  
GGGTTCTGGGAGAGCTGAATCAGCTCCTTGAAAACCCTGTGGTACCTCTCTCTGAATATTTATTA  
CTGATACCTCAACTCCTATTTCTATTTATTTACTGAGCTTCTCTGTGAA

### IL13

#### Partial CDS BW133 EF645663

GGCGCTAGCGTATGGCGCTCTGGTTGACAGCAGTCATTGCTCTCGCTTGCCTTGGTGGCCTTGCCTCCCC  
AGCCCCTCTGCCATCCTCGATGGCCCTCAAGGAGCTCATTAAAGGAGCTGGTCAACATCACCCAGAACCA  
GGCCCCCTCTGCAATGGCAGCATGGTGTGGAGCGTCAACCTGACAGCTGACACGTAAGTGTAGAGCCCT  
GGAGTCCCTGAGCAACGTCTCCACCTGCAGTGCCATCCAAAACACGCGGAAGATGCTGACTAACTCTG  
CCCTCACCAGCTCTCAGCCGGGCAGGTTTCTAGCGAGCGCGCCGAGACACCAAATGAAGTGATCGT  
GTTGGTAAAAGACCTGCTCAAAAATTTAAGGAAAATTTTTACGGTGGAAAGCATGTGGACGCCCT

### IL15

#### Partial CDS TH379 EU682379

GAGAAGTACTTGCATCCAGTGCTACTTGTGTTTACTTCTGAACAGTCATTTTTTAACTGAGGCTGGCATT  
ATGTCTTCATTTTGGGCTGTATCAGTGCAGGTCTTCTAAAACAGAGGGCAAACCTGGCAGGATGTAATAA  
GTGATTTGAAAAGAATTGAAGATCTTATTCAATCTATACATGTTGATGCCACTTTATATACTGAAAGCGA  
TGCTCATCCCAATTGCAAAGTAACAGCGATGAAGTGCTTTCTCCTGGAGTTACATGTTATTTTGCATGAG  
TCCAGAAACGAGGACATTAAGGAAACAGTAGAAAACCTTATCATCCTAGCAAACAGCAGCTTATCTTCTA  
ATGGGAATGTTACAGAATCTGGATGCAAAGAATGTGAGGAACTGGAGGAAAAAATATTAAAGAATTT  
TTGCAGAGTTTTGTACATATCGTGCAAATGTTTCATCAACCCTTCT

### IL17

#### Complete CDS TH416 (replaces RN020 EU744563)

ATGGCTCCTCTGAGAACTTCATCCGTGTCCTGCTGCTGCTGCTGAGTCTGGTGGCTATCGTGAAGGCG  
GGAATAGTAATCCCACAAAATCCGGAATGCCGAACACTGGGGACAAGAACTTCCCTCAGAATGTGAAG  
ATCAACCTAAACGTCCTTAACCGGAAAACGAATTCAGAAGGGCCTCAGATTACCACAACCGCTCCACCT  
CCCCTTGGAATCTCCACCGCAACGAGGACCTGAGAGATACCCCTCTGTGATCTGGGAGGCGAAGTGCC  
GCCACCTGGGCTGTGTCAATGCCGAAGGGAAGGTAGACTTCCACATGAACTCCGTCCCCATCCAGCAAG  
AGATCCTGGTCTGCGCAGGGAATCTCAGAACTGCCCCACTCCTTCCAGCTGGAGAAGATGCTGGTGG  
CCGTGGGCTGCACCTGCGTCACCCCCATTGTCCGCCACATGGGTTAA

### IL18

#### Complete CDS DT001 EU438772

GCAGGAATAAAGATGGCTGCTGGACCAGTAGAAGACAATTGCATTAGCTTGGTGGAAATGAAATTTATT  
GACAACACACTTTACTTTGTAGCTGAAAACGATGAAAACCTGGAATCAGATTACTTTGGCAGGCTTGAAC  
CTAAACTCTCAATCATACGAAATTTGAACGACCAAGTTCTTTCATTAACCAGGGAAATCAACCTGTGTTT

GAGGATATGCCTGATTCTGATTGTACAGACAACGCACCCCAGACCGTATTTATCATATATATGTATAAAG  
ATAGCCTCACTAGAGGTCTAGCGGTAACCATCTCTGTGAAGTGTGAGAAAACGTCTACTCTCTCTGTAA  
GAACAAAATTTTCTTTAAGGAAATGAGTCCTCCTGAGAATATCAATGATGAAGGAAATGACATCATA  
TTCTTTAGAGAAGTGTCCAGGACATGATGATAAGATACAGTTTGAGTCTTCACTGTATAAAGGATACT  
TTCTAGCTTGTGAAAAAGAGAATGATCTTTTCAAACCTATTTTGAAAGAAAAGGATGAAAATGGGGATA  
AATCTGTAATGTTCACTGTTCAAACCAGAACTAGC

### IL23

#### Complete CDS TH304 EU438773

AGAGATTCCACAGGGACTGACTGGTGCAAGGCACAGAGCCAGCCAGGTTTGAGAAGCAGGCAGCAAG  
ATGCTGGGGAGCAGAGCTGTGTTGCTGCTGCTGCTCCTGTGGCCCCGGACTGCTCAGGCCCGGGCT  
GTGCCTGGAGGCAGTAGCCCTGCCTGGGCTCAGTGCCAGCAGCTCTCACAGAAGCTCTGTACGCTGGCC  
TGGAGTGCACATCCACCAATGGGACATGTGGATCTACCAAGAGAAGAGGGAGATGCTGAGACTACAAA  
TGATGTCCCCCATATCCAGTGCAGGATGGCTGTGATCCTGAAGGACTCAGGGACAACAGTCAGCCCTG  
CTTGCAAAGGATCCACCAGGGCCTGGTTTTTTACGAGAAGCTGCTGGGCTCAGACATTTTACAGGGGA  
GCCTTCTACTCCCAATGGCCCTGTGGACCAGCTTACGCCTCCCTCCTGGGCCTCAGGCAACTCTTGC  
AGCCTGAGGGTCACTACTGGGAGACTGAGCAGATTCCAAGCCCCAGTCCCAGCCAGCCGTGGCAGCGC  
CTCCTTCTCCGCCCAAGATCCTTCGCAGCCTCCAGGCCTTTGTGGCTGTAGCTGCCCGGGTCTTTGCCCA  
TGGAGCAGCAACCCTGACCCCTAAAGCCAGCAGCTTAAAGGATGGCACCCACATCTATGGCTCAGCAA  
TGCTA

### TGF-beta

#### Complete CDS BW106 X99438

ATGCCGCCCTCCGGCCTGCGGCTGCTGCCGCTGCTGCCACTGCTGTGGCTACTAGTGTGACGCCTG  
GCCGGCCAGCCCGGACTGTCCACCTGCAAGACCATCGACATGGAGCTGGTGAAGCGGAAGCGCATC  
GAGGCCATCCGCGGCCAGATCCTGTCCAAGTTGCGGCTCGCCAGCCCCCGAGCCAGGGGGAGGTTCC  
GCCCCGCCCGCTGCCCGAGGCCGTGCTGGCCCTTTACAACAGTACCCGCGCCAGGTGGCCGGGGAGA  
GCGCTGAGACGGAGCCCCGAGCCTGAGGCGGACTACTACGCCAAGGAGGTCACCCGCGTGCTAATGGT  
GAAAAGGAAAACGAAATCTATAAGACTGTGGAGACCGGCTCACACAGCATATATATGTTCTTCAACACG  
TCGGAGCTCCGGGCAGCAGTCCCCGATCCCATGCTGCTCTCCCGGCAGAGCTGCGCCTCCTAAGGCTC  
AAGTTAAGCGTGGAGCAGCATGTGGAGCTGTACCAGAAATACAGCAATAATTCTGGCGCTACCTCAGT  
AACCGGCTGCTGACCCCCAGCGACTCGCCGGAATGGCTGTCTTTGATGTCACTGGAGTCGTGCGGCAG  
TGGCTGAGCCAGGGAGGGGCAATGGAGGGCTTTCGCCTCAGTGCCCACTGCTCCTGTGACAGCAAAGA  
TAACACACTCCGCGTGGGCATCAACGGGTTTCAAGTTCCAGTCGCCGGGGTGTGATCTGGCCACCATTGATGG  
CATGAACCGGCCCTTCTGCTCCTCATGGCCACCCACTGGAGAGGGGCCAGCAGCTGCACAGCTCCCCG  
GCACCGCCGAGCTCTGGACACCACTACTGTTTCAGCTCCACAGAGAAGAACTGCTGCGTACGGCAGCT  
GTACATTGACTTTTCGAAGGATCTGGGCTGGAAGTGGATCCACGAGCCCAAGGGCTACCACGCCAACTT  
CTGCCTGGGGCCCTGCCCTACATTTGGAGCCTGGACACGCAGTACAGCAAGGTCCTGGCCCTGTACAA  
CCAGCACAACCCGGGCGCGTCCGGCGGCCGTGCTGCGTCCCGCAGGTGCTGGAGCCGCTGCCCATCG  
TGTAACAGTGGGTCGCAAGCCCAAGGTGGAGCAGCTGTCCAACATGATCGTGCCTCCTGCAAGTGCA  
GCTGA

## TNF-alpha

### Complete CDS TH322 EU438779

ACTTGAGCCCCTCTGGAAAGGACATCATGAGCACTGAAAGCATGATCCGAGATGTGGAGCTGGCAGAG  
GAGGAGCTCGCCAAGAAGGCAGGGGGCCCCCAGGGCTCCAGACGGTGCTTGTGCCTCAGCCTCTTCTC  
CTTCCTCCTTGTCGCAGGAGCCACCACGCTCTTCTGCCTGCTGCACTTTGGGGTGATCGGCCCCCAGAGG  
GAAGAGCAGTTACCGAATGCCTTCCAGTCAATCAACCCTCTGGCCCAGACTCAGATCATCTTCTCGAA  
CCCCAAGTGACAAGCCTGTAGCCCATGTTGTAGCAAACCCCAAGCCGAGGGGCAGCTCCAGTGGCTGA  
GTGGGCGTGCAAATGCCCTCCTGGCCAATGGCGTGAAGCTGACAGACAACCAGCTGGTGGTACCATTG  
GATGGGCTGTACCTCATCTACTCCCAGGTCTCTTCAAAGGCCAAGGCTGCCCTTCCACCCATGTGCTCCT  
CACCCACACCATCAGCCGCTTAGCTGTCTCCTACCCGTCCAAGGTCAACCTCCTCTCTGCCATCAAGAGCC  
CTTGCCACACGGAGTCCCCAGAGCAGGCTGAAGCCAAGCCCTGGTATGAGCCCATCTACCTGGGAGGA  
GTCTTCCAGCTGGAGAAGGGTGATCAACTCAGCGCTGAGATCAATCAGCCCAACTATCTCGACTTTGCG  
GAGTCCGGGCAGGTCTACTTTGGGATCATTGCCCTGTGAGGGGGGTACGTCCGTCCTCGCCCACCTCAA  
TCCCTTTATTATCTGC

**POULTRY**  
**(Gallus gallus)**

Start and stop codons are underlined. Probable coding errors are highlighted in red.  
Nucleotides in lower case indicate deletions with respect to reference sequences.

Header format:

**(Gene Name)**

(Complete/Partial CDS) (Clone ID if available) (GenBank Accession Number if available)

**CCL4**

**Complete CDS NM\_001030360**

GCTGGAAGCCGAGCTCCACTTGCCTCTCCAGCTCCTGCCACCACTCCCAACTGACATGAAGGTCTCTG  
TGGCTGCCCTCGCTGTCCTCCTCATTGCCATCTGCTACCAGACCTCTGCTGCACCGGTGGGTTCTGACCCG  
CCGACCTCCTGCTGCTTCACCTACATCTCCCGCAGCTGCCCTTCAGCTTTGTGGCAGACTACTACGAGAC  
CAACAGCCAGTGCCCTCATGCTGGTGTGTTGTTTCATCACCAGGAAGGGCCGTGAGGTCTGTGCCAACCC  
CGAGAACGACTGGGTACAGGACTACATGAACAAGATGGAACTGATGCACCAGGGATGGGATG  
AGCACGCTATGCCCACTTTGCAGGCCCTGCCAAAAACGCCACTGTGACTG

**CCL20**

**Complete CDS NM\_204438**

ACGCGGGGAGTACAGGCAGGCAGCGAAGGAGCACTCATTGGAGCATAGCTGCTGCTTGGAGTGAAAA  
TGCCTGGCTTGAGCACCAAGAGTTTGATTTTGGCTTCTCTGCTGGGACTGCTGTTGCTGCTGCTGTCAG  
TACCTCCCAGGCACAAAGCAACCAAGATTGCTGTCTGTCTTACAGCAAAGTCCGTCTGCCTCGGAAGGTC  
ATTAAGGGCTTTACTGAACAGCTGTCTGGTGAAGTCTGTGATATTGATGCCATCATTTTCCACACCGTCA  
GGGGACTGAAAGCCTGCGTAAATCCTAAGGAAGACTGGGTGAAGAAGCATCTTCTTTTCTGAGCCAGA  
AGCTCAAGAGGATGTCAATGTGATATGGTTTCCAGCTGGGAACAAACGCAGACGTGGCTGAAGAACC  
ACTTGGTTCAACCTCTTGGTTGAGGTTGTCATGTTGTACTGTTGTGCTTACTCACCCTATCTCTGG  
CTTCTTTGGAACCGTTGAACTTCTGGAGTTGATTCATATTGCATCACTGTTTTGCTTGAATTAAGCATTTT  
GTTGACGTTTCTAGGTTTACTAATACGACATGAGTACTATTTAGTAAAGACTTCATTAAGCTATTGTACAG  
AGCATGAATTGTATTAGGCTTATTGCATAGCACTATTGTGTTGTTTCCAGCATTGTAAATCTTTGTAAAGGT  
TATTTATTCTGTTTATTTTGTACTGCTTGGCACTATCTTGTGCCAAAATTTTCTTTTAACTGGAGTTAGC  
ATTATAACTTTTTAGGCTGTTGTTAAAAAAGTGCTTGTGGGGAAAAAAATGGAACTGGAGTTAAA  
AATAAATATTA AAAACTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

**CD80**

**Complete CDS NM\_001079739**

ATGAAGATGGGGTGCCTGAAGAGATGGCCCCTGAAGAGATGGCTCGGGCTCGGGCTTGGGCTCATCGT  
GCTCCACTGCATCACTCTAGGCTGTGCACAGGAGAAGAAAGTGGCCAAAAGCAAAGTAGGGGAAAAAG  
TTGGCCTGCCTTGTGTTACAAAATCCCAGCTCGGAGAGCCTGCAAACCTACCGAGTGTATTGGCAGAT  
GAACGTCACGGATGTGGTGTGCTGGCCTACGCAGGGGAGAAAAAGATCAATGAGCACCCACGCTATGTCA  
ACCGGACAAAGCTGGACTTTGAGAACCTCACCTGTGGATCTCCAGTGTGGAAATCCTGGACAGCGGCC  
CTTACCAATGTATCGTTTACAGAGTCTCCAGTCTTACCAGACAAACCTGGATTTTCTTTTGTGTGGAGAG  
CCTGTGACCCTCTTTGTTACCGCTGACTTCAGCAAGCCGAACATAGAAAGAGAAGTAACCGCTAGTTCAT

GTGCATCAACAGAAATGGTGGTAAGATGTTCTTCTCATGGAGGTTTTCCCAAACCCGAAATCCGTGGATT  
CCTCAACGACGAACGTGTGGTGTGAATACCACCTGGGAGTCTGAGTCCAGCCTCAGCCCGTACAACGT  
CACTGGCACACTGTGGCTCAACATGACCAAAGATAGCAACTTCACTTGCTTCGTTGAATATGATGGCCTT  
CTCAGGTCCACCAGTTTGCTTCTAGCAAAGCAAATGACTGCATCGTCTCTACTGCACTTCCATCCTATAA  
TGTCATTACTGCTTCAAGTATCATCATTATCACCTTCGTTTTGGCTGTCACCCTAGCAGTAAAGTACCTCCC  
AAGGCACGCCTGTTCCCACTGTTCTAAGAACCAAGTTTCAGCAGAAGACGACGTGAAAGAAAGTATGAA  
CCCACCCACAGCTGTAATTGACATGTGAAATGTCATCTCTATGA

### CD83

#### Predicted CDS XM\_418929

ATGGCTTCAGCAGCCTACACTCTACTCTTCACCCTGTGCAATGTTTGGAGCTTGATCAATGGAGCTGCTG  
TGGCTGTCCCAGATGTTGCTGTGACATGCTTTGAAGAAGCTTTGCTGTCTGTAAAGTTCTTCAGGATTC  
CTCGATCGCCTACCAGGCAGTGTCTTGGCACAAAATGGCTGGAGTTGGCGACAGAATAGCATGGAAAG  
TCCTTGATGTGGAATCTCGTCATCCAAAAGGACTTGGAGGCTCCCTGGAGCTCTCCAACACCACCTTTCA  
ACTGAGGATCAGGAATGCCACCAGCCAGGACAGTGGCACGTACAAGTGCCTTTGGGGGAACAGAGG  
GGAGACCACAACCTGAGTGGCATCATCACATTAAGTAACAGGTTGCCCTAGAATAGAAGATGAAAA  
ACTGAAAAAATAAAGACTGAGCTTTTCATGCTGACTTGCCTCGGGATTTTTACTTGCTGCTCATCTTCT  
TTACCTGTACGTGTCTAAGAAAAGAGAGTATGTCTCCAGTGATAAAAGCAGAAGAGATTCAAACGCA  
CTCTCACTCTCATCAACGCACATGAAATGACAACACTCCGGGTTTTAAACAGTGGCAGCACGTGCAAAAG  
TGGACTTACTTCAAGTTCTATCTAA

### CD86

#### Complete CDS NM\_001037839

ATGGAGGTCTGCATATTCTTTCTTTATGCCATAATACTTCTCCAGGTATTGCTGCCAACGTACATCACG  
TGAAGTCATTTCTCAATCACACTGCATACCTATCTTGCTACTTCCCAAACCTCTCAGAAAACCTGACATAAA  
TAATGTAATAGTTTTTGGCAAAAAGGTACGGGTGAAGTGGTACATGAAGTTTACCTTGGCCAGGAAAA  
ACACGATCACCTTAATTCTAAGTACATAAATCGTACCAAGATGGATATGGACAAATGGACCTTGAATTG  
TTAAATGTAGGGATTGTGGATGAGGGGCAGTATAAGTGTATTATTATGCACGTGGACAAGGGACCAAA  
AAAGCTCATAACGAATCTGAGTGCTTACTGAACATCACTGCCAACTATAGTCAACCTGTGATAGCACAG  
CTACACACTGGGGAACCAAGCCCAATGAAAACCTGAATCTTCTGTTCTTCCAGCGGAGGTTATCCAG  
AGCCCAAGCAGATGATTTGGCTAATTTCAAGTAAAACATAACAGATAGGCTTATACGACACATGGATG  
TCTTACAGGATGCTGTCACAAAGCTGTATAATGTTACCAGCAAGCTGAATATCCAGTTCCTACAAATAC  
ACTCACTAATATTAGCTGTTTGCTTACCTTGGAGAGCAGCAGGGGAGCCTTGTCTCAGTGCCGCTAGTC  
ATAGAGATACCGGCAGAAGAAATGGAACCGGTGAAGGTAATTTCTTTGGCCCACTTGTAGCTGTAATT  
TACTGGTCACGCTTCTTCTGGGTTTTTGGATATTGAAGAACAGAAATATCTCATCTACCAGCCAGAGTGT  
CAGTCTCGCAGTCTAA

### CXCR4

#### Complete CDS NM\_204617

TGCGCTCGTGGCGCTCGGACGGCCCGGACCTACTCGGTGCTCGGAGTATGGACGGCAGCATGACGGT  
TTGGATCTGTCTCTGGCATACTCATTGAATTTGCTGACAATGGCTCGGAGGAGATTGGCTCAGCTGACT  
ATGGAGACTATGGAGAGCCGTGCTTTCAGCATGAAAACGCTGATTTCAACCGGATCTTCTTCCAACCAT  
CTACTCCATCATCTTCTAACAGGAATAATCGGGAATGGATTGGTTATCATTGTTATGGGCTACCAGAAG  
AAGCAAAGAAGCATGACTGATAAATACAGGCTGCACCTCTCTGTGGCTGACCTCCTCTTTGTCATCACCT

TGCCATTCTGGTCTGTGGATGCAGCCATAAGCTGGTACTTCGGAAATGTCCTGTGTAAGGCAGTTCATGT  
CATTTACACAGTCAACCTCTATAGCAGTGTCTTGATTTTGGCTTTCATAAGTTTAGATCGTTACCTGGCAA  
TAGTCCATGCCACCAACAGCCAGCGACCCGAAAGCTGTTGGCTGAGAAGATTGTGTATGTGGGTGTCT  
GGCTGCCAGCTGTGCTTCTCACAGTGCCTGATATAATTTTTGCCAGTACGAGTGAAGTAGAAGGACGGT  
ATCTCTGTGATCGCATGTACCCTCATGACAACCTGGCTGATTTCTTTCAGATTCCAGCATATCTTGGTAGGA  
CTTGCTTGCCCGGTCTAATAATCCTGACTTGCTATTGTATTATCATATCTAAGCTGTCACATTCAAAGG  
CCACCAGAAGCGCAAAGCCTTGAAGACAACAGTTATCCTCATTCTTACCTTCTTTCCTGTTGGCTGCCGT  
ATTACATTGGCATCAGCATAGACACGTTTCATCTTGCTTGGAGTCATCAGACATCGCTGCAGCTTGGACAC  
AATCGTGACAAATGGATCTCTATCACAGAAGCCCTTGCCTTCTTCCATTGCTGCCTCAATCCAATTTCTT  
ACGCTTCTGTTGGTCCAAGTTCAAACATCAGCACAAATGCCTTGACATCTGTTAGCAGAGGATCAA  
GCCTCAAGATTCTTTCAAAAAGCAAACGTGGGGGACATTCTTCTGTTTCTACAGAGTCAGAGTCTTCAAG  
TTTCCATTCCAGCTAACGCTTTCCTTGCCTATCCCTTATAAATAGACACTTAAAAGTTGCTCAAGATCTC  
AGAAAAACAAGACTGACCATATTGTACAGATTTATTTTACAGTTGGAATTTTTTATTGCTTCTTTTAGTCTT  
TGTGAAGTTTAATTGACTTATTTATATGAAACTTTTGTATTGATAAACTGTCTAGGCAGGT

**IFN-gamma**  
**AH009942**

CATGAAGGACAGCACTAAGGGATTTAAAATTTAAAATGATTCTGATGCGCCACAGCAGTATCAGTGGTT  
ACTTTAAAAGAATACCAGAAATGAGTTGACTGTTGTATTGACCCCTTAACCACATGATACAATTTTTTCAG  
ATAGCTTGTAAGAGTATGCCTACAGACAAGGGCTACTCCTAAATCAGTATCATAAATTTCCCTCTTTTTCC  
CCACCACGGGTAAAAGATTCTTCAGAAAGTGCCACGTAATTTTACCCTCTGATGAACCGCTGAAAAATT  
TTCCAGGACCATGCTTTAAGAAAGACACTTTTCGAGGGATTCCCTCAACCAGCCTATAGCAAATCTTATC  
TAACACTATCTTGCTAAATATACACAGCCCGTGATGACGAAATAAAAAAATTTCAAGACCAGTATAAAT  
ACCACTCACAGGCAGATGAAGTTCATTGCTACTTTCTTCTAATAGAAGACATAACTATTAGAAGACAT  
AACTATTAGAAGCTGAAGCTCACTGAGCTTATATCTGACATCTCCAGAAGCTATCTGAGCATTGAACT  
GAGCCATACCAAGAAGATGACTTGCCAGACTTACAACCTGTTTGTCTGTCTGTCATCATGATTTATTAT  
GGACATACTGCAAGTAGTCTAAATCTTGTTCAACTTCAAGATGATATAGACAAACTGAAAGCTGACTTTG  
TAAGGTATTGTCTTCTACTGCATTTCTCCTCTCCTCTGCTTCTGTGCTGTAGATATAAGTCAGATAAAGTA  
GCTCTGTTGCCAACTACTGCAGTGATTACACATTAGTGGTGCAAAAATCATGTCTTGCTTTTTACTGTTT  
GTTTGAGTGGAGAACACTATTTGCCTTATAATAAGTAGTATTTGTATAACAGATGCTTATGTTCTCTGTTG  
CAGAACTCAAGTCATTAGATGTAGCTGACGGTGGACCTATTATTGTAGAGAACTGAAGAACTGGACA  
GAGAGAAATGAGGTGAGTCAGAACCAGACACGACAAAACATCTCATCTGCTCTGAAGGGCACTTTTGGT  
AAAAAGCAGCTCCAAGGCCAGTGAACCAGCCTGGGCAGAGAGAATACAAGTAGAGGCTGCTTCAGTA  
GCTCGGCTCATTCTCTGATGTCACTCACAGACCTTCTTTTGAATGTATTCTTCAACAGAAAAGGATCATA  
TGAGCCAGATTGTTTCGATGTACTTGAAATGCTTGAAAACACTGACAAGTCAAAGCCGCACATCAAAC  
ACATATCTGAGGAGCTCTATACTCTGAAAAACAACCTTCTGATGGCGTGAAGAAGGTGAAAGATATCA  
TGGACCTGGCCAAGCTCCCGGTAAGCTCTTTGTTCTGCCTCCAAGGACCTTGTGACCTTGTGAAAACAGA  
AAAGAGTCTGAGCCAGCTCTCGGTGTGACCTTTGTTCTGTCTGTTTCTTGTCAAACAGATGAACGACT  
TGAGAATCCAGCGCAAAGCCGCGAATGAACTCTTACAGATCTTACAGAAGCTGGTGGATCCTCCGAGTT  
TCAAAGGAAAAGGAGCCAGTCTCAGAGGAGATGCAATTGCTAATGGCATCTTATGACCTCCTGTCTTC  
AACTATTTTAAATTTTACAATGCACAATTTTATGTTGTGATTTTTTAACTGAGTTTATATACATTTAGCTTT  
TATTAATATTTAAGTATTTTAAATAATTATTTATATTAATAAAAAAACCAGGCAAACAATGAAAGTATTTAT  
ACCTCCTACTGCTGTGTAAGAAACGGATTGTGGTCTTAAAATACTGTCTATCTGTTGTGTGGGTTGAC  
TGAAAATACCGAATGAGGTGGATGTTTACCAGTTTCTGTGTGGGAAATACTGAATTGGAGGTGGATCTG

TACTCAAGAAAACCCACTCATCCCGGTCAGTCTAGTATTTCTAAATCCAAATCAAGGAGTGGCTTGTTTA  
AAGGGAAAAAATGTGAGCACTCTCTGACTGGGTCTTAGAGATTTTACTGATGGTTTGGCATGACTAAGA  
ATTTAGG

### **IL1-beta**

#### **Complete CDS Y15006**

CTTCACCCTCAGCTTTCACGCTGGGCACAGAGATGGCGTTCGTTCCCGACCTGGACGTGCTGGAGAGCA  
GCAGCCTCAGCGAAGAGACCTTCTACGGCCCTCCTGCCTCTGCCTGCAGAAGAAGCCTCGCCTGGATTG  
TGAGCACACCACAGTGGACGTGCAGGTGACGGTGCAGGAAAGGGACGTGGTGCCCGGAGCTTTCGGCGG  
GCCGCCGTGCTGGTGGTGGCCATGACCAAAGTGTGCGGAGGCCGAGGAGCAGGGACTTTGCTGACAG  
CGACCTGAGCGCGCTCCTGGAGGAGGTTTTTGGAGCCCGTCACCTTCCAGCGGCTGGAGAGCAGCTACGC  
CGGGGCGCCCGCCTTCCGCTACACCCGCTCACAGTCTTTCGACATCTTCGACATCAACCAGAAGTGCTTC  
GTGCTGGAGTACCCACCCAGCTGGTGGCCCTGCACCTCCAGGGGCCCTCCTCCAGCCAGAAAGTGAGG  
CTCAACATTGCGCTGTACCGGCCCGAGGCCACGGGGCAGCGCTGGAAGTGGCAGATGCCAGTGGC  
ACTGGGCATCAAGGGCTACAAGCTCTACATGTCGTGTGTGATGAGCGGCACCGAGCCACACTGCAGCT  
GGAGGAAGCCGACGTCATGCGGGACATCGACAGCGTCGAGCTGACCCGCTTCATCTTCTACCGCCTGGA  
CAGCCCGACTGAGGGCACCACGCGTTCGAGTCGGCCGCTTCCCGGGTGGTTCATCTGCACCTCCCT  
GCAGCCCCGGCAGCCCGTGGGCATCACCAACCAACCCGACCAGGTCAACATCGCCACCTACAAGCTAAG  
TGGGCGCTGACTGCCCGCTCCAACCCAAACCGGCCCGTTGCTGGTTTCCATCTCGTATGTACCGAGTACA  
ACCCCTGCTGCCCGCCACGCTGTTCCACGTGGAATAGCCGCTCTGGGCCCTGTGGCCTGAGTCATGC  
ATCGTTTATGTTTCATTACCGTCCCGTTGCTTTTAACTTATATATATATATTTTTTACCCTAATTATGATGGT  
TTTATTTTATCTCCCTTGTGCGGGTGGAGGTATTTATTGTGACTGGAGAAATAAAAGCTTCCCTGTGG

### **IL2**

#### **Complete CDS AF017645**

GGCAGGATTTGAATACCAGCATAACAGATAACTGGGACACTGCCATGATGTGCAAAGTACTGATCTTTG  
GCTGTATTTCCGGTAGCAATGCTAATGACTACAGCTTATGGAGCATCTCTATCATCAGCAAAAAGGAAACC  
TCTTCAAACATTAATAAAGGATTTAGAAATATTGGAAAATATCAAGAACAAGATTCATCTCGAGCTCTAC  
ACACCAACTGAGACCCAGGAGTGCACCCAGCAAAGTCTGCAGTGTACCTGGGAGAAGTGGTTACTCTG  
AAGAAAGAAACTGAAGATGACACTGAAATTAAGAAGAATTTGTAAGTCTATTCAAATATCGAAAAG  
AACCTCAAGAGTCTTACGGGTCTAAATCACACCGGAAGTGAATGCAAGATCTGTGAAGCTAACAACAAG  
AAAAAATTTCTGATTTTCTCCATGAACTGACCAACTTTGTGAGATATCTGCAAAAATAAGCAACTAATCA  
TTTTATTTTACTGCTATGTTATTTATTTAATTATTTAATTACAGATAATTTATATTTTTATCCCGTGGCTA  
ACTAATCTGCTGTCCATTCTGGGACCACTGTATGCTCTTAGTCTGGGTGATATGACGTCTGTTCTAAGATC  
ATATTTGATCCTTTCTGTAAGCCCTACGGGCTCAAATGTACGTTGGAAAAGTATTGATTCTCACTTTGT  
CGGTAAAGTGATATGTGTTTACTGAAAGAATTTTTAAAAGTCACTTCTAGATGACATTTAATAAATTTCA  
GTAATATATGAAAAAAAAAAAAAAAAAAAA

### **IL-2R alpha**

#### **Complete CDS NM\_204596**

ACCATTTGCTGACCACAGAGTCCTTGCTAGTCCTTGGTAGTTCTAGGGCTAACCATGCAGTAGACGGCTT  
GTAGGGTCAGCCAACACCAACCCATCGCTTCTCAGAACTTCACCATCCTTGGCGTTACGGAGGAAAGA  
TGTAACAGGTCCCATGGAGCTCAAGCGCCTTTTGTGATGTGGCTCTTGCTTGGATCCATCATGGGGACAG  
GGCAGATAAATGCCACGTCTTCACTACTGAATTTGCTGATGTGGCTGCTGAAACATATCCACTGAA

GACCAAAGTGCATTATGAATGTGACAGTGGCTATAGGAGACGAAGTGGGAACACCTTGACAATTAGGT  
GTCAGAATGTATCAGGGACTGCTTCTGGGTCCACGATGAACTTGTGTGCATTGATGAGAAATTTTTGTT  
CTCAAGGAATCACACAGCTAAGTTAAATCCTACACAACAGCCAGCAAGACAAACCCAAAGCCCAGCACC  
TCCGAAGCAAGCAAACAATTCAAGTTTTTTCGGTATGCCCCAACTGTCCCACATGCCTCTCTGAGCGTA  
CACCAAATATATTCTGTGGGGCAAGTATTACATTTCAAATGCCGACTGGCTACAATAAGCAGCTTCCTA  
CCACTGGCACCATCACGTGCAAGAATGTGGATGGAAGAATCAAGTGGACACCCGTTGATAGGCCATGTA  
CCAATGACAGCGGCCCTATAACAAGCAGCTATCCCATCTCATGGAGGCAGTCATCTTTTTATTCTGCTT  
CTCCATTCTGCTGTCTTTTTGTGAGTCGCCGAGCAGAGACGATAAACGGGAAGGAACCAGGAAAATGTG  
AAATCTGAAATAATCCCTGGAAGAGCTCTCAGCCAGATCTACCACCTCATTATTGCACTGCTTGGATTCT  
GAATACCTTCTCTGGTATTAATAAATGACTCCGGATTTTGGGTTGTCTGGTTCAGCTGTTAAATACTGGC  
ACAAGAAAAGGAGGAATCAGAGCTTCTGAAATCAAAAAAAGTGTGCATAATAAAAAAAAAAAAAAAAAA  
AA

#### IL4

##### Complete CDS NM\_001007079

ATGAGCTCCTCACTGCCACCCTGCTGGCACTGCTGGTGTGCTGGCCGGCCCTGGGGCTGTGCCACG  
CTGTGCTTACAGCTCTCAGTGCCGCTGATGGAGAGCATCCGGATAGTGAATGACATCCAGGGAGAGGT  
TCCTGCGTCAAGATGAACGTGACAGATATCTTTGCAGACAATAAGACAAATAACAAAAGTGGCTCTTAT  
GCAAAGCCTCCACAATTGTTGGGAGAGCCAGCACTGCCACAAGAACCTGCAGGGTCTCTTCTCAACA  
TGCGTCAGCTCCTGAATGCCAGCAGCACCTCCCTCAAGGCACCATGTCCCACGGCAGCAGGCAACACTA  
CTTCAATGGAGAAGTTCCTAGCAGACCTACGTACCTTCTCCACCAACTAGCTAAAAATAAGTGA

#### IL10

##### Complete CDS NM\_001004414

ATGCAGACCTGCTGCCAAGCCCTGTTGCTGCTGCTGGCTGCATGCACCCTGCCTGCCACTGCTTGGAGC  
CCACCTGCCTGCACTTCTGAGCTGCTGCCCCGCCGGCTGCGGGAGCTGAGGGTGAAGTTTGGAGAAA  
TTAAGGACTATTTTCAATCCAGGGACGATGAACTTAACATCCAAGTCTCAGCTCTGAACTGCTGGATGA  
GTTTAAAGGGACCTTTGGCTGCCAGTCTGTGTCAGAGATGCTGCGCTTCTACACAGATGAGGTCCTGCC  
CCGTGCCATGCAGACCAGCACCATCAGCAGAGCATGGGCGACCTGGGCAACATGCTGCTGGGCC  
TGAAGGCGACGATGCGGCGCTGTACCCGCTTCTCACCTGCGAGAAGAGGAGCAAAGCCATCAAGCAG  
ATCAAGGAGACGTTGAGAAGATGGATGAGAACGGGATCTACAAAGCCATGGGGGAGTTCGACATCTT  
CATCAACTACATCGAGGAGTACCTGCTGATGAGGAGGAGGAAGTGA

#### IL12p35

##### Complete CDS NM\_213588

ATGGCAGAGCACGGCATCGGCATCGGCAGCAGAGCGGCACGGCTGGGGGTGCGGCGCTGCGTGCTGC  
TGGCCGCGCTCTGCCTGCTGCTGCCTTCCACGTGGGCACTGCCACCTCCTGCCACAACCTGGCCAAGGG  
ACTCAACTGCTCCAGGGCGCTGCTGGCCGCTGCAAACGAGGGCACTCCTGAAGGTGCAGAAGCAGAGGA  
CGCTGGGGTTTGAAGTGCACCCTTGAAGAGGTGCATCTTGAAGACGTCACCAACAGTCAGAGCAACACAA  
TAAAGTCTGCAGTCTCAGGATCCGGGGCCTGGAACTGCCCCGTAAGTGGAAAGTTCTACTTTAGATAT  
GAGCAAATGCCTGCAGGGGATCTACGAAGACCTGAAAACCTACAAGGCAGAGCTGGGGAACCTCAAGG  
ATCTGAGGGTGTGACATCCATTGATGACATGATGCAAGCCCTGCAGCCCCGAGCCAGCCATGCCGC  
AGCCCTCGCCAGCACACCCTTGGCTCCTTCCAGGGCCGCATGCGGCTCTGCGGGTCTGACGCGCTT  
CTGCCTGCGCGCAGTACCATCGGCAGGATGCTGGGCTACCTGAGTGCCCTCACTGCAGAGATGTAA

**IL12p40**

**Complete CDS AY262752**

ATGTCTCACCTGCTATTTGCCTTACTTTCTTACTTTCTTTGCTGCCCTTCTGGAAGCACAGTGGAAACTT  
AGAGAGAATGTGTATGTCATAGAATCTGAGTGGAACGATGAGACACCAGCTAAAAAAGTGAAGCTCAC  
CTGTGACACATCTGATGAAGCACTGCCAGTTTACTGGAAAAAGGGAACAGAACTGAAAGGAACTGGAA  
AGACTCTGACCACCGAAGTGAAGGAGTTCCAGATGCTGGCAACTACACCTGCCTGTCTGCTAAGACCC  
ACGAGATTATCAGCTACAGTTTTCTTCTCATAACTAAAGTAGACTCCAATGGGCAAATGATACGGTCAAT  
TCTGAAAAGCTATAAAGAGCCAAGCAAGACGTTCTTAAAATGTGAGGCAAAGAACTACTCTGGAATTTT  
CACATGTTTATGGATGACAGAAAATGAGAGTCCAAGTGTGAAGTTCACAATTAGGAGCCTAAAAGGCTC  
TCAAGGAGATGTAACCTGCAGCAGCCCTGTGGCTCGCACTGATAAATCTGTGACTGAATACACTGCCCA  
GTGCCAGAAGGAAAACACTGTCCATTTGCCGAAGAGCACCAGCCGACTGAGATGTTCTGGAGGTCAT  
TGATGAGGTGGAATATGAGAACTACACTAGTAGTCTTTCATCAGAGATATCATAAAGCCAGACCCACCT  
CAATGTCAGTATGCAAGCACAAATGAACTGTGACCTGGACATATCCAAGACCTGGAGCACACCGAAG  
TCCTACTTCCCTTTGACTTTCAGGGTCAAAGTTGAAAGCACAAAGAAATACAAAAGCAAGGTTTATGATG  
CTGATGAGCAGTCTATTAGATTCAAAGACTGGGCCAAAAGACAAGATCTCTGTGCAGGCCAGGGATC  
GCTATTACAACCTCATCTGGAGTGAGTGGTCCACGCTTTGCAGATAAA

**IL15**

**Complete CDS NM\_204571**

TGACCAGTGCAAATTTATCGTAGTTCGGTACCAACTTGCCATAGGTTCCGAGGCTTGTACCGCAATGT  
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CAGCCAACACAAAACCTCTGCCGGAGCACGGAGAAGGCCGGAGAGTCAGAAAACACATGTGAAAAGTAT  
TTGTCTCCAGTACCAACTGTATCTACTTTTTGAACAGCCATTTCTTTTGCCTTTTAAAGAATAAGACTGGACT  
AACCATCTTCTTCTATGTGCTTATGTACCAAAGACAGAAGCAAATCACTGTAAGTGGTCAGACGTTCTG  
AAAGATTTGGAGCTGATCAAGACATCTGAAGACATTGATGTGAGTTTATATACTGCAAACACATACGAG  
GATATAGAATGCCAGGAACCTGTAATGAGATGTTTTTTTTTAGAGATGAAAGTGATTCTTCACGAATGTG  
ATATCAAAAAATGTAGTAGGAAGCATGATGTACGGAACATATGGAAAAATGGAAATGCAAGATTTGCA  
ACTTACCAGTTGAATTCACAACAGCAAAAAAATGCAAAGAATGTGAAGAGTATGAAGAAAAAATTTT  
ACAGAAATTTATACAGAGTTTTGTAAAGTTATACAGAGGGAATGCAAAAAATACGCTAACTAAATACG  
CAAGCTGGGAACAGTGACTTTTCAAGAAACATACCTCAGATAAATTAGATTGTCAATAACATTGAACTAA  
AAAGAACTTCACTTCTAGTCCTATTTGCACAGAATAAAAAAATAAAGAATAATAAAATCTCCNAAAAAAA  
AAAAAAAAAAAAAAAAAAAAA

**IL16**

**Complete CDS AJ508678**

ACTTCTCTACAGCTTCTGAATGCATAACTGCTGTTCCAGCGGGCAGAGATCAAGAAAGAAAACCAA  
TAGGAACTCCAGTTTCATCAATACGAAGGCCTGTCTTAAAAGGCAAGCACGGGTAGATTATACTCTGG  
ATACTACAACAGAAGATCCTTGGGTTAAGATTTCTGACTGCATTAAGCTTATTTAATCCTACCATGAG  
CGAAGACAACAGCCACTTAGATTTGCAACCCGGCATCGACGCAAATGAAGGACATGAAAATCGAAGCA  
GCTCAGAGGCAGTTCTGCAGAAATCAGAATCAGAAATAGTCAGTTCCAAAGTGCTAAAATCAGATGAAA  
ATGACGCTGTA AAAAAGGGCCCTCTGTTGCACCTAAGCCAGTCTGGTTTCGCCAAAGTCTGAAAGGAC  
TGAGGAAAGCGAATTCAGACCTCAAACCACAGGCAGATCAAAGTCCTTCTGACCTTCAGAGTGTTC  
CAAAGAAGTCAATCCAGTTTATCCCGTCTGTCTTCCAGGGGATCATCAATCAAACAGAGAATAAGTTC

ATTTGAATCTTTGAGTGCTCCGCAGTCACCTGAAAAAGTACACCGAAGGCTCAGCCCAAACCATCAGTC  
CAGAAGGAACAGTCTCCCTCTGCAAATGGTCAGAAGGGGCTCCAGACCATTTAGCCAAACCTTTCTCC  
AGTGCTCTGAAAATAGCCAACAACAGTCAAAGTCATCTGTGGTTATGGGTACAAAGAGCCTGGATAGAT  
CTTCTGTCCCAAGGACACCCTTACAGCCAGCTCAGAGAAAAGCAATGATGCCAACACCGAAAATCCTCC  
AGCTCTTCTCACTGCAGAAGCCATTGCAACTTCCCATGTAGCACCATTAGCAAAGTACACAACCTGAGA  
TCGCGAAGCTTTCCACTTACTGCCACCCAGTCTTGTGAGATGATGAAGACGTTTGATGAAAAATATAGCA  
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GTCCCTTCTGGAACACTGCATGGGAAGCTGTGGACACGTTGTCTCAGACCTCTGTAGAAGAGGATGGG  
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GCATCCGCTGTGTCTGGGCAGTCTGTCTCTCTGCTTTCCCTGAAGAGTTAGCAAAGCTCATAGAGG  
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CCAGACAAGCTGTTGTTGCTACTAGAAAAGCAAAGATGGAGAAAAAGTCACAACGTTTCAATTGGCT  
CTAGCACATCTTCAAGTGGCAAGTGCCTCACAAGAATCAACAAGTGGAGAAACAATCTGCACTATAAC  
TCTAGACAAAACAGCTGCTGTTTGGGCTTCAAGTCTGGAAGGTGGGAAGGGCTCTATTTCATGGAGATAA  
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TGAGCTACTACAGGTGCACACCACAGCCTTGCAAGGACTCACTCGTTTTGAAGCATGGAATATAATCAA  
GGCATTACCTGATGGACCTATCACAGCTATCATCAAAGAAAGAATCCAAGCTCTGTTACCAAGAAGGC  
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TATCACTTACAGACATCTGGCTAGCATGGCGAGGACTCTGAACTGTATATGAAAGGTACATACAAGTT  
TACTGCCTGTTAGAGAAAGCTGTTTGGGATCAAATGAGAAGATGTGAACAAAACGTACATGATTACTAT  
TTCAGCAAATTGTTTCAAGTGTGAAATGATAACAAAATAACTTTATAAATAATATACTGGTTGTAAAAAAA  
AAAAAAAAAAAAAAAA

## IL17

### Complete CDS AJ493595

GACTAGTTCTAGCGGACGCGTGGGTCGCCAGCACAAGCATCAGCTGCAGCAAGAAAAGGAAGATGTC  
TCCGATCCCTTATTCTCCTCTGTTTCCAGCCACTGCTGTTGGTGTGCTGGCCATGTTGTAGCCAGCATTT  
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TGCTTAACCCAAAAGATGGAAAATCCCCAACTGTGAGAGTCAACATAAGCATCAGCAACATGAAC  
CAGGATACCAAAGTGACCCTTGATATCAGCAAACGCTCACTGGCTCCATGGGATTACAGGATCGATGAG  
GACCACAACCGCTTCCCCGCTTGGTTGCTGATGCCAGTGCCGCCATTCCAGGTGCGTGAAGTCCGGCTG  
GGCAGCTGGACCACAGCGTCAACTCCGTGCCATCAAACAGGAGATCCTCGTCCCTCCGCCGAGCCGA  
AGGGCTGCCAGCACTCGTACCGCCTGGAGAAGAAAATGATCACCGTGGGCTGCACGTGTGTCACCCAC  
TGATCCAGCACCAAGGCTTAAAGGGAGCCACAGCACAGGAGTGGGGAGCTGCAGGAGAAGTGCCTTGC  
CTAACAGCGATGAAAATCCACAGAGCTGAGCCAGGCCGTAACGATTAGCAAGAGTCTCAGCTTTGTGCT  
TATTTGGTTTTGTTTTAAGTCCCTTTTCCCCTGTAAACTCTGAATTAGGAATGCAGCCCCTTCCAACGTG  
CTCCATGAGAAGAGTGGTGGGAAAGCTTTACAGTCTTCACTCGACACTTCGAAAAGCCTATTTATTTTA  
ATCTATTTATGCTGATAACAAGTTTGTAGATATCTATGTTTATTTATCTCTACGCAATAATAATAAAA  
AAAAATCAAACAGCAAAAAAAAAAAAAAAAAAAAA

**IL17-D**

**Complete CDS EF570583**

ATGCTAATGAATCTTTATTACTTGCTTCCCTGTAGAATTTTCGTATGACCCCAAGATACCCTAAATACAT  
TCCCGAAGCATACTGTCTGTGCAAGGGCTGCCTCATGGGGATCTTTGGTGAGGAGAATTTTCACTTCCGC  
AGCACCCCGTGTACATGCCACCGTCATCCTGCGCCGACCTCCTTTCGCTGGAGGCCGCTATGTGT  
ACACGGAAGACTACGTCACTATCCCAGTGGGCTGCACTTGTGTGCCTGAGCAAGAAAAGGAGGCCGAA  
GACGTAAATTCAGCATAGACAAGCAAGAAATGAAGTTGCTGGTCAACCAGAACAAGCCGTCATCGGA  
ATGA

**IL18**

**Complete CDS AJ277865**

AAGATGAGCTGTGAAGAGATCGCTGTGTGTGCAGTACGGCTTAGAGAAAACCTCTGCCTCTATTTTGAA  
GATGATGAGCTGGAATGCGATGCCTTTTGTAAAGATAAACTATCAAACGATTCTTTTCGAAACGTCAATA  
GCCAGTTGCTTGTGGTTCGTCCAGATTTAAACGTGGCAGCTTTTGAAGATGTAACAGATCAGGAGGTGA  
AATCTGGCAGTGAATGTACTTCGACATTCACTGTTACAAAACCACCGCGCCTTCAGCAGGGATGCCTGT  
TGCATTCAGCGTCCAGGTAGAAGATAAGAGTTACTACATGTGTTGTGAGAAAGAGCATGGGAAAATGG  
TTGTTTCGATTTAGGGAAGGAGAAGTTCCCAAAGACATTCCTGGTGAAAGTAACATCATATTTTTCAAAA  
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TTGAGGAAGAAGACTCCTTAAGAAAATAATTTTAAAGAACTGCCGAGAGAAGATGAAGTTGATGAA  
ACCACAAAATTCGTAACAAGTCATAATGAAAGGCACAACCTATGATATATTTCTACACTCTTAAACATA  
ATTTGTCTTTTTATGAAAGAAGTCTAATTCATCAAATACAGGAAGACAATTGATATTTTCATATATTTAC  
ATATAGCCAGCTACAGTAACAGTCCAAA

**IL-21R**

**Complete CDS NM\_001030640**

ACACTGGGTGCTACTCTCACTCAGTGCTCATGAGAGCCACCTGCTCTCCATCTCCACATGCAGTGTCTGC  
GGTCCCAGTAACCATTTAGCCAGGCCAGTCCGGCCAAGGGAGAGTTGGAGGGCTGACATGGACAGCTG  
AAAGGACGGGGCAAGGACATCCAGTCAGAACCAAAATGAGGAACAACTATGGCTCCAGAGTATTTCC  
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CGTGTGCACTGTGGACATGACTGAGCTGCTGGCAGACATCAGAGTCCAGGTGGATGCGACAGAGATAG  
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TGAATTTACACCTTGTAAGTCCAGTGCAACTGTAACCGCATGTACAAGGAACAAAAACATAACGGTGA  
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GTGCCTTGATCTGTCTGACCTGAGCTCACAGGACAAAATTCTGGCCTCGGGCTCTATGTCCACAGATCA  
CCTGAGGACTACAGGTGCCCCAGGCCACCAGAAAGTTGAAGGGGCTTTGGAAGGAGGGATGGGGAGC  
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GTTGACTTTGAATTTGAGCAAAATAGTCAGACCAACGCTGAGTCCGTTCCCTCTTGAGCAGGAGGGGGAG  
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CAAGAAAAGCAACTGTACCTTTAAAATTGCTCCCTGGCTTACACAGATGTGCAAATTTTTTTTTTTTGAAG  
TAAGCTTATAAATAGTACAGAACTTTAAAAGGATTTTCTTGGCATTCTCTCATGACTCAAGTTGGATGTA  
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AAAAAAAAAAAA

## LITAF

### Complete CDS AY765397

TCCGCTGTGGGGCGTGCAAGTGCCTCGCCACCAGGCTTCCCTTCTGAGGCATTTGGAAGCAGCGTTCGGGA  
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TCAGTCATATATCATGCTCTGCTCCTAGTGGCTTTCCCTGCCCATCTGCACCACCTTCATATGAGGAGACAG  
TAGGAATCAATGTGAACTATCCTCACCCCTACCCTGTCCACAACCTGGCCTCAGACCAGATGGGAAGG  
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GGTGCATAGCTGGCTGTTGCTTAATTCCTTTTGCCTTGTGCTCTGAAAGATGTGGAACACTTCTGTCC  
AAATTGCAATGCCACGTTGGTTCTTATAAGCGTTTATAGCCAGTGTGTAAGCACTAAGAGTTGATTAGC  
AACTCTTAAACCCATACTGAAGCTTAATGAAGGCTTCTAATA

## Lymphotactin

### Complete CDS AF006742

ATGAAACTCCACGCCACAGTTCTCCTGGTCATAGTCTGGCTTGGCGTCTTCGCTCTGCACACGGCAGAAG  
GAAGCGTTGCAAGTCAGTCAATGCGCAAATTATCCTGCGTAAATCTATCTACACAGAAAGTGGACATCA  
GAAGTATTGTCAACTATGAAAAGCAGAAAGTTCCAGTAGAAGCTGTCATGTTTATCACTGCAAATGGTA  
TCAGGATCTGTGTACACCCTGAACAGAAATGGGTGCAGTCTGCTATGAAGAGAATAGACAGAAGACGT  
ACTACCAGAAGAAGATAATCCTGTCTTGGCAGGCACCTGAGGCCAACAAAATGGAATAGTCATCACTG  
CCACACACAGCAGGGAAGAAAGCCTTGGTATCTGCTTTTAACTCCTACTGGCAATAAATTGTCTGAGCAA  
ACATGAACTTGTAGGCATCTATTAATCACTGGTTGAATGTCTGCCGGCTTCATATTATAGCTGGACTCTGT  
TACAACATTTATTGTCTGAAATGCTTGTCAATATTTATTTACAACCTGAATCTAAGTATTTTCTCATCTTTC  
TGTCATGACTAGTATAGGATTTAAGGGTGAACAGTAGATGGTTTACATGTTGCAGGGAAGAAAATTAC  
TTCTCACAGAGATGGAAAAGAGTAGATCTCCAAGCTGATGGGGGTGAATGTTCTGCAGTGAAGTCCGA  
GATCCAGAAGATTTCTGCATGATTTTACGGTTACTCAAACCTACATAAACTATAAGAAAAGCTGACCTCAT

GCATCAGGCAGTCACCTGAGCAGCGCCACATTCAGAAAGAAATCCTCGGGCTTTCTATTTCTACACGCAG  
TATTGTACTGTTGGCTCTGATTTTA

**MIF**

**Complete CDS M95776**

GCGCCATGCCTATGTTACCATCCACACCAACGTCTGCAAGGACGCCGTGCCCGACAGCCTGCTGGGCG  
AGCTGACCCAGCAGCTGGCCAAGGCCACCGGCAAGCCCGCGCAGTACATAGCCGTGCACATCGTACCT  
GATCAGATGATGTCCTTCGGGGGCTCCACGGATCCTTGCCTCTCTGCAGCCTCTACAGCATTGGCAAGA  
TTGGAGGGCAGCAGAACAAGACCTACACCAAGCTCCTGTGCGATATGATTGCGAAGCACTTGCACGTGT  
CTGCAGACAGGGTATACATCAATTACTTCGACATAAATGCTGCCAACGTGGGCTGGAACGGTTCCACCTT  
TGCATAGAGCTCTCCCTCCTGTGCCAGAGGCTGCTCCAGACCTCCCCTCGTGCTGCCCGTTAGAGATC  
ACCACACAGACGGCCCTGCGCTATGTTGTGTGCACTCACAGATGGATGGCTCCTTGTTAGTGTGTTTCAG  
TACTGCTGCTTCAACATTCCCTCTGTTTTCTCCGTGTAGAAAACAAATAAAGATTTAGAAAT

**TNFSF15 (TL1A)**

**Complete CDS NM\_001024578**

GCAGCTCGTACGCCAATTGCCGGCATGGATCACGGGGCTGAAATAACCCTGGAAGAGGCTTCGGCGAC  
CGGCCAAGCCTCCAGGATGCACATCAAGGAGGACCTGCGGAGGATGCGCTGCGCCGTGCTGCTCTGCC  
TGCTGGCCGTGCTGCTGCTGGCGCTGCCATCGCATACTGCTGGCCGGGAACCTGAGAGCACCCACCT  
CCTGCCCCCAGGTCGTGGATGAGAGGAGCTCTCACTTTCTGAAGCAGCGAGCAGTAGCTGCTGTTACAG  
ACACGCTTCCCAGCGCCGAGAAGCCAAGAGCACACCTGACAGTGAAGAAACAAGAACCCTCCAGCACC  
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GAGTTATTCCAGCAACGCACTGGTGATACCTGTGTCTGGGGATTACTATGTCTATGCTCAGGTCACTTTC  
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ACCCCGAGCCCACCCAGCTGCTGACCAGCACCAAGACCCTCAGTGAAGAAAGGAACAACCTGGTTCCAGC  
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GTAATTTTGCATGACCTTTCTCAGATTCTTAAAGGCAATTGCAATTAATAATTCCTTAAGCATAGTTCC  
GTACTTTGACTAATATAAAGCCCAGATTAATCATTAACTGCTTAATTAATCACTTCCAGTTTCCCTGTAA  
AGTAGATTAATAATCATATCATATGTTTTGCAGAATCTACCTGATTTTCTTTTATTTTCCAGGGTATTGTTTA  
CGGATACTTAAGTCAATGTGTAGGCTTTAGACCTTATTTAAAACCTTCTAGGGAACATGCAGAAAACGTTTT  
CGTTTCAGCATGGCCATGGAATCCCCCATCAGATCCAACATTAGGAAAACAGAAAAA

**RUMINANT**  
**(Bos taurus)**

Start and stop codons are underlined. Probable coding errors are highlighted in red.  
Nucleotides in lower case indicate deletions with respect to reference sequences.

Header format:

**(Gene Name)**

(Complete/Partial CDS) (Clone ID if available) (GenBank Accession Number if available)

**CCL2**

**Complete CDS TH033 EU276059**

GAATCCTCTCGCTGCAACATGAAGGTCTCCGCTGCCCTCTGTGCCTGCTACTCACAGTAGCTGCCTTCA  
GCACCGAGGTGCTCGCTCAGCCAGATGCAATTA~~ACT~~CCCAAGTCGCTGCTGCTATACATTCAACAGTAA  
GAAGATCTCCATGCAGAGGCTGATGAACTACAGAAGAGTCACCAGCAGCAAGTGTCTAAAGAGGCTG  
TGATTTTCAAGACCATCCTGGGCAAGGAGTTATGTGCAGACCCCAAGCAGAAATGGGTCCAGGACTCCA  
TAACTATCTTAACAAGAAAAACCAA~~ACT~~CCAAAGCCTTGAGC

**CCL5**

**Complete CDS TH021 EU276060**

CCATGAAGGTCTCTGCCACTGCCTTCGCTGTCTCCTGATGGCGGCCGCCCTCTGCGCTCCTGCTTCTGCC  
TCCCCATATGCCTCGGATACCACGCCCTGCTGCTTTGCCATATCTCCCGCCGCTGCCCGCACCCACGT  
CCAGGAGTATTTCTACACCAGCAGCAAGTGCTCCATGGCAGCAGTTGTCTTTATCACCAGGAAGAACCG  
CCAGGTGTGCGCCAACCCAGAGAAGAAGTGGGTGCGAGAGTACATCAACGCTTTGGAGTTGAGCTAGG  
GTGG

**CCL11**

**Complete CDS TH333 EU744565**

AGGAATCAGCAGCTCTCAGGCTGAAGCTGTCGACCTCGCCCCTCAACATGAAGGTCTCTGCAGTGCTCCT  
GTGTCTGCTGCTCACAGCCACCTCTGCAGCATCCAGGTGTTGGCTCAGCCAGCTTCTATTCCAACCATCT  
GCTGCTTTAATATGTCTAAAAAGAAGATCTCCATTCAGCGACTGCAGAGCTACAGAAAAATCACGAGCA  
GCAAATGTCCTCAGAAAGCTGTGATATTCAACACCAAACAGAACAAGAAAATCTGTGTGATCCCCAGG  
AGAAGTGGGTCCAGAATGCCATGGAGTACCTGAACCAAAAATCCCAA~~ACT~~TTAAAGTCATAAATATTCA  
CCTTAAAAAAAAAAAAAAAAAATTCACCTTTTAAAGAGCCTCAAAGGCTTGGTTCAC

**CCR7**

**Complete CDS AY834253**

ATGACCTGGGGAAGCCAATGAAGAACGTGTTGGTGGTGGCCCTTCTCGTCATTTTCCAGGTGTGC-  
CTCTGCCAAGATGAGGTACGGACAATTACATCGGAGACAACACCACGGTGGACTACACGCTGTAC-  
GAGTCCGTGTGCTTCAAGAAGGACGTGCGGAACTTCAAAGCCTGGTTCCTCCCGATCATGTACTCCAT-  
CATTTGCTTCGTGGGCCTTCTGGGCAACGGGCTGGTCATGCTGACCTACATCTATTTCAAGAGGCTCAA-  
GACCATGACTGATACGTACCTGCTCAACCTAGCCCTGGCAGACATTCTTCTTCTGACCCTCCC-  
CTTCTGGGCATACAGCGCAGCCAAGTCCTGGGTCTTTGGGGTCCACGTTTGCAAGCTCATCTTTG-  
GCATCTACAAGATAAGCTTCTTCAGTGGCATGCTCCTGCTGCTATGCATCAGCATCGACCGCTACGTTGC-

CATCGTCCAGGCCGTCTCGGCCACCGCCACCGTGCCCGTGTCTTCTCATCAGCAAGCTCTCCTGC-  
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GAGCAGCAGCGAGCAGGCACTGCGGTGCTCCCTCGTCACCGAGCACGTGGAGGCCTTGATCAC-  
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CATCATCCGCACCCTGCTCCAGGCACGCAACTTCGAGCGCAACAAGGCCATCAAGGTGATCATTGCT-  
GTGGTCGTGGTCTTCGTAGCCTTCCAGCTGCCCTACAACGGGGTGGTTCTGGCCATACGGTGGC-  
CAACTTCAACATCACCAGCGGCACCAGCTGCGAGCTCAGCAAGCAACTCAACATCGCCTACGATGTCAC-  
CTACAGCCTGGCCTGCGTCCGCTGCTGTGTCAACCCTTCTTGTACGCCTTCATTGGCGTCAAGTTC-  
CGCAGCGACCTCTCAAGCTCTTCAAGGACCTGGGCTGCCTCAGCCAGGAGCAGCTCCGGCAGTGGTC-  
CTTCTGCCGGCACACCCGACGGTCCTCCATGAGTGTGGAGGCTGAGACCACCACCACCTTCTCCCCGTAG

### **CXCL9**

#### **Complete CDS TH006 EU276061**

GGAGTGATTTACCCCTACCAATATGAAGAAAAGTGCTCCTCTCTTTTTGGGTATCATCTTCTGACTCTGA  
CTGGAGTTCAAGGAGTTCCAGCAATAAGGAATGGACGCTGTTCTGCATCAACACCAGCCAAGGGATGA  
TCCATCCAAAATCCTTAAAGGACCTTAAACAATTTGCTCCAAGCCCTTCTTGTGAGAAAATGAAATCATT  
GCTACAATGAAGAATGGGAATGAAGCCTGCCTAAACCCAGATTTACCAGAAGTAAAGAATGATTAA  
GAGTGGGAGAAAACAGGTCAACCAAAAGAAAAAGCAAAGGAAAGGGAAAAAATATAAAAAACCAAGA  
AAGTTCCAAAAGTAAAAGATCTCAACGTCTTCTCAAAGAAGACTACATGAGCTCCCACTTCACC

### **CXCL10**

#### **Complete CDS TH013 EU276062**

AGTTGCAGCACCATGAACAAAAGCGGTTTTCTATTTTCTGCCTTATCCTTCTGACTCTGAGTCAAGGTGT  
ACCTCTCTCTAGGAATACACGCTGTTCTGCATCGAGATCAGTAATGGATCTGTTAATCCAAGTCCCTTA  
GAAAACTTGAAGTCATTCTGCAAGTCAATCCTGCCACGTGTGAGATTATTGCCACAATGAAAAAGA  
ATGGGGAGAAAAGATGTCTGAATCCAGAATCTAAGACCATCAAGAATTTACTGAAAGCAATTAACAAGC  
AAAGGACTAAAAGATCTCCTCGAACACGAAAGAGGCATAAATCACTGCACTACTGATAAGGATGGACC  
AGAGAGAAGC

### **CXCL11**

#### **Complete CDS TH011 EU276063**

CAGCAGCAACAAGCATGAGTGTGAAGGGCATGGCTATAGTCTGACTGTGATATTATGTGCTGCAATTG  
TTCAAGGTTTCCCTATGTTCAAAGGCGGACGGTGTCTTTGCATAGGCCCTGGAGTAAAAGCAGTCAAAG  
TGCCAGATATTGAGAAAGTCTCTATAATTTACCCAATAAATACTGTGACAAAACAGAAGTGATTATCAC  
CCTGAAAACACATAAAGGACAAAGATGCTTAAATCCCAAGGCAAAGCAAGCGAAAGCTATTATCAAGAA  
AGTTCAAAGAAAGAATTCTGAAAAATATAAAAAATATGAAATCCTGGAAAAGAGGATCTGAAAACC

### **IFN-alpha-A**

#### **Complete CDS TH001 EU276064**

ACAGAGTCACCCACCTACCAGGCCAAAGCATCTGCAAGGTCCCCGATGGCCCCAGCCTGGTCCCTCCTG  
CTATCCCTGTTGCTGCTCAGCTGCAACGCCATCTGCTCTCTGGGTTGCCACCTGCCTCACACCCACAGCCT  
GGCCAACAGGAGGGTCTGATGCTCCTGCAACAAGTGAAGGGTCTCCCTTCTCCTGCCTGCAGGA  
CAGAAATGACTTCGAATTCCTCCAGGAGGCTCTGGGTGGCAGCCAGTTGCAGAAGGCTCAAGCCATCTC  
TGTGCTCCACGAGGTGACCCAGCACACCTCCAGCTCTCAGCACAGAGGGCTCGCCCGCCACGTGGGA

CAAGAGCCTCCTGGACAAGCTACGCGCTGCGCTGGATCAGCAGCTCACTGACCTGCAAGCCTGTCTGAC  
GCAGGAGGAGGGGCTGCGAGGGGCTCCCCTGCTCAAGGAGGACTCCAGCCTGGCTGTGAGGAAATAC  
TTCCACAGACTCACTCTCTATCTGCAAGAGAAGAGACACAGCCCTTGTGCCTGGGAGGTTGTCAGAGCA  
GAAGTCATGAGAGCCTTCTCTTCTCAACAACTTGCAGGAGAGTTTCAGGAGAAAGGACTGACACACA  
CCTGGTC

#### **IFN-beta**

##### **Complete CDS TH113 EU276065**

GTAGCCCTGTTGCCTGATTTTCATCATGACCTACCGGTGCCTCCTCCAGATGGTTCTCCTGCTGTGTTTCTC  
CACCACAGCTCTTTCCAGGAGCTACAGCTTGCTTCGATTCCAACAACGTCAGAGCCTTAAAGAGTGTCAG  
AAACTCCTGGGGCAGTTACCTTCAACTCCTCAACATTGCCTCGAGGCCAGGATGGACTTCCAGATGCCTG  
AGGAGATGAAGCAAGAACAGCAGTTCCAGAAGGAAGATGCCATATTGGTCATGTATGAGGTGCTCCAG  
CACATCTTCGGCATTCTCACCAGAGACTTCTCCAGCACTGGCTGGTCTGAGACCATCATCGAGGACCTCC  
TTGAGGAACCTATGGGCAGATGAATCGTCTGCAGCCAATCCAGAAGGAAATAATGCAGAAGCAAAAC  
ACCACAGCGGGAGACACGATCGTTCCCCACCTAGGGAAATATTACTTCAACCTCATGCAGTACCTGGAG  
TCCAAGGAGTACGACAGGTGTGCCTGGACAGTCGTGCAAGTGCAAATACTCACGAACGTTTCTTCTG  
ATGAGACTAACAGGTTACGTCCGTGACTGAACATCTCCACCTGTGGCTCTGGGAAGGGACAATGTG

#### **IFN-gamma**

##### **Complete CDS TH030 EU276066**

CCGGCCTAACTCTCTCCTAAACAATGAAATATACAAGCTATTTCTTAGCTTTACTGCTCTGTGGGCTTTTG  
GGTTTTCTGGTTCTTATGGCCAGGGCCAATTTTTAGAGAAATAGAAACTTAAAGGAGTATTTAATG  
CAAGTAGCCAGATGTAGCTAAGGGTGGCCTCTCTTCTCAGAAATTTGAAGAATTGGAAAGATGAAA  
GTGACAAAAAATCATTACAGAGCCAAATTGTCTCCTTCTACTTCAAACCTTTGAAAACCTCAAAGATAAC  
CAGGTCATTCAAAGGAGCATGGATATCATCAAGCAAGACATGTTTCAGAAGTTCTTGAATGGCAGCTCT  
GAGAACTGGAGGACTTCAAAAAGCTGATTCAAATTCGGTGGATGATCTGCAGATCCAGCGCAAAGCC  
ATAAATGAACTCATCAAAGTGATGAATGACCTGTACCAAAAATCTAACCTCAGAAAGCGGAAGAGAAGT  
CAGAATCTCTTTCGAGGCCGGAGAGCATCAATGTAATGGTCCTCCTGCCTGCAATATTT

#### **IL1-beta**

##### **Complete CDS TH024 EU276067**

CTTCATTGCCAGGTTTCTGAAACAGCCATGGCAACCGTACCTGAACCCATCAACGAAATGATGGCTTAC  
TACAGTGACGAGAATGAGCTGTTATTTGAGGCTGATGGCCCTAAACAGATGAAGAGCTGCATCCAACAC  
CTGGACCTCGGTTCCATGGGAGATGGAAACATCCAGCTGCAGATTTCTCACCAGTTCTACAACAAAAGCT  
TCAGGCAGGTGGTGTGCGTCATCGTGGCCATGGAGAAGCTGAGGAACAGTGCCTACGCACATGTCTTCC  
ATGATGATGACCTGAGGAGCATCCTTTCATTTCATCTTTGAAGAAGAGCCTGTCATCTTCGAAACGTCCTC  
CGACGAGTTTCTGTGTGACGCACCCGTGCAGTCAATAAAGTGCAAACCTCCAGGACAGAGAGCAAAAATC  
CCTGGTGTGGCTAGCCCATGTGTGCTGAAGGCTCTCCACCTCCTCTCACAGGAAATGAACCGAGAAGT  
GGTGTCTGCATGAGCTTTGTGCAAGGAGAGGAAAGAGACAACAAGATTCTGTGGCCTTGGGTATCA  
AGGACAAGAATCTATACCTGTCTTGTGTGAAAAAAGGTGATACGCCACCCTGCAGCTGGAGGAAGTAG  
ACCCCAAAGTCTACCCCAAGAGGAATATGGAAAAAGCGCTTTGTCTTCTACAAGACAGAAATCAAGAATA  
CAGTTGAATTTGAGTCTGTCTGTACCCTAACTGGTACATCAGCACTTCTCAAATCGAAGAAAGGCCCGT

CTTCCTGGGACATTTTCGAGGTGGCCAGGATATAACTGACTTCAGAATGGAAACCCTCTCTCCCTAAAGA  
AAGCCATACCCAGGG

**IL2**

**Complete CDS TH036 EU276068**

GTCAGCAATGTACAAGATACTCTTGTCTTGCATTGCACTAACTCTTGCCTCGTTGCAAACGGTGCA  
CCTACTTCAAGCTCTACGGGGAACACAATGAAAGAAGTGAAGTCATTGCTGCTGGATTTACAGTTGCTTT  
TGGAGAAAGTAAAAATCCTGAGAACCTCAAGCTCTCCAGGATGCATACATTTGACTTTTACGTGCCAA  
GGTTAACGCTACAGAATTGAAACATCTTAAGTGTACTAGAAAGAACTCAAACCTTAGAGGAAGTGCTA  
AATTTAGCTCCAAGCAAAAACCTGAACCCAGAGAGATCAAGGATTCAATGGACAATATCAAGAGAATC  
GTTTTGGAACACTACAGGGATCTGAAACAAGATTCACATGTGAATATGATGATGCAACAGTAAACGCTGTA  
GAATTTCTGAACAAATGGATTACCTTTTGTCAAAGCATCTACTCAACAATGACTTGATCACTAAGTGCCTC  
TC

**IL4**

**Complete CDS TH106 EU276069**

GTCTCACATTGTTTCAGTGCAAATAGAGATACTATTAATGGGTCTCACCTCCCAGCTGATCCCAGTGCTGG  
TCTGCTTACTGGTATGTACCAGTCACTTCGTCCATGGACACAAGTGTGATATTACCTTAGCAGAGATCAT  
CAAAACGCTGAACATCCTCACAACGAGAAAGAATTCATGCATGGAGCTGCCTGTAGCAGACGTCTTTGC  
TGCCCCAAAGAACAACAACCTGAGAAGGAAACCTTCTGCAGGGTTGGAATTGAGCTTAGGCGTATCTACAG  
GAGCCACACGTGCTTGAACAAATCCTGGGCGGACTTGACAGGAATCTCAACAGCTTGGCAAGCAAGAC  
CTGTTCTGTGAATGAAGCCAAGACGAGCACAAGTACGCTGAAAGACCTCTTGAAAGGCTAAAGACGA  
TTATGAAGGAGAAATACTCCAAGTGTGAAGCTGAA

**IL5**

**Complete CDS TH185 EU276070**

ATGAGAATGCATCTGCATTTGACTTTAGTAGCTCTTGGAGCTGCTTATGTTTGTGCCAATGCTGTAGAAA  
GTACCATGAATAGACTGGTGGCAGAGACCTTGACACTGCTCTCCTCTCATCGAACTCTGCTGATAGGTGA  
TGGAACTTGATGATTCTACTCCTCAGCATACAAATCACCAACTGTGCATTGAAGAAGTCTTTCAGGGA  
ATAGACACATTGAAGAATCAAACCTGCACAAGGGGATGCTGTGAAAAAATATTCCAAAACCTGTCTTTA  
ATAAAAGAATACATAGACCTCCAAAAAAGGAAGTGTGGAGGAGAAAGATGGAGAGTGAACAATTCCT  
AGACTACCTGCAAGTTTTTCTTGGTGTGATTAACACAGAGTGGACAATGGAAAGTIGA

**IL6**

**Complete CDS TH039 EU276071**

CAGCTATGAACTCCCGCTTACAAGCGCCTTCACTCCATTCGCTGTCTCCCTGGGGCTGCTCCTGGTGAT  
GACTTCTGCTTTCCCTACCCCGGGTCCCCTGGGAGAAGATTTCAAAAATGACACCACCCAGGCAGACTA  
CTTCTGACCACTCCAGAGAAAACCGAAGCTCTCATTAAAGCGCATGGTCGACAAAATCTCTGCAATGAGA  
AAGGAGATATGTGAGAAGAATGATGAGTGTGAAAGCAGCAAGGAGACACTGGCAGAAAATAAGCTGA  
ATCTTCAAAAATGGAGGAAAAGGACGGATGCTTCCAATCTGGGTTCAATCAGGCGATTTGCTTGATCA  
GAACCACTGCTGGTCTTCTGGAGTATCAGATATACCTGGACTACCTCCAGAACGAGTATGAGGGAAATC  
AGGAAAATGTCAGGGATTTGAGGAAAATATCAGAACAATGATCCAGATCCTGAAGCAAAAGATCGCA  
GATCTAATAACCACTCCAGCCACAAACACTGACCTGCTGGAGAAGATGCAGTCTTCAAACGAGTGGGTA

AAGAACGCAAAGATTATCCTCATCCTGAGAAACCTTGAGAATTCCTGCAGTTCAGCCTGAGAGCTATTC  
GGATGAAGTAGCTGGGGCTC

**IL7**

**Complete CDS TH110 EU276072**

CTGCAGCTTGCAGTTCATCATGACCACGCTCGCTCCCGCAGACCATGTTCCATGTTTCTTTTAGGTATATCT  
TTGGAATTCCTCCCCTGATCCTTGTCTGTTGCCAGTAGCATCATCTGATTGTGATATTAGCGGTAAAGAC  
GGTGGAGCATATCAGAATGTTCTAATGGTCAACATCGATGACTTGGACAACATGATAAACTTTGATAGC  
AATTGCCTGAATAACGAACCTAACTTTTTTAAAAAACATTCATGTGATGATAATAAGGAAGCTTCATTTTT  
GAATCGTGCTTCTCGAAAGTTGAGGCAATTCCTTAAATGAATATCAGTGATGATTTCAAGCTTCACCTA  
TCAACAGTTTCACAGGGCACATTAACACTGCTGAACTGCACCAGCAAGGGTAAAGGAAGAAAACCCACCT  
TCCCTGAGTGAAGCTCAACCCACTAAGAATTTGGAAGAGAATAAATCTTCAAAGGAACAGAAAAACAG  
AATGACCTGTGTTTCTAAAGATACTACTACAAAAGATAAAAACCTTGTGGAATAAAATTTTGAGGGGCA  
TTAAAGAACACTGAAAATATGGAGTAGCAATATAAAACCTTGAGCTTTATTTGTGTCCTCCAAGAATCTA  
TCCGC

**IL8**

**Complete CDS TH018 EU276073**

AACAAGAGCCAGAAGAAACCTGACAAAAAGCCTCTTGTTCAAATATGACTTCCAAGCTGGCTGTTGCTCT  
CTTGGCAGCTTTCTGCTCTCTGCAGCTCTGTGTGAAGCTGCAGTTCGTCAAGAATGAGTACAGAACTT  
CGATGCCAATGCATAAAAACACATTCACACCTTTCCACCCCAAATTTATCAAAGAATTGAGAGTTATTG  
AGAGTGGGCCACACTGTGAAAATTCAGAAATCATTGTTAAGCTTACCAATGGAAACGAGGTCTGCTTAA  
ACCCCAAGGAAAAGTGGGTGCAGAAGTTGTGCAGGATTTGTGAAGAGAGCTGAGAAGCAAGATCCA  
TGA

**IL10**

**Complete CDS TH104 EU276074**

ATGCATAGCTCAGCACTACTCTGTTGCCTGGTCTTCTGGCTGGGGTGGCAGCCAGCCGAGATGCGAGC  
ACCCTGTCTGACAGCAGCTGTATCCACTTGCCAACCAGCCTGCCCCACATGCTGCGGGAGCTCCGAGCTG  
CCTTCGGCAAGGTGAAGACTTTCTTTCAAATGAAGGACCAACTGCACAGCTTACTGTTGACCCAGTCTCT  
GCTGGATGACTTTAAAGGTTACCTGGGTTGCCAAGCCTTGTGCGAAATGATCCAGTTTTACCTGGAAGA  
GGTATGCCACAGGCTGAGAACCACGGGCTGACATCAAGGAGCACGTGAACTACTGGGGGAGAAG  
CTGAAGACCCTCCGGCTGCGGCTGCGGCTGTCATCGCTTTCTGCCCTGCGAAAACAAGAGCAAGGCG  
GTGGAGAAGGTGAAGAGAGTCTTCAGTGAGCTCCAAGAGAGGGGTGTCTACAAAGCCATGAGTGAGTT  
TGACATCTTCATCAACTACATAGAAACCTACATGACAACGAAGATGCAAAAGTGAAGCATTCTAGGGAA  
GAAGACCTCCAGGATGGTGA

**IL12p35**

**Complete CDS TH180 EU276075**

ATGTTGCCCCGTTTCGCAGCCTCCTCCTCATATCCACCCTGGTTCTCCTCCACCACCTGCCCCACCTCAGTTT  
GGGCAGGAGCCTCCCCACCACACAGCAAGCCCAGGAAGGAGCTGCCTCGACTACTCCCAAACCTGCT  
GAGGGCTGTCAGCAACACGCTACAGAAGGCCAGACAACTCTAGAATTTTACTCCTGCACTTCTGAGGA  
GATCGATCATGAAGATATCACCAAAGATAAAAACCAGCACAGTGGAGGCCTGTTTACCACTGGAATTAGC  
CACGAATGAGAGTTGCCTGGCTTCCAGAGAGACCTCTTTATAACTAATGGGCATTGTCTGGCTTCTGGA

AAGACCTCTTTTATGACAACCCTGTGCCTTAGAAGTATCTATGAGGACTTGAAGATGTACCACGTGGAGT  
TCCAGGCCATGAATGCAAAGCTTCTGATGGATCCTAAGAGGCAAATCTTTCTAGACCAGAACATGCTGG  
CAGCTATTGCTGAGCTGATGCAGGCCCTGAATTCGACAGTGAGACTGTGCCACAGAAACCCTCCCTGA  
AAGAACTGGATTTTTACAAGACAAAAGTCAAGCTCTGCATCCTTCTTCACGCCTTCAGAATTCGTGCGGT  
GACCATCGACAGAATGATGAGCTATCTGAGTTCTTCCTAG

### IL12p40

#### Complete CDS TH043 EU276076

ATGCACCCTCAGCAGTTGGTCGTTTCCTGGTTTTCCCTGGTTTTGCTGGCATCTCCCATCGTGGCCATGTG  
GGAAGTGGAGAAAATGTTTATGTTGTAGAATTGGATTGGTATCCTGATGCTCCTGGAGAAACAGTGGT  
CCTCACATGTGACACTCCTGAAGAAGATGGCATCACCTGGACCTCAGACCAGAGCAGTGAGGTCTTGGG  
CTCTGGCAAACCTTGACCATCCAAGTCAAAGAGTTTGGAGATGCTGGGCAGTACACCTGTCAAAGG  
AGGCGAGGCTCTGAGTCGTTCACTCCTCTGCTGCACAAAAGGAAGATGGAATTTGGTCCACTGATAT  
TTTAAAGGATCAGAAAGAACCCTAAGAGTTTTTAAAATGTGAGGCAAAGGATTATTCTGGACA  
CTTCACCTGCTGGTGGCTGACAGCAATCAGTACTGATTTGAAATTCAGTGTCAAAGCAGCAGAGGCTC  
CTCTGACCCCCGAGGGGTGACGTGCGGAGCAGCGTTGCTCTCAGCAGAGAAGGTCAGCTTGGAGCACA  
GGGAGTATAACAAGTACACAGTGGAGTGTGAGGAGGGCAGCGCCTGCCAGCCGCTGAGGAGAGCCT  
GCTTATTGAGGTCGTGGTGTAGAAGCTGTGCACAAGCTCAAGTATGAAAACACTACACCAGCAGCTTCTTCATC  
AGGGACATCATCAAACCAGACCCACCCAAGAACCTGCAACTGAGACCATTAAGAATTCTCGGCAGGTG  
GAGGTCAGCTGGGAGTACCCTGACACGTGGAGCACCCCGCATTCTACTTCTCCCTGACGTTTTGTGTTT  
AGGTCCAGGGAAAGAACAAGAGAGAAAAGAACTCTTCATGGACCAAACCTCAGCCAAAGTCACATGC  
CACAAGGATGCCAACGTCCGCGTGCAAGCCCGGACCGCTACTACAGCTCATTCTGGAGTGAATGGGC  
ATCTGTGCCTGCAGTAG

### IL13

#### Complete CDS TH029 EU276077

ATGCGTCTGCTCCTCAATTTCTCCTGTGCTGTTCTAGGCTCCATGGCGCTCTTATTGACCGCGGTCATTG  
TTCTTATCTGCTTTGGTGGCCTCACCTCCCCAAGCCCTGTGCCTTCTGCTACAGCCCTCAAGGAGCTCATT  
GAAGAGCTGGTTAATATCACCCAGAACCAGAAGGTGCCGCTGTGCAATGGCAGCATGGTGTGGAGCCT  
CAACCTGACGAGCAGCATGTACTGTGCAGCCCTGGACTCCCTGATCAGCATCTCCAACTGCAGTGTGCATC  
CAAAGGACCAAGAGGATGCTGAATGCACTCTGTCCCTACAAGCCCTCAGCTAAGCAGTTTTCCAGTGAG  
TACGTCCGAGACACCAAATTGAAGTGGCCAGTTCTTAAAAGACCTGCTCAGACATTCAAGGATCGTTT  
TTCGCAATGAAAGATTCAACTGA

### IL15

#### Partial CDS VLM094 EU682380

CCATATTTGAGAAGTACTTCCATCCAGTGCTACTTGTGTTTACTTCTGAACAGTCATTTTTTAAACAGAGGC  
TGGCATTGATGCTTTCAATTTGGGCTGTATCAGTGCAAGTCTTCCAAAACAGAAGCAAACCTGGCAGTAT  
GTAATAAATGATTTGAAAACAATTGAGCATCTTATTCAATCTATACATATGGATGCCACTTTATATACTGA  
AAGTGATGCTCATCCCAATTGCAAAGTAACAGCGATGCAGTGCTTTCTCCTGGAGTTACGAGTTATTTTA  
CACGAGTCCAAAATGCCACCATTTATGAAATAATAGAAAATCTTACCATGCTAGCAAACAGCAATTTAT  
CTTCTATTGAGAATAAAACAGAATTGGGATGCAAAGAATGTGAGGAACTGGAGGAAAAAAGTATCAAA  
GAATTTTTGAAGAGTTTTGTACATATTGTGCAAATGTTTCATCAACACTTCT

**IL17****Complete CDS VLM096 EU682381**

ATGGCTTCTATGAGAACTTCATCTATGTCACTGCTACTGCTTCTGAGTCTGGTGGCTCTTGTGAAGGCAG  
GAGTCATCATCCCACAGAGTCCAGGCTGCCACCTACTGAGGACAAGAACTTCCCGCAGCATGTGAGGG  
TCAACCTAAACATCGTTAACCGGAGCACAACTCCAGAAGGCCACCGATTATCACAAGCGCTCCACCTC  
ACCTTGGACTCTCCACCGCAATGAGGACCCTGAGAGGTACCCCTCTGTGATCTGGGAGGCCAAGTGCAG  
CCACTCAGGCTGTATCAATGCTGAAGGCAAGGTGGACCATCACATGAACTCTGTCACCATCCAGCAAGA  
GATCCTGGTCTCCGAAGGGAGTCTCAGCACTGCCCTCACTCCTCCGGCTGGAGAAGATGCTGGTGGC  
CGTGGGCTGCACCTGCGTCACCCCAATTGTCCGCCATTTGGCTTAAGAGCTTTCTGCCTGACCCCTACTCC  
CCAAATTAGTTAGTTTCTGGGGAGTAGGCCAGCCCCTTTTCTAACTAACATCATTTATGTATTTAATA  
AGCCCTGAAATAACTTTGGGGCATAAGATTCCAATTTGATGTATTACATGCTTTATTTTCTATTCTTTAAG  
ACAAGTTTCCAGATTTGTGAATATTATTAAAGGTAGAACCTATATTTATATGAGCTATTTATGGAT  
CTATTTATGTTTCATTAGTCTTTAGAAAAAAGGTGAAATATATGAGTATCTGTTTTGCCTAGGGAAA

**IL18****Complete CDS TH047 EU276078**

ATGGCTGCAGAACAAGTAGAAGATTATTGCATCAGCTTTGTGGAAATGAAATTTATTAACAATACACTTT  
ATTTTGTAGCTGAAAATGATGAAGACCTGGAATCAGATCACTTTGGCAAACCTGAACCTAAGCTCTCAAT  
CATACGAAATTTGAATGACCAAGTTCTCTTCATTAACCAGGGAAATCAACCTGTCTTTGAGGATATGCCT  
GATTCTGACTGTTTCAAGATAATGCACCCAGACCATATTTATCATATATATGTATAAGGACAGCCTCACTA  
GAGGTCTGGCCGTAACCATCTCTGTGCAGTGTAAGAAAATGTCTACTCTCTCTGTGAGAACAAAATTGT  
TTCCTTTAAGGAAATGAATCCTCTGATAACATTGATAATGAAGAAAGTGACATCATATTCTTTCAAAGA  
AGTGTCCAGGACATGATGATAAGATACAATTTGAGTCTTCATTGTACAAAGGGTACTTTCTAGCTTGTA  
AAAAAGAGAATGACCTTTTCAAACCTATTTTGA AAAAACAGGATGATAATAGAGATAAATCTGTAATGTT  
CACTGTTCAAACCCAGAACTAGATATTTAAATGAT

**IL23****Partial CDS CC13 EU616677**

ATGCTGGGGAACAGAGCTGTGATGCTGCTGCTGCTACTGCTGCCCTGGACAGCTCAGGGCCGGGCT  
GTGTCAGAGGACAGCAGCCCTGCTTGGACTCGGGGCCAACAGCTCTCACAGCAACTCTGCATGCTGGCC  
TGGAGTGCACACCTACCAATGGGACATATGGATCTACCAAGAGAAGAAGGAGGTGATAAGACTACAGA  
TGATGTCCCCCGTATCCAGTGTGAGGATGGCTGTGATCCACAAGGACTCAGGGACAACAGTCAGTCCTG  
CTTGCAAAGAATTCATCGAGGCCTGGTTTTTACGAGAAGCTGCTGGGCTCAGATATTTTACAGGGGA  
GCCTTCTACTCCCAAATGGCCCTGTGGACCAGCTTCACGCCTCCATACTGGGCCTCAGGGAACTCTTG  
CAGCCCAAGGGTCACCACTGGGAACTGAGCAGACTCCAAGCCCTATCCCAGCCAGCCATGGCAGCGC  
CTCCTTCTCCGTCTCAAGATCCTTCGAAGCCTCCAGGCCTTTGTGGCCGTAGCTGCCCGGGTCTTTGCCCA  
CGGAGCAGCAACTCTGAGCCCTA

**IL23R****Complete CDS EU616678**

ATGAATCAGGTCACAATTCATTGGGACGTGGTAATAGCTCTCTACATATTCTTCAGTTGGTGTGTCATG-  
GAGGGATTACAAATATAAACTGCTCTGGACACATCTGGGTAGAACCTGCCACAATTTTTAA-  
GATGGGTATGAATATCTCTATATATTGCCAAGCAGCAATTAAGAAGCTGCCAACCAAGTAACTTTATTTT-  
TATAAAAATGGCATCAAAGAAAGATTTTATATCACAAGAATCAATAAAAACAACAGCTCGCCTTTG-

GTATAACAACCTTTGTGGAGCCACAAGCCTTTGTGTACTGTACTGCTGAATGTTCCAGATATTTTCCAGA-  
GACTGATATGTGGAAAAGACATTTCTTCTGGATATCCACCAGATGTACCTGACAAAGTAGCCTGTGT-  
CATTTATGAATATTCTGGCAACATGACTTGTACCTGGAACCCTGGGAGGCCACCTACATAGACA-  
CAAAGTATGTGGTGTACGTGAAGAGTTTAGAGACAGAAGAAGAGCAAGAATATCTCACTTCAAGTTA-  
CATTAACTCTCCACTGATTCATTGCAAAGGGCAAGAAGTATTTGGTTTGGGTCCAAGCTTCAAAT-  
GTTCTGGGCATGGAGAAGTCGAAACAACACTACAAATTCATCTGGACGATATAGTGATACCTTCTGCATC-  
CATTATTTCCAGGGCTGAGGATATAAATACTACAGTGTCCAAGACTGTAATCCACTGGGATAGTCAAA-  
CATCAATTGAAAAAGTTTCTGTGAAATGAGATACAAAGATACAACAAACCAAACTTGGAACGTTAAA-  
GAATTTGATACCAATTTTACATACGAGCAACAGTCAGAATTCTACTTGCAGCCAAATGCTATGTATG-  
TATTTCAAGTGAGATGTCAAGAAACAGGTAAAAAGTACTGGCAGCCCTGGAGTTCACC-  
CTTTTTTCATAAAACTCCTGAAATAGTTCCTCAGGTCACAATGAAATCATTCCAACATGATACTCA-  
GAATTCTGGACTTCTAATTGCTTCCATCTTTAAAAACATCTTACTTCTGACAACAGGAAAGACATTG-  
GACTTTTATTGGGAATGGTCTTCTTTGCTGTTATGCTGTCAGTTCTATCTTTGATTGGGATATTTAACA-  
GATCGCTTCCAAGTGGGATTAAGAAGAATCTTATTGCTAATACCAAATGGCTCTATGAAGATATTC-  
CTAATATGGAAAACAGTAAAGTTGTGAAAATCCTTCAGGAAAGAAATGAGTTTATGAATAA-  
CAATTCAGCGAACAGGTCTATATGTTGATCCGGTGATTACAGAGATAGAAATCATTCTCCAGAA-  
GAAAACCCATGGGCTACAAGAAAGAAAACAATACAGGATGCCTGGAGAGAAAAGAGAGCCTGGA-  
GAAATCACTACTCACCGACGCTACAGTTGTTTATATTCTGATCTCAACACTGGGTATAAACCCCA-  
GATTTCAAGTTTTCTCCCTGGGGGAAACCATCTCAGCAATGATGATGAAACAGCTTCTCAATTCTG-  
GAACCACCAGCTGATTCCTTAACTTGGGAAACAATGCCAGGTTTAAAAAATATCCT-  
GATTTTGCTTTTTCTGTCTCAAGTACAAATCACTAAGCAACACACTATTTCTTGAAGAATTAACCT-  
CATTTTAAATCAAGGAGAATGCAGTCTCCGGACATGCAAAACTCAATAGAGGGGGAAACTGCCAT-  
GCTTCTGGAAGATGCATTACTGAATGAAACTATTCCAGAACAAACTCTGCTGCCTGATGAATTTGTCTC-  
CTGTTTGGGGAGCATGAACAAAGAGTTGCCATCTATTAATTCTTACTTTCCACAAAATATTTTGGAAAGC-  
CACTTCAATCGGATTTCACTCTTAGAAAAGTAG

### **TNF-alpha**

#### **Complete CDS TH016 EU276079**

TCTCCCGTCTGGACTTGAACCCTTCTGAAAAAGACACCATGAGCACCAAAGCATGATCCGGGATGTGG  
AGCTGGCGGAGGAGGTGCTCTCCGAGAAAGCAGGGGGCCCCAGGGCTCCAGAAGTTGCTTGTGCCTC  
AGCCTCTTCTCCTTCTCCTGTTGTCAGGAGCCACCAGCTCTTCTGCCTGCTGCACTTCGGGGTAATCGG  
CCCCAGAGGGAAGAGTCCCAGGTGGCCCCTCCATCAACAGCCCTCTGGTTCAGACACTCAGGTCTCT  
TCTCAAGCCTCAAGTAACAAGCCGGTAGCCACGTTGTAGCCGACATCAACTCTCCGGGGCAGCTCCGG  
TGGTGGGACTCGTATGCCAATGCCCTCATGGCCAACGGTGTGAAGCTGGAAGACAACCAGCTGGTGGT  
GCCTGCTGACGGGCTTTACCTCATCTACTCACAGGTCTCTTCAGGGGCAAGGCTGCCCTTCCACCCCT  
TGTTCTCACCCACACCATCAGCCGATTGCAGTCTCCTACCAGACCAAGGTCAACATCCTGTCTGCCATC  
AAGAGCCCTTGCCACAGGGAGACCCAGAGTGGGCTGAGGCCAAGCCCTGGTACGAACCCATCTACCA  
GGGAGGAGTCTTCCAGCTGGAGAAGGGAGATCGCCTCAGTGCTGAGATCAACCTGCCGGACTACCTGG  
ACTATGCCGAGTCTGGGCAGGTCTACTTTGGAATCATCGCACTGTGA

### **TCR delta V1**

#### **Partial CDS CH304**

TGGCCAGAAGGTTACTCAAGACCAGCCAGCTATATCCACCCAAGTGGGGCAGTCAGTCACCCTGAATT  
GTCGGTATGAAACAAGTTGGAGTTATTACAACCTTTTTTGGTACAAGCAACTTCCAGTGGACAGATGAC

TTACCTTATTCAACAGTATTCAGAACACGGCAATGCAAGGAACGGTCGCTATTCTGTAACTTTCAGAAA  
GCAGATAAATCCATCAGCCTCATCATTTTCATCCTTACAGCTGGAAGATTCTGCAAAGTACTTCTGTGCTCT  
CTATGTACAGGATTTACGAGTTCTCGGTGGGATGCAGAATCCACTAATATTTGGCAAAGGAACCTATCTG  
AACGTGGAACCCAGAAAGTCAACCTGCTGCCAGCCCATCTGTTTTTGTGATGAAAAATGGGACAAACGTC  
GCTTGTGGGTGAAGGAGTTCTACCCCAAAGATGTAAGTATAAGTCTGCAATCATCCAAGAAAATAATAG  
AATATGACCCGGCTATTGCCATCTCACCTGGGGGGAAGTACAGTGCTGTCAAGCTTGGTCAATATGGAG  
ACCCCGATTGAGTACATGTTTCGGTTGAACACAACAAGCAAACCTGGCACTCTACTGACTTTGAACAAA  
GAAACTATTCCAGAAACAACCTCCAAAACCGATGGCATATGAAAACAGCACAAAAGCTGAAGCTCCAGT  
GACCTGCCAAGAGCCCCAAGTGAACCCGGGAAGGTGAACATGATGTCCCTCTCGGTGCTGGGGCTCC  
GAATGCTGTTTGC

### **TCR delta V2**

#### **Partial CDS CH306**

ATGCTCTGCCCTGGCCTGCTGTGGGTGTTTCATGGCTACCTTTGGCTTCAGATCCAGCATGGCTGACAAAG  
TACTGAAGCTCAGACTACGGTAACAGCACGGGAAAGAGAACTGTGACCATAGGCTGCACGTATGAA  
ACCTCTCGGACTTATTATACTTTGTTCTGGTACAGACAGTTTCCCGGTGGAAGGATGGAATTCCTTATTCA  
TCAGGATAGTAATAATGCAAATGCAAGGAGGGATCGCTACTCTGTAAACTTTCAAAGGGAAAAAAAT  
CATCAGCCTCACCATCTCTTCTTGTACCTGGCTGACTCAGCAAAGTATTTCTGTGTTCTCTGGGAAGAGG  
ACTGGGGGTGGGGTGGGGTACTCCAGAACGTACGTGGGACCCTGACTGACAAGCTCATCTTTGGAAAA  
GGGACCCGCCTCATCGTGGAACCAAAAAGTCAACCTGCTGCCAGCCCATCTGTTTTTGTGATGAAAAATG  
GGACAAACGTCGCTTGTGGTGAAGGAGTTCTACCCCAAAGATGTAAGTATAAGTCTGCAATCATCCAA  
GAAAATAATAGAATATGACCCGGCTATTGCCATCTCACCTGGGGGGAAGTACAGTGCTGTCAAGCTTGG  
TCAATATGGAGACCCCGATTGAGTACATGTTTCGGTTGAACACAACAAGCAAACCTGGCACTCTACTGA  
CTTTGAACCAAAGAAAACCTATTCCAGAAACAACCTCCAAAACCGATGGCATATGAAAACAGCACAAAAGC  
TGAAGCTCCAGTGACCTGCCAAGAGCCCCAAGTGAACCCGGGAAGGTGAACATGATGTCCCTCTCGGT  
GCTGGGGCTCCNAATGCTGTTTGC

### **TCR delta V3**

#### **Partial CDS CH312**

ATGCAGTCTGGACCGCCTTCTCTCCTGTGCACAGTCGTGGCCCTCATCTGCCTTGGTTCCAACAATGTTGA  
GAGCGCCGATGTACCTACAGTGTAAAAGGAGGGGAATCCGTGACCGTGAATGCAAGTTCTCAG  
TCAGCTATACTTACTATATGATGTACTGGTATCGACAGCCTTCCAGCGGAGAGATGATTTACATGATTAA  
TATTTATTCTCAAATAAGCATTCAAGGGAAGGACGATATTCTGTGGAATTTAACAAACCCAACCAAATG  
CTGAAACTCACCATCTCAGCCTTGACGCTGAGTACTCGGCCATCTATTTCTGTGCTGTGAGAGAGTACA  
GCGTACGGTGGGGTGCATGATGGGATACGCTATCCACTAATATTTGGCAAAGGAACCTATCTGAACGTGG  
AACCAGAAAGTCAACCTGCTGCCAGCCCATCTGTTTTTGTGATGAAAAATGGGACAAACGTCGCTTGT  
GGTGAAGGAGTTCTACCCCAAAGATGTAAGTATAAGTCTGCAATCATCCAAGAAAATAATAGAATATGA  
CCCGGCTATTGCCATCTCACCTGGGGGGAAGTACAGTGCTGTCAAGCTTGGTCAATATGGAGACCCCGA  
TTCAGTGACATGTTTCGGTTGAACACAACAAGCAAACCTGGCACTCTACTGACTTTGAACCAAAGAAAAC  
ATTCCAGAAACAACCTCCAAAACCGATGGCATATGAAAACAGCACAAAAGCTGAAGCTCCAGTGACCTGC  
CAAGAGCCCCAAGTGAACCCGGGAAGGTGAACATGATGTCCCTCTCGGTGCTGGGGCTCCGAATGCT  
GTTTGC

## TCR delta V4

### Partial CDS CH325

ATGTTTCTCCCTGTGGGCTTCAGCCTTTTGCTTTTCTACAAGGGCGTGCTGTGTAACCAAGTGACCCAGA  
GTTCCCCGGAGCAGAGAGTGGCGAGTGGCAGTGAGGTGACACTGCTCTGCACCTTCCAAACCACATATT  
CAGATCCAGACTTATACTGGTACCGAAAAAGGCCAGATGGTGTCTTCCAGTTTGCCTGTACAGGGACA  
ACACTAGATCCTATGATGCAGATTTTGCTCGGGGTAGATTTACCGTGCTGCATAGCATGAGCCAAAAA  
CCTTCCACTTGGTGATCTCCTCCGTGAGGCCTGAAGACACTGCCACTTACTACTGTGCTTTGAGGCTCCGT  
GAGAGCGTACGGGACTGGGGCGCTGACAAGCTCATCTTTGGAAAAGGGACCCGCCTCATCGTGGAACC  
AAAAAGTCAACCTGCTGCCAGCCCATCTGTTTTTGTGATGAAAAATGGGACAAACGTCGTTGTTTGGTG  
AAGGAGTTCTACCCAAAGATGTAATAAGTCTGCAATCATCAAGAAAATAATAGAATATGACCCG  
GCTATTGCCATCTCACCTGGGGGAAGTACAGTGCTGTCAAGCTTGGTCAATATGGAGACCCCGATTCA  
GTGACATGTTTCGGTTGAACACAACAAGCAAACCTGGCACTCTACTGACTTTGAACCAAAGAAAATTC  
CAGAAACAACCTCCNAAACCGATGGCATATGAAAACAGCACAAAAGCTGAAGCTCCAGTGACCTGCCAG  
AGCCCAAGTGCANCCGGNANGTGACATG

## TCR gamma V2-C3

### Partial CDS CH03

GCNTTNGTTGAAATCATTTGTGATCTTATTACCCAAACCCTCAAATATATCCACTGGTACAAGTACCAGG  
AGGGCACAGCTCCTCGACGCCTTCTTACTACGACATCTCCTACTCAAAGGTTGTGTTGGAATCAGGAGT  
CAGTGAAGGGAAGTACAAAGTTTATAAAGAGAAGAGCTATACTTTTGAATCTTAAACCTGCAAGAAAG  
TGATTCTGGAATGTACTACTGTGCTGCCTGGGAGAAGAAGAAGATATTTGGAAAAGCAACTGAGCTCAT  
AGTAGCTCCTCCTGATAGAGACCTTGATATAGACATGTCCCCAAGCCCACTATGTTTCTTCTTCGATTA  
CTGAAATCAAGCATGATAATACTGGAACATATCTTTGTCTTCTGGAGAATTTTTTCCCTCATGTTATTAAG  
GTTTATTGGAGAGAAAAAGAGGCAACAGAGTTTTGCCATCCCAGCAGGGAAATACTGTGAAGACTGC  
TGACACATACATGAAGTTCAGCTGGCTGACCGTGTCTGAAAACCTCCATGGATAAAGAACACATATGTATC  
GTCAAACATGAGAAAAATAAAGAGGAGATAATCAAGAGATTCTTTTTCCGCCAGTGAATGAAGTTGTC  
TCTTCAGTTGTCACTGCTACTAAACCTCCAAATGATGGTTTGAAGGATAAAAAAAAACAAGTCCCTGTTG  
TAAATTCTACAAAAGCATGTCTGAAAGATGAAAACAATACCCTGCAGCTGCACCTCATGAACACCTCTGC  
CTATTACACATACCTCCTCCTCATTACGAGCACGGTCTACCTTGTGTCATCATCACCTCCTGTGTGTTGAG  
GAGAACAGGCGTCTGCGGCATTGAGAAGAGCTCGTGATAGAGGGGCCCCATAAGANGATCAACGTTCC  
TTCATCATCTATGGNCTCNAAAAGCTCTGCTCANAATCTAGCCTGG

## TCR gamma V8-C3

### Partial CDS CH03

ACAAGTTGTGATCATGAGGGCTACTGGGTCATCTGTTGTAATCGATTGTGATCTTACAGGAAGCTATAT  
CCACTGGTACAAATTCAGGAGGGAGCTGTACCCCGACGCCTCCTCTACTACGATGTCTACTACTCAAAG  
GTTGAGTTGGATTGAGGAATCAGTGAAGGAAATATCGTGTTTACAAAGGCAAAATTTAATCTCCAAC  
TGCAAGAAAGTGATTCTGGCACCTACTACTGTGCTGTCTTTTCGTGCAGGCTGGAAGAAGATATTTGGAA  
AAGCAACTGAGCTCATAGTAGTCTCCTGATAGAGACCTTGATATAGACATGTCCCCAAGCCCACTAT  
GTTTCTTCTTCGATTACTGAAATCAAGCATGATAATACTGGAACATATCTTTGTCTTCTGGAGAATTTTT  
CCCTCATGTTATTAAGGTTTATTGGAGAGAAAAAGAGGCAACAGAGTTTTGCCATCCCAGCAGGGGAAA  
TACCGTGAAGACTGCTGACACATACATGAAGTTCAGCTGGCTGACCGTGTCTGAAAACCTCCATGGATAA  
AGAACACATATGTATCGTCAAACATGAGAAAAATAAAGAGGAGATAATCAAGAGATTCTTTTTCCGCC  
AGTGAATGAAGTTGTCTTTCAGTTGTCACTGCTACTAAACCTCCAAATGATGGTTTGAAGGATAAAAAA

AAACAAGTCCCTGTTGTAAATTCTACAAAAGCATGTCTGAAAGATGAAAACAATACCCTGCAGCTGCACC  
TCATGAACACCTCTGCCTATTACACATACCTCCTCCTCATTACGAGCACGGTCTACCTTGTCATCATCA  
CCTCCTGTGTGTTCCAGGAGAACAGGCGTCTGCGGCATTCANAAGAGCTCGTGATAGAGGGGCCCCATA  
ANAGGATCAACGTTCTTCATCATCTATGGTCNCNAAAAGCTCTGCTCANANTCTAGCCNGG

### **TCR gamma V3-C5**

#### **Partial CDS CH06**

ATGTCACCATTGGAAGCATTACATTTTTCTCCTTCTGGACTTTTGGACATGGGTTATCAAAAAGTGGAGC  
AGGCCAGATCTCCCTTCCACAGAAGCAAAGAAAAGTATTGACATACATTGCAAGATAGAGAGCACAA  
ATTTTGAATCAGACACTGTTCACTGGTACCGGCAGAAATTGAATCAGGTTTTGGAGCATCTGGTTTATGT  
GACCTCAATCACAACCTGCAGCTCGAAAACAAGTAGATGGGAAGAACAAAATTGAGGCAAGAAAAGATG  
CTCGAATGTTCACTTCGACCCTTACGGTAAATTTATAGAAAAGAAGATGTGGGCATTTACTACTGTGC  
TGGCTGGTGGTGGGGCAGTTCAACCTGGATCAAGGTATTTGGTGAAGGAACTAAGCTCGTAGTAATACC  
TCCTGATAGAAGGCTTGATGGAGACTTATTTCCCAAGCCACTATATTTTTTCTTCAGTTGAGGAAGTAA  
AACTCCACGGGGCTGGAACACATCTTTCCTTCTCAGAATTTTTTCCCTGATGCTATTAAGATACAATGG  
AAAGAAAAGAATGTCAATACAATTCTGGAATCTTATCAGGGAAATATCATCAAGACTAATGACACATAC  
ATGAAATTCAGCTGGCTAACCTTGACTAAAAGGCAATGGATAAAGAACATGTATGTATCGTCAAACAT  
GAGAATAACAAAGGAGGACGTGATCAACAGATTCTTTTTTCTCCAGTTAAAAAAGAGGTCGATACACAT  
GCCTGCATGAAAAAAGAAAGTGATACCCTGCAGCTGCAGTTTGCGAACACCTCTGCCcTACTATACCTAC  
CTCCTCCTCCTCCTCAAGAGCATGATCTACTTCTCCATC

### **TCR gamma V4-C5**

#### **Partial CDS CH05**

CGTTGTGCACTGGTATCAAGAGAAAGAAGGGGAGCCCCTGAAACGAATCCTTTATGGCTCAGCTAACAG  
TTATAAGCTGGACAAACCTAATTCCTGCTGGAGATAGATAACAAAAGAACGGAATCTTTTACCTGATA  
ATCAATAATGTTGTCAAGTCCGATGAAGCCACTACTACTGTGCCTGCTGGGATCAGTGGAGTTCAACCT  
GGATCAAGGTATTTGGTGAAGGAACTAAGCTCGTAGTAATACCTCCTGATAGAAGGCTTGATGGAGACT  
TATTTCCCAAGCCACTATATTTTTTCTTCAGTTGAGGAAGTAAAACCTCCACGGGGCTGGAACACATCTT  
TGCTTCTTCAGAATTTTTTCCCTGATGCTATTAAGATACAACGAAAGAAAGGAATGTCAATACAATTCT  
GGAATCTTATCAGGGAAATATCATCAAGACTAATGACACATACATGAAATTCAGCTGGCTAACCTTGACT  
AAAAGGCAATGGATAAAGAACGTGTATGTATCGTCAAACATGAGAATAACAAAGGAGGACGTGATCA  
ACAGATTCTTTTTTCTCCAGTTAAAAAAGAGGTCGATACACATGCCTGCATGAAAAAAGAAAGTGATACC  
CTGCAGCTGCAGTTTGCGAACACCTCTGCCTACTATACCTACCTCCTCCTCCCCCTCAAGAGCATGATCTA  
NTTGNCCATC

### **TCR gamma V7-C5**

#### **Partial CDS CH02**

ATGGCATTCTGGAAGCGGTCTCCTCTCCTCCTCCTGCTTTTTGGCCTTGGGCAATTAACCTTGGTGC  
AACTGAAGTATCAGTTACTGGAACAAGAGAAAAGAGTATAATTATGTCTTGCAAGGTGTTCTTAAGGA  
CTTTAGCAAAGATTACATCCACTGGTACCGGCAAAAACCAGATCAAGGTTTGGAACAGCTGCTTTTTGT  
TTAGATGCCCTGCGCTAAACGACTTGGGAGGGAAAGAAAAGCAGGCTTGAGGCCAGAAAAGATAAAC  
CTCTTCCACTTCTACCTGAAAATAAGTTTCTTAGAGAAAGAAGATGAGGCCACATACTACTGTGCCGGC  
TGGTTGCTCGCCTACAGTTCAACCTGGATCAAGGTATTTGGTGAAGGAACTAAGCTCGTAGTAATACCTC  
CTGATAGAAGGCTTGATGGAGACTTATTTCCCAAGCCACTATATTTTTTCTTCAGTTGAGGAAGTAAA

ACTCCACGGGGCTGGAACACATCTTTGCCTTCTTCAGAATTTTTCCCTGATGCTATTAAGATACAATGGA  
AAGAAAAGAATGTCAATACAATTCTGGAATCTTATCAGGGAAATATCATCAAGACTAATGACACATACAT  
GAAATTCAGCTGGCTAACCTTGACTAAAAAGGCAATGGATAAAGAACATGTATGTATCGTCAAACACGA  
GAATAACAAAGGAGGACGTGATCAACAGATTCTTTTTCTCCAGTTAAAAAAGAGGTCGCTACACATGC  
CTGCATGAAAAAAGAAAGTGATACCCTGCAGCTGCAGTTTGCGAACACCTCTGCCTATTATACCTACCTC  
CTCCTCCTCCTCANGAGCATGATCTACTTCTCCATC

## SWINE

Start and stop codons are underlined. Probable coding errors are highlighted in red. Nucleotides in lower case indicate deletions with respect to reference sequences.

Header format:

**(Gene Name)**

(Complete/Partial CDS) (Clone ID if available) (GenBank Accession Number if available)

### CCL2

**Complete CDS DT636 (note: this replaces DT304) EU682382**

ATGAAGGTCTCTGCAGCCCTCCTGTGCCTGCTGCTCACTGCAGCCACCTTCTGCACCCAGGTCTTGCCCA  
GCCAGATGCAATTAATTCTCCAGTCACCTGCTGCTATACACTTACCAGTAAGAAGATCTCGATGCAGCGG  
CTGATGAGCTACAGAAGAGTCACCAGCAGCAAGTGTCTAAAGAAGCAGTGATCTTCAAGACCATCGCG  
GGCAAGGAGATCTGTGCAGAACCCAAGCAGAAGTGGGTCCAGGACTCCATAAGCCACCTGGACAAGAA  
AAACCAA~~ACT~~CCGAAGCCTTGA

### CCL3L1

**Complete CDS DT401 EU364893**

ATGAAGGTGCGCGTGGCTGCTCTCGCCATCCTCCTGCGCCATGGCCCTCTGCAGCCAGGTCTTCTCTG  
CACCCTTGGCGCCGACACCCCAACGGCCTGCTGCTTCTCCTATACCTCCCGGCAGCTTCTCTGCAAATTC  
GTAGCCGACTATTTTGTAGACCAGCAGCCAGTGTCCAAGCCCGGGTGCATCTTCCAAACCAAAAAAGGC  
CGGGAGGTCTGTGCCAACCCCGAGGATGCCTGGGTCCAGGAATACATCTCTGACCTGGAGCTGAATGCC  
TGA

### CCL4

**Complete CDS TH409 (replaces DT426 EU364894)**

ATGAAGCTCTGCGTGACTGTCTCTCCCTCCTGGTCTGGTGCCTGCTGCTTCTGCTCTCCAGCGCTCTCAGC  
ACCAATGGGCTCAGACCCTCCACCTCCTGCTGCTTACATAACCGTGC~~GG~~AAGCTTCTCGCAACTTC  
GTGACTGATTACTATGAGACCAGCAGCCTCTGCTCCAGCCAGCCGTGGTATTCCAGACCAAAAAGGC  
AGGCAGGTCTGCGCCAACCCAGTGATGACTGGGTCCAGGAGTACATGGATGACTTGGAACTGAACTG  
A

### CCL5

**Partial CDS DT515 EU744561**

TCCCCATATGCCTCGGACACCACACCCTGCTGTTTTCTACCTCTCCCGCCCGCTGCCCCGCGCCACCT  
CCAGGAATATTTCTACACCAGCAGCAAGTGTCCATGGCAGCAGTCGTCTTATCACCAGAAAGAACCG  
CCAGGTGTGTGCCAACCCAGAGAAGAAATGGGTGCGGGAGTACATCAACACTTTGGAGATGAGCTAG

### CXCL9

**Complete CDS TH400 (replaces DT305) EU364897**

GACTCAGTGGAAACACTACAGAAGTGACTGTTCTACCACTATGAAGAAAAGCAGTGTTGCCTTGCTTT  
TGGGTATCATCTTCTGACTCTGATTGGAGTTCAAGGAACCCCTACTAATGAGGAATGGACGTTGTTCTTG  
CATCAACACCAGCCAAAGGATGATCCATTTAAAATCCTTAAGGGATCTTAAACAATTGCCCCAAGCCCT

TCTTGTGAGAAAATGGAAGTCATTGCTACAATGAAGAATGGGGATCAAACATGTCTAAACCCAGATTCA  
CCAGATGTGAAAAAATTGATTAAGAGTGGGAGAAACAGGTCAGCCTAAAGAAAAAGCAAAGAAAG  
GAAAAACATCCAAAACCAAGAAAGTTCGAAAAGTTAAAAATCTCAACGTCCTGATCAAAAAGAAGAT  
GACATGAGGGACCATGTTACCAACAAGTATTCTG

#### **CXCL10**

##### **Complete CDS DT308 EU364898**

ATGAACCAAAGTGCTGTTCTTATTTTCTGCCTTATTCTTCTGACTCTGAGTGGAECTCAAGGAATACCTCT  
CTCCAGAACTGTTGCTGTACCTGCATCAAGATCAGTGACAGACCTGTTAATCCGAGGTCCTTAGAAAA  
CTTGAAATGATTCTGCAAGTCAATCTTGCCACATGTTGAGATCATTGCCACAATGAAAAAGAATGGG  
GAGAAAAGATGTCTGAATCCAGAGTCTAAGACCATCAAGAATTTACTGAAAGCAATTAGCAAAGAAAG  
GTCTAAAAGATCTCTCGAACACAGAGAGAAGCATAAA

#### **CXCL11**

##### **Complete CDS TH404 EU682377**

ATGGGTGTGAAGGGCATGGCTATAGTCTTGGCTGTCATATTTTGTGCTACAATATTCAAGGCTTCCCCA  
TGTTCAAAGCGGAAGGTGTCTTTGCATTGGCCCTGGAGTAAAAGCAGTGAAAGTGGCAGATATTGAG  
AAAGTCTCATAATTCACCAAGTAACAACCTGTGACAAAACAGAAGTGATTGTCACCCTGAAAGCACATA  
AAGGACGAAGATGCCTAAATCCCAAATCAAAGCAAGCAAATGTTATAATGAAGAAAGTTGAAAGAATG  
AATTTCTAAGATATCAAATGTATGA

#### **IFN-alpha**

##### **Complete CDS DT316 EU364896**

CCCACCTCAGCCAGGACAGAAGCATCTGCAAGTTCCCAATGGCCCCAACCTCAGCCTTCTCACGGCCC  
TGGTGCTACTCAGCTGCAATGCCATCTGCTCTCTGGGCTGTGACCTGCCTCAGACCCACAGCCTGGCTCA  
CACCAGGGCCCTGAGGCTCTGGCACAATGAGGAGAATCTCTCCCTTCTCCTGCCTGGACCACAGAAG  
GGACTTTGGATCCCCTCATGAGGCTTTTGGGGCAACCAGGTCCAGAAGGCTCAAGCCATGGCTCTGGT  
GCATGAGATGCTCCAGCAGACCTTCCAGCTCTTCAGCACAGAGGGCTCGGCTGCTGCCTGGAATGAGAG  
CCTCCTGCACCAGTTCTGCACTGGACTGGATCAGCAGCTCAGGGACCTGGAAGCCTGTGTCATGCAGGA  
GGCGGGGCTGGAAGGGACCCCCCTGCTGGAGGAGGACTCCATCCTGGCTGTGAGGAAATACTTCCACA  
GACTCACCTCTATCTGCAAGAGAAGAGCTACAGCCCCTGTGCCTGGGAGATCGTCAGGGCAGAAGTCA  
TGAGATCCTTCTTCTCCAGAAACCTGCAAGACAGACTCAGGAAGAAGGAGTGACCAGACACCTGGTT  
CATCATAGAAATGCTTCTTAC

#### **IFN-beta**

##### **Partial CDS DT627 EU744562**

AGCTATGATGTGCTTCGATACCAACAAAGGAGCAGCAATTTGGCATGTCAGAAGCTCCTGGGACAGTTG  
CCTGGGACTCCTCAATATTGCCTCGAAGATAGGATGAACTTTGAGGTCCCTGAGGAGATTATGCAACCA  
CCACAATTCAGAAGGAAGATGCAGTATTGATTATCCACGAGATGCTCCAGCAGATCTTCGGCATTCTCA  
GAAGAAATTTCTTAGCACTGGCTGGAATGAAACCGTCATTAAGACTATCCTTGTGGAACCTGATGGGC  
AGATGGATGACCTGGAGACAATCCTGGAGGAAATCATGGAGGAGGAAAATTTCCCAGGGGAGACAT  
GACCATTCTTACCTGAAGAAATATTACTTGAGCATTCTGCAGTACCTGAAGTCCAAGGAGTACAGAAGC  
TGTGCCTGGACAGTCGTCCAAGTGGAAATCCTCAGGAACTTTTCTTCTTAAACAGACTTACAGATTACCT  
CCGGAACTGA

**IL-4R alpha**

**Complete CDS AY266143**

ATGGGGTGGCTTTGCCCTGGGCTCACGTTCTCCGTGAGCTGCCTGATCCTGGTGTGGGCAGCAGGCTCT  
GGGGTCACTGTGTCTCCCCAGGGGGCGTCAGGGTCTGGAGTGGCCATCTGCCTATCCGACTATGTC  
AGCACCTCTACCTGTGAGTGGAGGATGGCCGGCCTGTCAACTGCAGCGCTGAGTTCCGCCTGTCTAT  
CAGCTTAAATTCTTCAACACTGAAAACCACACCACGTGTGTCCCCGAGAACAGAGCAGGCTCAGTGTGC  
GTCTGCCATATGCTGATGGAGAGCATTGTCATTGTGGACACCTACCAGCTGGACCTGTGGGCCGGGGAA  
CAGCTGCTGTGGAACAGCTCCTTCAAGCCCAGCCAGAACGTGAAACCCCTGGCCCCAGAAACCTCATG  
GTTACAGCCAACATCTCCACACCTGGCTGCTGACGTGGAGCAACCCGTACCCTTCTGAGAGCTACCTGT  
ACTCGAACTCACCTACCTGGTCAACATCTCCAATGAGAACGACCCACGGATTTCAGAATCTATAACGT  
GACCTACCTGGGGCCCACCCTCCGATTCCAGCCAACACCCTGAAGTCCGGAGCTGCTTACAGCGCACG  
CGTGAAGCCTGGGCTCAGAGATAACAACAGCACCTGGAGTGAAGTGGAGCCCAGTGTCAAGTGGCTTA  
ACTACTATGAGGAGCCCCTGGAGCAGCGCCTCCCGCTCGGCGTCAGCATCTCCTGCGTTGTCATCTTGAT  
CATCTGCCTGTCTGCTATTTTCGGCATCATCAGAATTAAGAAAGAATGGTGGGACCAAATCCCAACCCA  
GCCACAGCCCCCTTGTGGCCATTGTCATCCAAGATTCTCAGGTGTCACTGTGGGGTAAGCGGTCCCCTG  
GTCAGGAACCAGCCAAGTGGCCACGCTGGAAGACTTGTCTTACCAAGCTCCTGCCCTGTTTCTGGAGCA  
TGGCGTGGACAGGGATGAGGATTCCTCGAAGGCTGCCAGAAATGGGCCTTCCAGGGTCTGCAAAG  
CAGCATGGCGCCCCGTAGAGGTCAGCAAGACGATCCTCTGGCCAGAGAGCATCAGCGTGGTGCGGTGC  
GTGGAGCTGTTTGAAGGCCAGGTGGAGAATGAGGAAGAGGAAGAGGAGGAAGACAAAGGGAGCTTC  
TGCCCATCGCCGAGAACAGCGGGGGCAGCTTCCAGGAGGGCAGAGAGGGCATCGCAGCCCCGCTGA  
CAGAGAGCCTGTTTCTTGACCTTCTCGGGGATGAGAGTGGGGCCTTTAGCCCCCAGGGCATGGGACAGT  
CCTGCCTTCTCCACCTTTGGAAAACGCCAGTGCCCCGATGCCCTGGGCGGAGTTCCCAAGGGTGGGAT  
CCCCGAGGCATCGTCCAGGGCAAGGAGCAGCCTTTGAACCCAGAGCCAAGTCTCAGGCCACCCCGA  
CCCAGAGCCTAGCCAGCCTGGCTTTCCAGAGCTGCCTGCTGTCATCGCCGACAACCCCGCCTACCGCAG  
CTTACAGCACCTTCTGAGCCAGTCTCAGATCCCGGAGAGCTGGACTCGGACCCAGAGCTGGCGGAAGC  
CCTGGAGGAAGTGGAGCCCAGCCTCCCTGCTGCCCCAGCCCTCTGAGCCACCCCTACACTCCAGCCT  
GAGCCAGAAACCTGGGAGCAGATCCTGCGCCAGAGTGTCTCCAGCGCAGGGCGGCCCCGGCCCCCGC  
CTCGGGCCCCAGCAGCAGCGGCTACCGGGAGTTTGTGCACGCAGTGGAGCAGGGCACTCAGGATCGCA  
GGGCGGCGGGCTCTGGCCCTTGTGGAGAAGCTGGCTACAAGGCTTTCTCCAGCTTGCTTGTGGCAGTG  
CCAGCTGCCAGGGACATCTGGGCTTGAACCCAGCAGTGGGGAGAGCGGCTACAAGCCCTTCCAGAGC  
CTCCCTCCTGGCTGCCCGAGACCCCGTCCCTACCCCTGTTACCTTTGGACTGGACATGGAGCCCC  
TCCCAGCCCTCAGAACCCACCCTTCCCAGGCAGCTCTGCAGAGTGCCCTGGCTTGGAGCCAGCGGTCAA  
AGGAGAAGATGGCCAGAAGCCCCGCTGGCCCTGGAGCAGGCCGCCGATCCCCTCAGGGATGACCTGG  
GCAGCGGCATTGTCTATTACGCCCTCACCTGCCACCTGTGCGGCCACCTGAAGCAGTGCCACGGCCAGG  
AGGACGGTGGCAAGGTCCACGTGGTGGCCAGCCCCTGCTGTAGCTGCTGTTGTGAAGACGGGTCCCCA  
CCCATGGTGACCCCTGAGGGCCCCAGACGCCCATCAGTGGGGTCCCCTGGAAGCCAGCCTTTCT  
CCGGCCTCCCTGGCACTCTTGGGTGTCTCAAGGGAGGGTAAGATCCCCCGTGTCTGCAAATCACCCCCA  
GCAATGTTACAGAGCTCCAGCCAGACCCACAGCAGTAGCGATGCTCTCCCAGGGCCTGCGTGCATGG  
ACACTTCCTAG

**IL7**

**Complete CDS DT300 EU364895**

ATGTTCCATGTTTCTTTTAGGTATATCTTCGGAATTCCTCCCCTGATCCTTGTCTGTTGCCAGTAGCATCA  
TCTGATTGTGATATTGAAGGTAAAGACGGCGGAGTGTATCAGAATGTTCTAATGGTCAGCATCGATGAC  
TTGGACAGGATGATAGACTTTGATAGCAATTGCCTGAATAACGAACCTAACTTTTTAAAAAACATTCAT  
GTGATGATAATAAGGAAGCTTCATTTTTATATCGTGCTGCTCGAAAGTTGAAGCAATTTATTAATGAA  
TATCAGTGAGGAGTTCAATCACCATCTATCAACAGTTTCACAGGGCACATTAACACTGTTCAACTGCACC  
AGCAAGGTTAAAGGAAGAAAACCACCTTCCCTGGGTGAAGCCAACTCACTAAGAAGTTGGAAGAAAA  
TAAATCTTTAAAGGAACAGAAAAGACAGGGGGACTTGTGTTTCCTAAAGATACTACTACAGAAGATAAA  
AACTTGTGGAATAAAATTTGAGGGGTGCTAAAGAATATTGA

### IL13

#### Complete CDS DT321 EU682383

CCAGCCTACAAGTNTGCTCCTCACTCCTCCTGTGCTGGCTCCAGGCTCCATGGCGCTCTGGTTGACTCTG  
GTCATTGCTCTCACCTGCTTTGGTGGCCTCGCCTCCCCAGGCCCTGTGCCTCCCCACTCTACAGCCCTCAA  
GGAGCTCATTGAAGAGCTGGTCAATATCACCCAGAACCAGAAGACACCCCTATGCAACGGCAGCATGGT  
GTGGAGCGTCAACCTGACCACCAGCATGTAAGTGTGCCGCCCTGGAATCCCTCATCAACATCTCCGACTGC  
AGCGCCATCCAAAAGACCCAGAGGATGCTGAGCGCCCTCTGTTCTCACAAGCCCCAAGCGAGCAAGTT  
CCTGGCAAGCACATCCGAGACACCAAAATTGAAGTGGCCAGTTCGTAAAAGACTTGCTCAAACATTTA  
AGGATGATTTTTCGCCACGGGTAGTTTCAGATGAAGCATGAAAAATGAGCACTGATCTTTGCAGAGGCAG  
CCCTTTACCATCTAAGATGCGGATTCAATTTTTCTCCAGATGTCAGGAACTCACTGGGGAGAAGGGAGA  
GGGGGTTAGGGTGGGGGGGGTAAGATTTCTTAGCTTAGACTTGAGCCTGTGCTGTCTGCCTTGAGC  
CTAGCCGACCCAGCTGCCCTGTGCCGTGGTGGCCAGGGCTCAGCTTGGGGGCCTCCTCCATCCGGGGC  
TCTGCGCTCAGGGGACGAGGATGGCATCGCCCCACACGACCTCTCCTTGCCAGACATGGTGAGGAGGC  
ATCGGCTTGACACGGGGGCAACTGAGGCA

### IL-13R alpha

#### Complete CDS AY266142

ATGGAGCGGCCGGCGCGGCTCTACGGGCTGTGGGCGCTGCTGTTCTGCGCCGGCGGGCGGGGCTGG  
CCGCGCCCGCAGAACTCAGCCACCTGTGACGAATTTGAGTGTTTCTGTCGAAAACCTCTGCACAGTCAC  
ATGGACGTGGAATCCTCCTGAGGGAGCCAGCCGAATTGTAGTCTATGGTATCTTAGTCATTTTGGCAAC  
AAACAGGATAAGAAAATTACTCCAGAAACACATCGTTTCAGAAGAAGTGCCCTGAATGAGAGGATTTGT  
TTACAAGTGGGATCCCAGTGCAGCACCAATGAAAGTGAAGAGCCTAGCATTTTGGTGGAAAAGTGCATC  
TCACCCCTGAAGGTGATCCCGAGTCTGCTGTTACTGAGCTACAATGCGTTTGGCACAACCTGCGCTACA  
TGAAGTGTACCTGGCTCCCTGGAAGGAATACAAGTCTGACACTAATTATACTCTACTATTGGCACAG  
CAGCTTGGGACAAATTCTTCAGTGTGAAAACATCTATAGAGAAGATCAACACATTGCTTGTTCCTTTGCT  
CTGACTAAGGTGAAGGATTCCAATTTTGAATCCAGTGTCCAAATAATGGTCAAGGACAATGCGGGAAAA  
ATCAGACCAGCCTCAGCATAGTGCCTCAAGTTCTCATGTGAAACCTGATCCTCCGCATATTAAGTCT  
CTCTTTCCAAAATGGTGACTTGTATGTGCAATGGAAGAATCCACAGAATTTTTATAGCAGATGCTTGTCTT  
ATCAAGTAGAAGTCAATAACACCCAGGCTAAGACACATGATATTTTCTATGTTGAAGAGGCCAAATGTC  
AGAATTCAGAATTTGAAGGGAACCTAGAGGGTATGATTTGTTTCATGGTCCCCGGTGTCTTCTGATAC  
TTTGAACACAGTCAGAATAAGAGTCAAAACAATAAGTTATGCTATGAAGATGACAAGCTCTGGAGTAA  
TTGGAGTCAAGCGATGAGTATAGGTCAAAGGCCAATCCAACATTCTACATAACCACATTGCTCATCATT  
CCAGTCATTGTTGCAGCTGCAATTATAGTCTTCTGCTGTATCTGAAAAGGCTCAAGATCATTATATCC  
TCCAATCCTGATCCTGGCAAATTTTTAAAGAAATGTTTGGAGACCAGAATGATGATACCCTGCACTGG

AAGAAGTACGACATCTATGAGAAGCAAACCAAAGAAGAACTGACTCTGTAGTGCTGATAGAAAGCCT  
GAAGAAAGCCTCTCAGTGA

## IL15

### Complete CDS NM\_214390

ATGAGAATTTTGAAACCATGTTTGAGAAGTACTTGCATCCAGTGCTACTTGTGTTTACTTCTGAACAGTCA  
TTTTTAACTGAGGATGGCATTTCATGTCTTCATTTTGGGCTGTATCAGTGCAGGTCTTCCTAAAACAGAAG  
CAACCTGGCAGCACGTAATAAGTGATTTGAAAAAATTGAAGATCTTATTCGATCTATACATATGGATGC  
CACATTGTATACTGAAAGTGATGCTCATCCCAATTGCAAAGTAACAGCGATGAAGTGCTTTCTCCTGGAG  
TTACGCGTCATTTTGAAGAGTCCAGAAATTCAGACATTAGTGATACAGTAGAAAACCTTATCATCCTTG  
CAAACAGCAGTTTATCGTCCATTGAGTATAAACTGAATCTGGATGCAAAGAATGTGAGGAGCTGGAGG  
AAAAAATATTAACGAATTTTGAAGAGTTTTATACATATCGTGCAAATGTTTCATCAACCCTTCTTGA

## TCR alpha

### Partial CDS EU364899

ATCAAGAACCCTGACCCCGCCGTGTACCAGCTGAAAGGCCCAAATCTAACAACATCAGTGTATGCCTAT  
ACACTGATTTTCAAATGAATACAACAAAAGACTCGGAGCCCGCGGTGTTTCAGCTTGAGCAGGACTGTGT  
TCAACTCAAACACAGCTGTGCTAGACATGGGGCCTTGGGTTCCAAGAGCAACGGGCTCGTGCTTGG  
AGCAAAGCACCGATTTTGAATGTCAAAGCACCTTCCAGCAGGAATTCTATCCTAACTCAGGAATTTCTT  
GTGATGCCAAGTTGGTAGAGAAAAGCTTTGAAACGGATATGAACCTCAACCTCCAAAAC

## TCR beta

### Partial CDS EU364900

GAGGACCTGCAGCAGGTGAGACCACCCAAGGTGGCCGTGTTTGAACCATCGGAAGCGGAGATCTCCCG  
GACCCAGAAGGCCACCCTCGTGTGCCTGGCCACAGGCTTCTACCCCGACCACGTGGAGCTGAGCTGGTG  
GGTGAACGGGAAGCAGGTCCAGAGCGGGGTCAGCACGGACCTTCAGCCCTACAGGGAGGACCCACGC  
CGCAATGACTCCAGCTACTGTCTGAGCAGCCGGCTGAGGGTCAACCGCTGCCTTCTGGCACAACCCCGC  
AACCCTTCCGCTGCCAAGTCCAGTTCTATGGGCTCACGGAGGACGACGAGTGGGAGTACAACCTGGACC  
AAGCCCATCACCCAGAACATCAGTGCAGGAGGCTGGGGCAAAGCAGACTGTGGCTTCAGCTCAGCGTC  
CTATCAGCAAGGGGTCTGTCTGCCACCCTCCTCTATG

## TCR gamma

### Partial CDS EU364901

GATATAAACCTTGCTTCAGACCTTTCCCCAAGCCCACAGTGTTTCTTCCTTCGATTGCTGAGATAAAGCT  
CCATAATGCTGGAACATACCTTTGTCTTCTGGAGAATTTTTCCCTAATGTTATTAAGGTTTATTGGAAAG  
AAAAGAATGGCAACAAAGTCTGGAATCCCAGCAGGGAAATACCATGAGGACGACTAACACATACATG  
AAATTCAGCTGGTTGACTGTGAGCAAACAGCCATGGATAAAGAACAAGTGTGTCTGTCAAACACGA  
GAAAAATAGAGGGGGAGTTGATCAAGAGATTATTTTTCTTCAGTGAATGAAGTTGTCACTTCAGTTGTC  
ACTACTACTGAGCCTCCAAATGACTGTTTGAACGATGGAAGCAAAGCCACTGGTATTGATTCTGAAAAA  
GCTTGTAAGAAAGATCACAGTGAAGTCACTGTTACTGATTCCAAAAAAGTTTGTGAGAAAGATGAAAGC  
AATTCAGTGCAGCTGCAGCTCGAGAACACCTCTGCCTACTACACCTACCTCCTCCTCCTCAAGAGTAC  
CCTCTACTTTGCCATCATCACCTGCTGTCTGTTTAGGAGAACAGTCTGCAGCAGTGGGAAGACCTCCTGA  
CAGATGATGCCACCAAGGGCTCAACTTCGCTTCAGCATCATTGTCTCTACAAGTGTCTGCTGAGGATCTA  
GCTGGGCTTCCTTTCTGGGTTTGGCTTCTTTCAGAGAATATGTACATCTTTGTATTATATCATTATAGTGT

AAGGATTTTTCAATCCAATGGCCAAACAGACCACTGTACTGTTTAACAAGGAATCCTGCCATGACTCAGG  
GCAGGGCTGAGGGCTGGTCCACGAGAGCCTTTCCACCACTGTCCCTCAGTGTGAGCAGCTCCTCCAGC  
CACTAAATCTTTCACCTCCTGAGCACACACAGCACAGCACATGGTTCCTCGTCTCCTCCCTCAGGGCTTCC  
ACCAGACCACGGCCCTGAGCTTCCCTGTACACACCCTGGAGCTCCAGCTTTGCTGCTTGAATTCTGTCCTT  
TGATTTTTCATGATAGGGACAATCAATTAATAAAGATATCCAACCTCC

## **TNF-alpha**

### **Complete CDS DT211 EU682384**

CAAGCCACTCCAGGACCCCTAGAAATAACCTCTCAGAAGACACACCCCCGAACAGGCAGCCGGACGAC  
TCTCTCCCTCTCACACGCTGCCCGGGGCGCCACCATCTCCAGCTGGACCTGAGCCCCTTGAAAAAGA  
CACCATGAGCACTGAGAGCATGATCCGAGACGTGGAGCTGGCGGAGGAGGCGCTCGCCAAGAAGGCC  
GGGGGCCCCAGGGCTCCAGGAGGTGCCTGTGCCTCAGCCTTCTCCTTCTCCTGGTCGCAGGAGCC  
ACCACGCTCTTCTGCCTACTGCACTTCGAGGTTATCGGCCCCAGAAAGGAAGAGTTTCCAGCTGGCCCCT  
TGAGCATCAACCCTCTGGCCCAAGGACTCAGATCATCGTCTCAAACCTCAGATAAGCCCGTCGCCACGT  
TGAGCCAATGTCAAAGCCGAGGGACAGCTCCAATGGCAGAGTGGGTATGCCAATGCCCTCCTGGCCA  
ACGGCGTGAAGCTGAAAGACAACCAGCTGGTGGTGCCGACAGATGGGCTGTACCTCATCTACTCCAG  
GTCCTCTTCAGGGGCCAAGGCTGCCCTTCCACCAACGTTTTCTCACTCACACCATCAGCCGCATCGCCGT  
CTCTACCAGACCAAGGTCAACCTCCTCTCTGCCATCAAGAGCCCTTGCCAGAGGGAGACCCCGAGGG  
GGCCGAGGCCAAGCCCTGGTACGAACCCATCTACCTGGGAGGGGTCTTCCAGCTGGAGAAGGATGATC  
GACTCAGTGCCGAGATCAACCTGCCGACTATCTGGACTTTGCTGAATCTGGGCAGGTCTATTTTGGGAT  
CATTGCCCTGTGANGGGGCAGGACATCCGTTTCCCTCCCTGTCCATCCCTTTATTATTTTACTCCTTCAG  
ANCCCCTCACGTCCTTCTGTTTTANAAAGANAATGAAGGGGCTGGGGGACTGGGCTCNAGCTTAAAC  
TTTNAACAACAACAGCAACACTTAAATCAGGAATNCAGGGATGTGTGGCCTGGAAAACCAGGCACT  
GACNCCACAANAATTGGANTGGGCTNCAAANNCTG

## TROUT

Start and stop codons are underlined.

Header format:

**(Gene Name)**

(Complete/partial) (Genbank Accession Number if available). HC-Hotcreek Clonal line

### CD3

#### Complete CDS (Confirmed EST CA357253)

AGACAGACAGACCTACTGAGGTGGTGACATTTTGAAGACATTTTGGAAACATACAGGGGAAAGGATTC  
CATATTCGGGAGAATCGAGAGAAGAGTAAGTAGAATGAAGTGGACCATACTCTTGGCTCATCTGTTGGT  
GATTTGGACCATGACTGTAGCTGAAGATTCAGTCTCAAACTTAAAATAAAAAGTGAAGAATCCTCCTCG  
GACAAGATCAAATTATCATGTCCTGATGGTTTCCATTTTCAATCTACTAATGAGACTACTCGAACACTGGA  
ATACAAGGACGAGAACAACAATGAGTATGTATGCGAGAAAGATTCTGTCTCAGAAGAAGACCAGGTCA  
AAATCTATGTGAAATTTTCGGACCTGTGATAACTGCGTCGAGCTGGATACAACTGCGGCTGTAGGGATGG  
TTGTGGGAGACCTGGTGGCCACTGTCCTGATTGGAGTAGCTGTCTACAGCATCGCCTCACAGCCCAAAG  
CAACTGATCACCGGCAAGAAAACATCTAGCAAAATGGGGCTCATCAACAATGAGGCGAGTGCAAAC  
GAAGACCCCACTGGCAACTATCAGCCCCTGAATAAAAAGCGCATGGACAGATCTGAGTACAGCACTCTG  
CCAGAAAGGAGATAAAGAGAAAAAT

### CD4

#### Complete CDS (AY973028)

ATCAGACTGACCAATCAGCAGTGAGGGAGGTGCAACGGGGTTTAAAAGGAAATTTGTTTCTCTGAAAAT  
CAACATTTCCGCCTGGTTCTTGATCATTGGCGAGGGACTCTCAATGCTATCCACCAAACGAGAAAGTACA  
AAATGAAGTGTGTTTCTGGATTCTTTCAATCATTATTGCATTGTTTCATCTCCTCAACAGGGGCTGAAGAT  
GTGGTTGTGTATGGTCAGGTGGGAGAGACGGTCACACTCCCAGATCAAAGTGGGGTTCAGAAAGGGT  
GTTGGTACAATGGTTCTTTGGAATAGACACACAACCTTTGATATCCCGCAACTCCCATGGTTCGAGAGACG  
ATAGATCCAGAGTGGAAAGACAGGCTGTCTCTGTCCAAGACGGACTTCTCCCTGATTATCAACAATATCA  
GACTGGAGGACTTCAAATCCTTCAAATGTGAATTGAAAGATTTTCATGCCACAAACAAGTACCTCAGTCAC  
ATTCAGACTGTTCCGTGTGAGTGTACAGCCAGTATCTCCCCTGTTGGCTGGGAAGAATCTTAATCTAAAG  
TGTGACATAGAGGAAATATTTAAGGGGACACAAAGAAGATGGCTTAGTCCCCAGAAACAGGACCTGAA  
TGAGGACAAGCGTGCCAGATCAGAAATGACGGCAGCCTGACAGTAATGAGTGTCACTGACCAAGACC  
ATGGAGAGTGGACCTGTGTGGTGACATACCAGGGCAGGGAAGCCTATGCCAACACTCATGTTACTGTA  
ATAGACCTCTCCCCTGCTCATCCACAGCCTATCTACACCTCTGTCTCCTCCCTCTCTTCTCCATCTGCCAT  
GTTTCTTTTCCATTCTCCTCCACTATCCTGGTCAGACAGCCAGGAGAAGAGCATCCAGGGAGGCCGCTG  
GACTTTACCCCAAGCCCAGCGGCAGGCTCCCTCACTGGGGTTCGTCCAGACCCTCGCCAACCTCTCCCTG  
GGCCTCCATTAGCCTGGGTGGTCAATCAGAAGAGAGAGCTGGATGTCTCCGCCCTGCAGAGGACAAA  
TCTAAACCTCTCCCTGTCAAAGAAAGGGGTGACGGAGGGGGACAGGGGCGAGTACACCTGCGCTGTGG  
AATTCCAGAGGGGGGACACCCTGAAGAGAAGTATGCGTGTGGAGGTGCTACAGGTTTTTCTCTCCAG  
CTCCAGTGGCCTTTGTAGGTCAAGAGGTCAACCTCACCTGCACCCTGGGCCACCCTCTGACCTCTGACCT  
GAAAGTGAAATGGATCCCACCACGCCAATCCTCCCTCTCGCGTTAGGCTCCGCCCCCGACTCCGCCCAT  
CTCACCATACCGGAAGCGAGGGATATAAATGGTGGGAGGTGGAGGTGTGAATTGTGGAGGAACAAAA  
CCAAGCTGACGTGAGTGGAGATCACTGAAGATCGAGCGAGTCCCCATGGACGTGTGGCTGTTGGTC

ACCATCTGTGGCGCAGCCGTCATATTCGTCTCCTCCTCATCCTCACTGTCATTCTCAACCGACGCCACAG  
ACAGCGGGTGACGATGCCAGACGTGGCAAACGCAGAATCTGCCGCTGCAAAGACCCCCAACAAAAG  
GATTCTACAGAACTAGAGACATCATACAGACCGGAATCCCTGTCAATGGACAATGTCTCTACTATTTG  
TCTTAGCTATTCTATTCTGACACAAAGAAACACAAAAGAACAAGAAAGAAGATGTTTTCATGTAATGTT  
TGATAATAGATTTACAAGTGTATATTATCATACTTTATGACCTATGATTGAGCTACAATTGAACAAATAC  
TGATATAAATATGTATAGCTAAAAAAAAA

#### CD4REL

##### Complete CDS (AY973029)

CCAGGTTTTGTAACTAAGACGTTTTGAGAATCAATTCAGGTGAATTACAAATCAGATCAGATTTTCAG  
ATAAAAGGTCCAATATGAAGACTCTCTCCTGGTTTGTGTTCCGCTGTGTATTCTCCATGTGGTGGTGA  
GGTATCTACAAGAGAATTGGTCTGCCTGTCAATATTGATTGTGGAGTCAAGACGTCTAACAAGGATAT  
GGAGTGGAGTCATAAAGCTGTGGGTGGAAGTAAATCTGTGCTCATCGTGGATTATTTGGGAAGAATG  
GCAAAGAGCGGAAAGGAAATGCTCCCATGGTTGAAAGGGCGAAAGTGAGACGGGACCGGCTGGAAAT  
CTCTGCTCTAAATGATGGTGACGCCGGACTTTACATCTGTAAGGTGGACGGGAAAGATATGGATCACAG  
ACTCGACATTGTCACAGTCAAGGTCCACCCCTCCAATGAACTCAACGAAGGCAACAATGCTATCCTCGAG  
TGCCAGGTGACAGGAGTGGATCCCTTGCCAGTGTGGAGTGGGTTAGTCCAGGTGGAAGGTGGAAG  
GGGCCCTGGACGACCTGGCTCTAGGAATGTCTCTTTTCAGCTCTGTGGCCCTGTCAGACACAGGAGAAT  
GGACATGTCAGATTACTCAGGATGAGAAGACACACAAAGAGACTCAGACCATCAACGTGAGAAGTTTG  
TTGCCAAATGAGGGCCAAGATGATGGGCAGGGGCACAGTGGACCTAACTCTGATGTAAACACAGTGAC  
TACTTGCCATCACTGTACCAAAGGCAGCCAGCAGCCGTTGAGTGGGTGCCATGCTGGGCTTAAGCCT  
GTGGGTGTGGGTGGCAGTGGGAGCAGGATGCCTGGTGGGGTCTTACTCCTGGTGACCATTGTTCTCC  
TGCACCGCAGGAACAAAATAATGAAGAGAAGAGACCGGAAGATGAAGAACATCAGAGTGCCCTGAA  
GTCCAACGACTACTGCCAGTGTAAACCGCACACTAGAGGGTCCACCCCGGAGGACGCAGAGAGAGAAGC  
CTTCGGCTGGACCACGGCAACAGCGCTGACGGAGCGGAGTATTATGGGCTGGAACGTGATTGCT

#### CD8

##### Complete CDS (AF178054)

GAGCTTGAACGTGTTGCTGTGCAAAAATACATGAAAATGGTCCAAAAGTGGATGCAGACACTTGTTTTA  
CTGTTCTTTTGTCAAGAACTCTCCAAGTGTGACAGAGAAAACGGATGGAGAGAGGGTGGAG  
ATCACTTGTGCACCACTCTAAGACTAAGAGCAACATGGTGAATTTGGTTTAGAGTCAAGACAACGCT  
GGAATGGAGTTTATTGCATCGTTTAGTACCAAGGACGGTATGAAGAAAACAACTTTAACCATGAGGTC  
TTCAGCGAGGAGCAGATAAACAACAAACATATTGATACTGAAGGCTTTCAAAAAGGCTCGAGATAGTGG  
CGTCTACAGCTGTGCATCAATCAATGGTAACGCGCTTGTGTTTGGTGAAGTAACTCGACTTGCTGGGCCA  
GCCCCTATGACAACAACAACCAGCAGACTACCAATGACCACAACCATAGAGCTAACCAGCTCTACA  
ACTGCCAAGTCGTGCAAAGTGGGAAAGGTGGACCCTACTGCATCCTGTGAGTTGATTGTTTGGGCCCCA  
TTGACTGCTGGCTGTGGCTTCTCTTCTCCTCCTCATCATCACTGTATGCCATTGCAACCGGATAAGAAC  
AAAAAGATGCCACATCATTACAAAAGACAGCCAAGAATGGCAGCTCCGGGGCAACAACATCCTATAGC  
CAACAACAGACTTTTCTAACCCCTCAACAGACTGAGAGAGACGCAAGATGGTGCGACGTCTACTATC  
AACCATTGAGTTTGTAAATGATACATTTTTACTGAGACATTTTCTCCTTAACACCATTGAAATAGTAGAA  
ATATAAGAATTCTCGCTCTTCAATTAATCAACATAATAGCTTTATGGCAGGTTTGTGTAGATGATTCAT  
GTCGCTCACTCAGTCTAATGACGAGATATGTATTGCTTATAGCTTAGTTTAAATGATGTTATGAGATATT  
TTCTCCTTATGACTTTTATGGTCTGTAAATGAAACCAAGACAAAAGCTCTGCAGTGAAACTTCAATAAA  
ACCAAAGGTAACATTTTCTAACTCAAAAAAAAAAAAAAAAAA

**CD28****Complete CDS AY789435**

ACCAGGGGAGCTTCAGTTTCACGACAAAACCTGAGAACTTTCAAGATGAACGTTTACTGGATACCCACGA  
TCCTCCTCTCCCTCTCCAGTGCTGCCAACATGATAAGCTCAAACAACCTGTAAAGATAAGCTCAGAACGTT  
CTATGTGGTCCGTGTGTCTGTCAACGGCATTGCATCGGTGATGCCCAACCTGACAGGCAAGGACCA  
GGAGGAGATGAGATTCCACCTTTACCTGGGCTTGGTCGAGGTTGGCAACCACACTCACGACAGTGCTCA  
CAACCACAACCTCCACAGAGACAGTGAGTCTGTTGGGGAGGGTCTGGGGCTGAGGGTGAACGAACAG  
GACCATACGGTCAGTTTTGTCTCTCTGGAATGACCACGGAGCGCGCTGGAGTCTATACCTGTGAGGGG  
TACCCCATGTACCCACCTCCATTGAGAAAGTACCAGACGAGCCTCAGACCTTGGTCTGGTTGAAGCAT  
TTCAGTGCCAGGCAGGGGGATGTGTAGGCCCTAGAGTGCATGGTGTCCCTGTTTGGGCATGGATGCTG  
GGGTTCTGGGTCACCACCATCTATGGTCTGGTTGTCACGGTCTTCGCCTTTGTCATCTGGCTCAGACTGA  
GGAGAGTGGAGTGTCCAGAGTGACTACATGGACATCAAACCCAAAGCTCCACTCAGGGGGGCACAGG  
AAGAAGCAGGGGGTCCAGCATCCAATCCGAATGGGACGATACTGATCACTGTCATCTCAGATCGGACA  
TCCTCATACAAAAGTAACACGAGTTGAGCCTTTATTGGCCCTTGAGAGCTGACTGGAGAAACAGACCAA  
GTTCTTGATGTAACATGAAAGCTAGCTCTTCAAATGATGAGGTGCACATCTAATTGTACATCTGATTGC  
GTGTAATAAAGATTTGAGTTATCAAAAAAAAAA

**CD79A****Partial CDS, sequence confirmed EST CA369371**

ATGGTGGCCGTGACATTCTTGTTCCTCTGCTTCTGGGCTGCAGGTGACCTCAGCCGTATCCAGG  
TTACTCTGGAGCCAGACAGGCCCTCTCAGAGGGTGCAGTCTCTCACACCGCCTCCCTGCGCTG  
CTGCTACTCAGTCACAGGGGGAGCCGTGGACACCACCTGGGCCACCAGCCCCACATGGTCAAA  
GGCATCCTTTCGGGAGTGGACTGGAGAGACAACCGTGTGACGGTGGATGGGGGGAACCTGACGG  
CAGCAGGGGTGATGTGTCACACACTCATCCTGAGGGAGGTCCGTCTGAACGACACAGGGTTGTA  
CCAGTGTTCCTCAACCACAGCGCCCTGCGGCCCTCTGTATACACCACGGCACCTTCCTGCAT  
GTCTACATGCCGATTGTGAAGATTCTGGACATCAGTGAAAGCACCAAGAACAGCATCCTGACTG  
CCGAGGGAATGTTACTGATGGTGGCAGTGCTTCTGCATGGTACCATGATGCTCTGTAAGACGAA  
GAAACTCAATCAACTGAAGAAGAAAAGGGTCAAAGAGGAAGAGGAGAATATCTATGAGGGTCTA  
AATCTGGAGGAATGCTGCTCCACATATGATCAGATCCAG

**CD79B****Partial CDS, sequence confirmed EST CA378285**

TGCAATCTACAGTAGTAATGTTGACCGCCATGTGCTGGCTACTGGTTGGATGTTGTGGGCTCGC  
CTTTGTGAACCTCTCAGTGGCTTTAAACAGCCCCCTACAGGTCACCCAGAAGCCACGTTTCTAT  
GGGGTGAAGACCAATCGCACTGTGGCCATATTCTGTGTGGTGTGCGGACCGAAACCAGCCTGCCA  
CGGTGGAATGGTACAAGGCCCTCAGAATACAACACCACTAGGAAGAAGATAGTTGGGGACCGGGT  
CACTGTGAGGCAGGAGAGCATGTTACAAAACGCCTCGATCGAACTCAGACATGTAGAGACGGAG  
GACACCGGATTTTACTTTTGTCTGATTAACAACATCACCTGGGGGCCAGGGACAGAGCTACAAG  
TGCTCAGACCCTCTAACAGTGAAAATGCAGAAAGGAGAAGCAAGCTGAAGGATGCTTTGATATT  
TCTCCAGGCGTTACTCTTAACGCTGTTTGTCTTGGCCCACTGCTACGCCACCAATCCCTGTTG  
AAGAAGGAAGATGCCATTTATGAGGAACCTGAACATGATCACATCTATGAGGGCTTTGGAGATC  
GAGCATTGGTGGTGTATGATGAGGACCATCTCAGTGTATGCTC

**CD83**

**Complete CDS (AY263796)**

ATGTTTTTTCAACTCGTCTGCATATTAGCTGCCTCTGTGCAAGGTGGCCTCACACAGGATAGGCCTACAC  
AAGAGGTGAAGTCAGTTTGTGGAGAGGACTCCATTCTGAAATGTAAAGCAATATGTAAGCCTGGGGTC  
CAATACGGGCGGTGAGGTGGTACAAGCTGGGTGAGGAGCCCTCTAATAAGGAGTCTGGCCTATTGAT  
GAAGAGGCTATCATCACCTAATAGCACCACCCAATGGTACGCCGACTGGAGCGTGAAGTGGAACCTTT  
GGCTGATGACTCTTTCGATATCTTCTGCCAATGTAAACGGCTGTTGATAGCGGGAGGTACAAGTGTCTC  
CTGGCAGCACCTGTAGGAGAGCAGAACCAGGAGGGGAGGTTACCTCAGAGTGACAGATTGCCTTGA  
GTCCACAGACCAATCAGAAGAAAGGGATAACATTCTAGTTCTTTCATTGTGGGGATTGTGGCGGCATT  
GCTGATATTCACCATCAGCTATGTCATCCTAAGGAATATGTTATTGCAAAGGAGTAAGAAGTATCCACAA  
GAACCACTTCTAGATGCACCCCTTGAGAAGAAAGATTTAATGTTGATTTACTCTGGGGCCAAACTGGT  
CGAGACAGGGTCCATAAAACATGTCTGTGTGTA

**CD152 (aka CTLA4)**

**Complete CDS (AY789436)**

ACGCGGGGGTGCACCTTCTCGTCGTCATGACTCTCAGCCTGTTGACATTTCTCTGTCTCGGTCTTTGC  
CTCCAGTGTGGAATGCCCTGAGGGTCACCCAGCCGTACCGTGTGGTGAGTCATCGTGGTGAGGTGGA  
GCTGTTCTGCTCTACCACCACACAGGGAGAAATGAACCGGAGGAGCTACGGATCACTCTGTACCGGGG  
GATGTACGGGGAGCAGGAAGAACAGAAGGTGTGCACGTCTCCTTCACCCACAACAACACAGCCTTCCA  
GGTGGAGGGAGAGGGAGAGAGGAAGGTGCGTTGTCGGGGCCAGTTAAGGCCAGGCAAGGTGAACCT  
GACTATCTCTGGTCTCAGGGGTAACGACACTGACCTGTACCGCTGTGCCATAGAAGTCTGTACCCTCCG  
CCATACCTGAGGACGTTTTGGGAATGGTACCCTACTCTATATAACAGAGGAACCAGGGGTGCTTTACCCCA  
GAGGCCAGAGAAGAGATGATGTAACAGGAGAAACATCCGTCAGACTACCCTTAGCAGGACTGGCCG  
AGTATTAATAGTAATCTCTGCCATTGCTATCCTCCTCGTTCATCAGTTCTACAGAGGAAGAGAAGATT  
GAAGCAATAGTACCGATGATGTCAAAGAATGATGGAAGATTTGATTATGGGAACCTCCAATGAAGAATT  
TTTAAAATACATATCTATATGTTTCATTGTGTTGTAATATAAAGAAATAGTGAAATCAAGTCTACAAC  
TCTCGAATAAATTATTTGCTTTTGATCAACCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

**IFN Type1 (IFN1s)**

**Complete CDS. HC (98% identity to AM489418) (to be deposited)**

GAAACTCATCTGGATAACTAACAGCGAAACAACTGCTATTTACAATGTATACAATGCAGAGCTGGAGT  
TGCATTTTTCTTATTATTTGCAGTATGCAGAGCGTGTGTCATTGCTGTGACTGGATCCGACACCACTACG  
GTCACTTGAGCGCAGAATACCTTCCCTGCTGGACCAGATGGGAGGAGATATCACAAAACAGAATGCC  
CAGTCCTTTTCCCAACATCACTTTACAGACACATAGATGATGCTGAGTTTGAGGACAAAGTCATATTCT  
GAAAGAGACCATCTATCAAAACAAAACCTGTTTGATGGGAATATGAAATCTGTCACCTGGGACAAGAA  
AAACCTGGACGATTTCTCAACATTCTAGAACGCCAATTGGAGAACCTTAATTCCTGTGTATCACCTGCC  
ATGAAACCTGAGAGGAGACTGAAACGGTACTTCAAGAAGTTGAATAGTAAGGTTCTGAGAAAAATGAA  
CTACAGTGCACAGGCGTGGGAGCTCATCAGGAAAGAGATGAAACGTCATCTGCAAAGATTGGATATCCT  
TGCAGCACAGATGACTGATCATCCAGACTCATTTGAGAAGCTACGCCCTTACCAGTTTATAAAGCATGA  
ATTTAATCATGTGGGACCCTGTCAGTCTATTTATTATATTTAAATCCATAAATTATTGTTTTTTATTTTATA  
ATTTATTATTATATTTTCGATTTCCCTTTTGTACATGT

**IFN Type1 (IFN2)**

**Complete CDS. HC (99% identity to AJ582754) (to be deposited)**



TTCTCGAATCAATACATTTATATTTATTATTAATTATCTTAGAAAATGTTTGTTTTTTAATAAATAGTTATTT  
ATTACTAAATCTGTAAATTCTACGACTGAATAAACAGACACTGAGGAAAAAAAAAAAAAAAAA

**IgD**

**Complete CDS AY870261**

GTAGAGAAGTGCATCTTCCACCAGTTCAGCTTCAACACAAACCATGTTCCCTGCATCTCTGCTGCTGATG  
CTGCTGCTGGCAGCTGTATCCTGTGTACAGAGTTATGAACTCTCTCAGCCAGCATCTATGACTGTCCTGC  
CAGGTCAACCACTGACCATCTCCTGTAAGGTCTCATATTCAGTTACTAACACTTGGACAGCTTGGATCCG  
AAAGCCTGCAGGGAAAGGACTGGAGTGGATTGGAAATGTATATTCTGGAGACACACGATACAAGGATT  
CACTGAAGAACAAGTTCAGCCTCTCAGTAGACTCTAGCAGTAATACTGTGTTTTTAAAAGGGCAGAACCT  
TCAGACTGAAGACTCAGCTGTGTATTATTGTGCCTACGGCAACGGGGGCGATGCTTTTACTACTGGGG  
GAAAGGCACAATGGTTACCGTTTCATCAGCCTCATCACTGCTCCGACTTTGTTCCCTCTTGCGCAATGTG  
GCTCCGGGACCGGAGATATGATGACTCTGGGTTGCATTGCCACTGGCTTACGCCTGCCTCCCTCACCTT  
CAATGGAATGACGAAGGCGGGAATCCCTGACTGATTCGTTCAGTACCCTGCGGTCAAACCGGTGG  
AAGCTACATGGGAGTCAGTCAACTCCGTGTAAGAGAGCAGACTGGGACAGTAAAAATTTGAATGCG  
CCGTGGAACATTCTGCTGGATCAAAGAAAGTACCAGTGAAAAACAACCTGCAGCGGGTCATTCTCCAA  
ATATCACACTGTATCCTCTCTGGGAGGAACTGAAGGTGGGATCAAAGGTGGGAATCCTCTGCATCCTGA  
GTGGGTTCTACCCTGACAAGCTGAGTGTGGAGTGGCTGCTGGATGACAAGACTGTGACCACATCTCCAG  
TCCAGCGGAAGCTGCAGAGTGTAGAAGGTGAGGAGAAAACATTCAGCCTGAACAGCCAGCTGGAGCTG  
GACCGGAGCCAATGGACTCAAGGTCAGAGGTCACATGCAAGGCAACCCACAATGCAGCACAAGGACC  
ACCTACAGGAACACCAGTYTCCAGGACCATCAGCATTGCTCAGCGTTTCTCTCGTCTACTCCATCCATCG  
ACTTGAGACCCCCAGATTCAGGACAGTGATGACACAGACTGAGGTAACAGCTACATGTGTTGTCCACT  
CTGCATATGACGCCAAAGTGTCTGGCTTCTGGATGGAAAAGACCCAACAGTAGGACCCCAGTGAACC  
AGGCCAGCAGGACAACCTCAGAGCGTCAGCAGTAACCTGACTCTCCCTCAAGCCAATGGAAAACCTGA  
ACACAATAACATGCAGAGCTGAACATCGCTGCTTCAACTCCACAGAGAAGACCAGTAATGTTAAAGGAC  
CTGCAGTGAGCAGCACTACCACAGTTCTGATCAGGAGGTCTCTCCAGAGTTACTGAAGGGAGACAGTG  
CTGTGCTGGAGTGTGCCATCACACAACCTCTCYTCCAGTGACCTCTACGTCACCTTTCAGGCCAATGGGGT  
TGATTTCCCTGAGAAACAGTATGTGGATGTGCCTGCATCCAAAGGCCCCCATTTGCTCACCAGACTGTT  
TCTATCCCCAAATCACACTGGAAGACAGACAACACTTTACCTGTAAAGTTAACCAAGGTTTCTCCAACA  
GCTTGGTGTCTAGCTCAAAGTCAAGCTTTTTGGTGAACCTGTCCATGGAACCTTCTAGTCCCCAGTGA  
GGAGTCGTCTGGCTCAGGGACCCAGAACTCATGTGTTCTGGGTGGGGCTTCAACCCTAAGATCAAGTG  
GCTCTCTGGGTTTGAACAGAGGTCTGCAGCAGACAATGAGATAAGTATGGGGGAAGATGGACATGTGG  
CACTAACAGTCATATCACAGTAACACAGCAGGAGTGGAAATGAGGGAAAGGACTTCATCTGTGAGGTA  
GATGACAAAGATCTTCAGAAAACCTGTCAGGAAGAGCACCAGTTTATGCACAGCTTTTCCCTCGTCTACTC  
CATACTCCACCTGGAGACCCCCAGATTCAGGACAGTGATGACACAGACTGAGGTAACAGCTACATGTG  
TTGTCCACTCTGCATATGACGCCAAAGTGTCTGGCTTCTGGATGGAAAAGACCCAACAGCCGAACCC  
AGTGAACCAGGCCAGCAGGACAACCTCAGAGCGTCAGCAGTAACCTGACTCTTCCCTCAAGTCAATGGAA  
AACCTGAACACAATAACATGCAGAGCTGAACATCGCTGCTTCAACTCCACAGAGAAGACCAGTAATGT  
TAAAGGCTCAGTGACCCCTCCGCACCTAGAGCAACCCTGCTCCAGGGTCCCAGTGAGCTTGTCTGCCTG  
GTGCTTGGCTTCAGCCCTCAGACATCAACATCACCTGGCTGCTGGACAACGTCACAGAGCTGTGGAAC  
AACAACACTAGCACCCCTACAGGGCACCAGGAGGAAAGTTCGGCATCAGGAGCCACCTGAGCCTGGC  
ACACCAGGATTGGACACCGGGGGCTGTTTACACCTGCAGGGTGACCCACACCACCCAGACTCTGGCCCT  
GAACATATCCAAACCAGAGATCCTTGAGTTGGAGGGTGTGTTCTTTGACGAGAACAGGTCTGATCCCAT  
TCTTGACAGACTGCAGAGGAGAACTGGAACATGGCCTGCATCTTCTGGTCTCTTCTCATCTCCCTCC

TCTACAGCTTCACAGTCACTCTGATCAAGACAAAATGATGACTTCAGGACACTTCCATATGATGGATCCC  
TCGGAGTTCAACTGGAATTAATTTAAATGAAATGATTTATTTCAACCTTTTCTTATCAAATCACAACACG  
TTTCTTAAGAAAATTGCATAGATTTAATTACTTACGGTTTCATGTTGCAGGTTTGATGACAGGGTAGTGT  
ATTGTTTTTATTCCCCACAAAGACAGACAATGTGGAGGTGCGCTTACTTGCTCTCATCTCTTGTTAATGCG  
TTATAGAATTTTTGAGCAGAGATAAAAATGGATGTTTAACTCTATTAATAAAGCATGCCATTACTCTCT  
ATGATGAAGTATTTAGACACCAGTCATTGCTGAATTATCTGCTGATAATAAAACATTATTTCAAACAAA  
AAAAAAAAAAAAAAAAAAAAAAAAA

## IgT

### Complete CDS AY870265

CCTCGGACGCACACTGCCAGAGATCCAACAGAGAAACATGTTTTCTTACATCCCTACTCCTCCTGGCAGTC  
CTGCCATATATACACAGCATTAGTTTGACCTCCTCCCCTGCTCAACTCAAACCTCCTGGAGAGTCAGTGAA  
ACTATCTTGCCAAGTCTCTGGCTATGTCCTGACAGACTATGGCACAGCTTGGATACGACAGCAGCCAGG  
GAAAACACTGGAGTGGATTGGGATCATCTGGGGTGGTGGATCCATCAACTCTGGGGCCTCTTTTAAGAG  
CAGATTCACCATCTCCAGAGACAGTAGTAATGTACTGTACTTAGACATCACCAGTCTGCAGGCTGAGGA  
CACAGCTGTGTATTATTGTGCAAAAATACAGTTACAGTTTGGGCTTCTTTTTGGATACTTTGACTATT  
GGGGGAAAGGAACATTGATCACAGTATCATCAGCAGCCACAGCCCCCTCTACTCTACTCTTATGAA  
CTGTGGAACCCCTTCTAACGACATCTACAGTCTCGGTTGTATCGCTAAAGGCTTCTCGCCTCCTCACACA  
CCTTCCAATGGACAGACGCCAGTGGGAAAGCGCTGACGGACTTTGTCCAGTACCCAGCAGTCCAGAGC  
GGGAAACCTACACAGGAGTCAGTCAGCTCCGCGTGGCTAAGAATGTCTGGGAAAACCTCAAAGTCTTTC  
AGATGTTCTGTGGATCATCCTGGAGGTGCGAAGACAGCAGTCATCAATAAACAGTCCCAAAGTCTCCA  
ACAGTGTCTTTGCTGTCTGCGCCCATTGGCACCCAGTACCTGATGTGTATGATTGAAGATTTACCTC  
CGAGACAGTCAAGGTACCTGGAAGAAGAATGACATGGAGGTGGAGGGCCAGACCCCTACTCTAGGCA  
AACGGCCGTCAGGCCTCTACTCAGGCAGCAGTCTGCTGAAGGTCACCAACACTGACTGGAACAACAAGG  
TCAAGTACAGCTGTGTGGTGGAGCACCAGGGTGAACCATCAGCAAGACGACCTCCAAAACAGAACCA  
CTGACGGTGACTCTGAACCCACCGCGTGTGAGAGAGGTGTTCTTGGACAACCAAGCAGTGTGGAATGT  
GTCATCACTGCTACAGACCAGAACACAGTGTCTGGTACCAACATCACCTGGCACATCAACGGAGATATA  
CAGACAGCTCACATTGATCTGAAACCTATTGAATCAAAGGGCAACCTGAACAGCAGGGTCACTACTCTG  
ACCATAGACCAGACAAGGTGGACCAATGTGAACAAAGTCCAGTGTCTGCCATGAAGCGTGGCGAAGA  
CACACCGTCAATTCAGGACATCAGCTTACCAAAGGAAGTGAAGCCCCTTCTGTGTCCGTCCACATTCTC  
CCAGAGGAAGACACCAAGAAGGATGGGGATGTGACTCTGATGTGCCTGGTGGTACAGCCGTCTCTCTG  
TGACGTCTACATCATGTGGAAGGAGGACAGTGGCGAGTACCAGGAGGGGGTACCCAGCCCTCCTCAGA  
AAACCAAGAAAGGCAACTACTTCTGTCACCAGCGTCTTACCATACCAAGGATAAGTGGGACACAAATG  
TGCTTTTACATGCGCCGTCAAGCATGCTGGCTCAGACAACAGCACCTCACCTAAGGAGATGAGTGTGT  
CGAAGTCCACGGCGAACATCCTACCGACTGAGCCTGAGGCGGGCTTCGCTCTAAGCTGCACGGACAAC  
TTGAGGATGAGTTCGGCAGCCTGTGGTCCACCACCTCCTCTTATCATTCTCTTCTCTCTCTCACCT  
ACAGCACAGTGTCTCAGCCTTTTCAAGATGAAGCGGTGAAGAACACATGATGGACTGCAGAGATAGATG  
TGTCTAGATTAGAAAGATAATGGTCTGGGATGGTTATGGAGTATAGTAGTGTCTTTCAGTAATAATGTTA  
TGTATATATCCTATACATTATTGTTTTGATTGATTAGTATTGTTGTTCTCAATATTATACAAGCATTGTGG  
TGATATGTTATTTTTATTATTGTTTCAATTTTGTACAGTATCTTTAAATATAAGTGTATACTGTGATGTCT  
GTGTGTCTTTTTCCCTTAAAGTTGTGTATTTCTTTTTACATCCACTGGATGCTAATACTGGGACAAGGA  
CACATCCTATATACAAAGACATTACTGATTGGATTGTTTCTGCTTGGCAGTTATCTATGGAGCCAATGTAC  
AGCTGTATTCCCTCCAGGACAGATTTAAACAACGTTATGCTATATCTGTCATATTTAACTAAAACCTTCAT  
TATTCTGTTAAAAAAAAAAAAAAAAAAAAA

## **MHC IA (UBA) HC**

### **Complete CDS AF115519**

ATGAAGGGTATTATCTTGCTGGTGGTGGGAATAGGCCTTCTTCATACAGCATCTGCTGTGACTCACTCCC  
TGAAGTATTTCTACACCGCATCTTCTGAAGTTCCCAACTTCCCAGAGTTCGTGGTTGTGGGGATGGTGGGA  
TGGTGTTCAGATGGTTCACTATGACAGCAACAGCCAAAGAATGGTGCCAGACAGGACTGGATGAACA  
AGGCAGCAGAAACTGCCACAGTACTGGGAGAGTCAGACAGGGATTCTCAAGGGTACCCAGCAGACT  
TACAAAGCCAGCATCGATATTGTAAGCAGCGTTTTAAACAAAGTGGAGGTGTGCACACTTTCCAGAAC  
ATGTATGGTTGTGAATGGGATGATGACACTGGAGCCACAGAGGGTTTTTTTTTCAGTATGGATATGATGGA  
GAGGATTTCTGGCATTGGACCTGAAGACAAAGAAATGGATCGCTCCAACACCACAGGCCGTATCACC  
AAACACAAGTGGGACAGTAACACAGCTAATGAGGAGCGGAGAAAACATTACCTACCCAGGAGTGCAT  
TGAGTGGCTGAAGAAGTATCTGGACTATGGGAAGAGCACTAATGAGGACAGTCCCTCCCTCTGTGTT  
TCTGCTCCAGAAGACCCCCACCTCTCCAGTGACCTGCCACGCGACAGTTTTCTACCCAGTGATGTCATG  
GTGCTCTGGCAGAAAGACGGACAAGATCACCATGAAGATGTGGAGTATGGAGAGACTCTCCCAACGA  
TGACGGAACCTTCCAGAAAAGCATCCACCTGACAATGACACCTGAGGACAGGAAGAACAACAAGTATC  
AGTGTGTGGTTCAAGTCAAGGGTATCAAGGAGGACTTCATCGGGGTTCCGCCTGACCAGGATGCCGCC  
AACGTTGTCCCATCATTGGAGGGGTGGTAGCTCTCCTCTGGTTCGTTGTTGTTGTTGGGGTCCG  
TCATTTGAAGAAGAGGAGCAAGAAAGGCTTTGTTCCGGCCAGCACTTCCGACACTGACTCTGACAAC  
CTGGAGGTGTCAAGAAGATTGAGAGACCTCTGCTCTTCAGGAACATCAGAGAAGGCGCTGAAGAGGA  
ACTTCTCAAGAACATAACAC

## **MHC class IIB**

### **Complete CDS (AF115533)**

ATGTCGATGCCAATTGCCTTCTACATTTGCCTGACCTTGATTTTGTTCATATTCTCTGGAACAGATGGATA  
TTTTCATCATCGTTGGCACAGTGTGATACTCCTCAAAGGACCTGCATGGTATAGAGTTTATAGACTCTT  
ATGTTTTCAATAAGGTTGAACATATCAGATTCAACAGCACTGTGGGGAGGTATGTTGGATACACTGAAC  
ATGGTCTGAAGAATGCAGAAGCATGGAACAGTGTGCTGGGATCCTGGGTCAAGAGCAGGCCGGAGCT  
GGAGCGTTTCTGTAAGCATAACGCTGCTAACCCTACAGCGCCATACTGGACAAGACAGTTGAGCCCCA  
TGTCAGACTGAGCTCAGTACTCCCCCAGTGGCAGACACCCTGCCATGCTGATGTGCAGCGCCTATGA  
CTTCTACCCCAAACAAATCAGAGTGACCTGGCTGAGGGACGGACGTGAGGTGAAATCTGATGTGACGTC  
CACTGAGGAGCTGGCTAACGGGACTGGTACTACCAGATCCACTCCACCTGGAGTACACACCCAAGTC  
TGGAGAGAAGATCTCCTGTATGGTGGAGCACATCAGCCTCACTGAGCCATGATGTATCACTGGGACCC  
GTCCCTGCCTGAGGCTGAG

## **PAX-5**

### **Complete CDS EU147491**

ATGGAAGTAGAGGCCGAGGGTTCATGTGTTGAGGCCGGGACGAGCAGGAGGACATGGAGGGGTGAAT  
CAGTTAGGAGGCGTGTTCGTGAACGGCAGGCCCTCCAGATGTGGTGCGAACGCGAATCGTAGAGCT  
GGCTACCAAGGGTCCGCCCTGTGATATCTCTCGACAGCTCCGGGTCAGTCACGGATGTGTCAGCAA  
GATACTGGGGAGGTACTATGAGACAGGAAGTATCCGTCCGGGGTATTGGAGGATCCAAACCAAAGG  
TTGCTACACCCAAAGTGGTGGATAAGATCGCCGACTACAAACGCCAAAACCCACCATGTTGCGCTGGG  
AGATACGAGACAGACTATTGGCTGAGAGAGTGTGTGACAACGACAGTGTCCAGTGTCAGCTCTATCA  
ACAGGATCATCAGGACTAAAGTCCAGCAGCCTCCGGGTGAGTCAGGACCTCTCTGCTCATAACCTGG  
CGTCGTCGGTAGCGTCGACACAGTTTTCCGCGGTGACCAGTACTCGGCTGGCTCCTCTACTCCATCAG

CGGCATTCTGGGAATCAGCTCAGCTAACGACGGCAAGCGGAAGAGAGACGATGCCCTCCAGGAGTCTC  
CTCTAGCCAATGGCCATGGTCCAGGAGGGCGGGACTTCTGAGGAAGCAGATGAGAGGGGACCTCTTC  
TCGCCTCAGCAGATTGAGACATCAGAGTATTCGGCCATGGCTCTAGCCGGTGGATTGGAGGAGATGAA  
AACCAATCTGGCCAATCCAGGGTCAGCGGGGAGCTAGGAGCCAGTGTTCCGGGCCACAGTCCTATC  
CACTGCCAGGTCGAGACCTCTGCAGACCACCCTCCCCGGCTACCCCCACACGTCCCCCAACGGGCCA  
GGGCAGCTACTCTGCCTCCTCACTGACTGGTATGGTACCCGGAGGAGATTTTTCCGGGAGTCCCTATTCC  
CACCTCAGTATTCCACATATAACGAGTCCTGGAGATTTCAAACCCAGCCTGTTAGTGTTCCAACAGG  
ACTATGGGTCTCTCTGGGGACGGAGATCGGATGTTCTCTGGGCTTTCACCGCCAGCCAGACGGGAC  
AGATGCAAGGGTCGCCGTAATACTACAGCGCGGCATCGAGAGGGGCGGGACCGGCTGCCACGGCAAC  
TGCTCCGCCTACGACCGCCACTGA

#### **TCRA**

##### **Partial (constant domain) EU072698**

GAGAGAAACATGACCCATCTTACTACAGCTTGAAGTCAAGAAATACCACAGCTTGCCTGGCTACAGATTT  
CAGCGCACACAATGCTACTACGCACTTGAATTATTCAACAAGACAGAGGCCACCAGAATGAATGGGGA  
CAGCTACTACAGCCAGGTTGCCCTCGGAGGAGAAAATTGCACTGAAGTAGGTGGTTCAGAGAAATGTG  
AAGCAAAGTGGTATTTTGACACAGATGCAAAGATCAACTTCCTATCCCTGACC

#### **TCRB**

##### **Partial (constant domain/TM) EU072699**

GATCCAAACATCAAAGTCACTGAACCCACAGTGAAAGTCCTAGCACCCCTCCGCTAAGGAGTGTGAAGAT  
AGAAACAAGAAGAAGAAGAACCCCTAGTGTGTGTAGCCACCCGCTTCTACCCCGACCACGTACCGGTC  
TTCTGGCAAGTCAACAATGTCAACAGAACTGAAGGTGCCGGACCGACAACAGGGCCTTGTGGGATAA  
AGATGGTTTATACAGTATCACCAGCAGACTGAGAGTCCCAGCCAATGAATGGCACAACACAGAGAACA  
GATTCACCTGCATTGTCAGCTTTTACGATGGGACTGACAATATAAGAGTGAATGACACCATTAGTGGAG  
ATCTCCAAGGTCAAAGTGGGGGAGAGATAACGACAGATTACTACGTGAAGAGCACCCAGACTGCCAAG  
CTGGCCTACAGCATCTTCATCGCTAAGAGTACCTTCTATGGCCTGGTCGTCATGGTTATGATTTGGAAGT  
TC

#### **TCRG**

##### **Partial (constant-cytoplasmic) EU072700**

CACGACACTTTATGTGACAGATGGCATTCAACGAAAACCCAAAGTGACGCTGTAICTCAGCGTCCAACTCT  
GAGTGAATGGGAAGACCACCCTGCTATGTCTGGCTAGAGACATGTTTCCAGACTTGGTCAAGATCTCA  
TGGAAGATGGAGGATGCAAACGGCGGAAGAACGGAGGTGCCCAAAGCAGAGGGGGAACAGCTGGAG  
CAGAGGGAGGAAGAACAGACGACCAGTATGATCATCATTGATAAAGACAATACGTACAGGAACAAATA  
CATCTGTTCTGTGGAGCATGAATGGGGTCTCAACATTTAGTCATCCAAAAGATACTCCAACCACCATG  
TCTGCACCAGCGTTCAGAAATGACACCCAGGAGTCACTGACTCTGCAGTTTACCGAAGATTCTTCCAGT  
CAACGTGCAGTCTGAACCTGGCCTCTGTGGTTTACACAGTGATGATAGTGAAAAGCATGGTGTATTGCT  
GTGGGCTCTCTCTCTGCTGCACAACAGGATCCTGGGAAGAGGA