

## Reference Key

- All alignments use human as archetypal as a reference point. Mouse and/or other species are used as other known references where available.
- "▼" denotes first amino acid of mature human sequence. All other species' alignments are shifted in relation to that aa. This break is artificial and meant to make it somewhat easier to separate the signal/propeptide sequence from mature sequence (Kingfisher sequence of interest).
- NCBI and Uniprot sequences are included for all species. If no NCBI/Uniprot sequence is shown in the alignment, the only sequence available for that particular gene in that particular species came from a VIRN lab.

# CCL2

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      10      20      30      40      50      60      70      80      90     100     110
      |.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
Hs CCL2 (NM_002982) MKVSAALLCLLLIAATFIPQGLA~QPDAINAPVTCYNFNTRKISVQRLASYRRITSSKCPKEAVIFKTIIVAKEICADPKQKWVQDSMDHLDKQTQTPKT*
Hs CCL2 (P13500)
Mm CCL2 (NM_011333) .Q.PVM..G..FTV.GWSIHV..~..V..L...S..SKM.PMS..E..K...R...V.V.KLKR.V...KE..TYIKN..RNQMRSEPTTLFKTASAL
Mm CCL2 (P10148) .Q.PVM..G..FTV.GWSIHV..~..V..L...S..SKM.PMS..E..K...R...V.V.KLKR.V...KE..TYIKN..RNQMRSEPTTLFKTASAL
Ec CCL2 (VIRN) .....T..A.ST.V..~...S.....T..GK..S...G..K.V.....L.....E.....AVKQ...KA...P*
Ec CCL2 (mature) ~~~~~S.....T..GK..S...G..K.V.....L.....E.....AVKQ...KA...P*
Ec CCL2 (NM_001081931) .....T..A.ST.V..~...S.....T..GK..S...G..K.V.....L.....E.....AVKQ...KA...P*
Ec CCL2 (Q9TTQ3) .....T..A.ST.V..~...S.....T..GK..S...G..K.V.....L.....E.....AVKQ...KA...P
Bt CCL2 (VIRN) .....TV.A.STEV..~...SQ.A...T.NSK..M..MN..V.....LG..L.....INY.N.KN...P*
Bt CCL2 (mature) ~~~~~SQ.A...T.NSK..M..MN..V.....LG..L.....INY.N.KN...P*
Bt CCL2 (NM_174006) .....TV.A.STEV..~...SQ.A...T.NSK..M..MN..V.....LG..L.....INY.N.KN...P*
Bt CCL2 (P28291) .....TV.A.STEV..~...SQ.A...T.NSK..M..MN..V.....LG..L.....INY.N.KN...P
Ss CCL2 (VIRN) .....T...CT.V..~...S.....TL.SK..M..M..V.....AG...E.....IS...KN...P*
Sw CCL2 (mature) ~~~~~S.....TL.SK..M..M..V.....AG...E.....IS...KN...P*
Ss CCL2 (X79416) .....T...CT.V..~...S.....TL.SK..M..M..V.....AG...E.....IS...KN...P*
Ss CCL2 (P42831) .....T...CT.V..~...S.....TL.SK..M..M..V.....AG...E.....IS...KN...P

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      120      130      140      150
      |.....|.....|.....|.....|

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Hs CCL2 (NM_002982)
Hs CCL2 (P13500)
Mm CCL2 (NM_011333) RSSAPLNVKLTRKSEANASTTFSTTSSSTSVGVTSVTVN*
Mm CCL2 (P10148) RSSAPLNVKLTRKSEANASTTFSTTSSSTSVGVTSVTVN
Ec CCL2 (VIRN)
Ec CCL2 (mature)
Ec CCL2 (NM_001081931)
Ec CCL2 (Q9TTQ3)
Bt CCL2 (VIRN)
Bt CCL2 (mature)
Bt CCL2 (NM_174006)
Bt CCL2 (P28291)
Ss CCL2 (VIRN)
Sw CCL2 (mature)
Ss CCL2 (X79416)
Ss CCL2 (P42831)

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# CCL4

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          10          20          30          40          50          60          70          80          90
Hs CCL4L1 (NM_001001435) MKLCVTVLSLLVLVAAFCSLALS~APMGSDPPTACCFSYTARKLPRNFVVDYYETSSLCSQPAVVVFQTKRGKQVCADPSESWVQEYVYDLELN*
Hs CCL4L1 (Q8NHW4)
Mm CCL4 (NM_013652)     . . . . . SA . . . . . L . . . . . APGF . . . . . S . . . . . S . Q . H . S . M . . . . . K . . . . . L . . . . . R . I . N . . . . . P . T . MS . . . . . *
Mm CCL4 (P14097)     . . . . . SA . . . . . L . . . . . APGF . . . . . S . . . . . S . Q . H . S . M . . . . . K . . . . . L . . . . . R . I . N . . . . . P . T . MS . . . . .
Ss CCL4 (VIRN)       . . . . . P . . . . . ~ . . . . . S . . . . . T . V . . . . . T . . . . . K . R . . . . . N . DD . . . . . MD . . . . .
Ss CCL4 (AJ311717)   . . . . . P . . . . . ~ . . . . . S . . . . . T . V . . . . . T . . . . . K . R . . . . . N . DD . . . . . MD . . . . . *
Ss CCL4 (Q711P4)     . . . . . P . . . . . ~ . . . . . S . . . . . T . V . . . . . T . . . . . K . R . . . . . N . DD . . . . . MD . . . . .
Gg CCL4 (VIRN)       . . VS . AA . A ~ ~ . . LI . I . YQ TSA ~ . V . . . . . S . . . . . T . IS . Q . FS . A . . . . . N . Q . PHAG . . . . . I . RK . RE . . . . . N . END . . . . . D . MNKM . . . . . *
Gg CCL4 (mature)     . . VS . AA . A ~ ~ . . LI . I . YQ TSA ~ . V . . . . . S . . . . . T . IS . Q . FS . A . . . . . N . Q . PHAG . . . . . I . RK . RE . . . . . N . END . . . . . D . MNKM . . . . . **
Gg CCL4 (NM_001030360) . . VS . AA . A ~ ~ . . LI . I . YQ TSA ~ . V . . . . . S . . . . . T . IS . Q . FS . A . . . . . N . Q . PHAG . . . . . I . RK . RE . . . . . N . END . . . . . D . MNKM . . . . . *
Gg CCL4 (Q90826)     . . VS . AA . A ~ ~ . . LI . I . YQ TSA ~ . V . . . . . S . . . . . T . IS . Q . FS . A . . . . . N . Q . PHAG . . . . . I . RK . RE . . . . . N . END . . . . . D . MNK . . . . .
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# CCL5

10 20 30 40 50 60 70 80 90

Hs CCL5 NM\_002985 MKVSAALAVILIIATALCAPASA~▼~SPYSSDTPCCFAYIARPLRAHIKEYFYTS<sup>G</sup>KCSNPAVVFVTRKNRQVCANPEKKWVREYINSLEMS\*

Mm CCL5 NM\_013653 .I...TI.T.A.T.P...G...LSLA...V...S...L...R...Q...Y...\*

Ec CCL5 AF506970 .F...ATATF.T...A...S...Q...S...I...K...T...\*

Ec CCL5 VIRN .F...ATATF.T...A...S...Q...S...I...K...T...\*

Bt CCL5 AJ007043 .T.F.L.M.A...A...S...T.VQ...S...MA...I...K...A.L.\*

Bt CCL5 VIRN EU276060 .T.F.L.M.A...A...S...T.VQ...S...MA...I...A.L.\*

Bt CCL5 (mature) ~~~~~A...S...T.VQ...S...MA...I...A.L.\*

Ss CCL5 DQ372066 .T...AMA...A...S.LS...LQ...S...MA...I...L.\*

Ss CCL5 (mature) ~~~~~A...S.LS...LQ...S...MA...I...T...\*

# CCL11

10 20 30 40 50 60 70 80 90 100

Hs CCL11 (NM\_002986) MKVSAALLWLLLIAAASPQGLA~GPASVPTTCFFNLANKIPLQRLSYRRITS GKCPQKAVIFKTKLAKDICADPKKKWVQDSMKYLDQKSPTPKP\*

Hs CCL11 (P51671) .....

Mm CCL11 (NM\_01330) .QS.T..F..TVTS.TS.V..~H.G.I..S...IMTSK...NTL.K..K...NNR.TL..IV...R.G.E.....A.T.H...LQ...\*

Mm CCL11 (P48298) .QS.T..F..TVTS.TS.V..~H.G.I..S...IMTSK...NTL.K..K...NNR.TL..IV...R.G.E.....A.T.H...LQ...\*

Ec CCL11 (NM\_001081871) .....C...TT...T.V..~Q.V.IS.V...V.S...SF...Q...K...S.....Q..K...Q.....A.....E.N.R.T.YSSF\*

Ec CCL11 (Q9TTQ4) .....C...TT...T.V..~Q.V.IS.V...V.S...SF...Q...K...S.....Q..K...Q.....A.....E.N.R.T.YSSF

Bt CCL11 (VIRN) .....V..C...T.TLC.I.V..~Q...I..I...MSKK.SI...Q...K...S.....N..QN.K..V..QE...NA.E..N...Q.L.S\*

Bt CCL11 (mature) ~~~~~Q...I..I...MSKK.SI...Q...K...S.....N..QN.K..V..QE...NA.E..N...Q.L.S\*

Bt CCL11 (AJ132003) .....V..C...T.TLC.I.V..~Q...I..I...MSKK.SI...Q...K...S.....N..QN.K..V..QE...NA.E..N...Q.L.S\*

Bt CCL11 (Q9TTS6) .....V..C...T.TLC.I.V..~Q...I..I...MSKK.SI...Q...K...S.....N..QN.K..V..QE...NA.E..N...Q.L.S

# CCL20

	10	20	30	40	50	60	70	80	90	100																																					
Hs CCL20 (NM_004491)	M	CCTK	SLLA	ALMS	VLLL	HLC	GE	EA	AS	NFDC	CLGY	TRIL	HP	KF	IV	GF	TRQ	LAN	EG	CD	IN	AI	IF	HT	KK	LS	VC	AN	PK	QT	WV	KY	IV	RLL	SK	VK	N	M	*								
Hs CCL20 (P78556)																																															
Mm CCL20 (NM_016960)	A	GG	R	FL	AW	A	SQA							Y	S	IQ	TP	PS	RA																							*					
Mm CCL20 (O89093)	A	GG	R	FL	AW	A	SQA							Y	S	IQ	TP	PS	RA																												
Gg CCL20 (VIRN)	P	G	L	S	I	S	L	G	L	L	S	T	Q	Q	S	S	K	V	R	P	R	V	K	E	S	G	V	D	V	R	G	K	A	V	E	D	K	H	L	L	F	Q	L	R	S	M	*
Gg CCL20 (mature)	P	G	L	S	I	S	L	G	L	L	S	T	Q	Q	S	S	K	V	R	P	R	V	K	E	S	G	V	D	V	R	G	K	A	V	E	D	K	H	L	L	F	Q	L	R	S	M	*
Gg CCL20 (NM_204438)	P	G	L	S	I	S	L	G	L	L	S	T	Q	Q	S	S	K	V	R	P	R	V	K	E	S	G	V	D	V	R	G	K	A	V	E	D	K	H	L	L	F	Q	L	R	S	M	*
Gg CCL20 (Q8QG55)	P	G	L	S	I	S	L	G	L	L	S	T	Q	Q	S	S	K	V	R	P	R	V	K	E	S	G	V	D	V	R	G	K	A	V	E	D	K	H	L	L	F	Q	L	R	S	M	





# CXCL10

	10	20	30	40	50	60	70	80	90	100	
Hs CXCL10 (NM_001565)	MNQ	TAILICCLIFLTL	SGIQG	VPLSRITVRC	TCISISNQPVN	PRSLEKLEIIPASQFC	PRVEIIATM	KKKGKRC	LNPE	SKAIKNLLKAVSKERSK	RSP*
Hs CXCL10 (P02778)	..	..	..	..	..	..	..	..	..	..	..
Mm CXCL10 (NM_021274)	..	PSAVF..L.G..T..	I..A..N..H.DDG..RM.AIG..	LS..	..	..	..	ND.Q..T..M.F.QK..A.*	..	..	..
Mm CXCL10 (P17515)	..	PSAVF..L.G..T..	I..A..N..H.DDG..RM.AIG..	LS..	..	..	..	ND.Q..T..M.F.QK..A..	..	..	..
Ec CXCL10 (VIRN/EU438777)	..	S.V..L..L..T..	I..A..N..N.DR.IP..	M..S.Q..	..	..	..	TV..I..Q..	..	RTLREV*	..
Ec CXCL10 (mature)	..	..	I..A..N..N.DR.IP..	M..S.Q..	..	..	..	TV..I..Q..	..	RTLREV*	..
Bt CXCL10 (VIRN)	..	KSGF..F..L..QGV	NT..S..E..GS..	V..S..	..	..	..	T..IN.Q.T..RTRKEA*	..	..	..
Bt CXCL10 (mature)	..	..	NT..S..E..GS..	V..S..	..	..	..	T..IN.Q.T..RTRKEA*	..	..	..
Bt CXCL10 (BC112547)	..	KSGF..F..L..QGV	NT..S..E..GS..	V..S..	..	..	..	T..IN.Q.T..RTRKEA*	..	..	..
Bt CXCL10 (Q2K1Q8)	..	KSGF..F..L..QGV	NT..S..E..GS..	V..S..	..	..	..	T..IN.Q.T..RTRKEA	..	..	..
Ss CXCL10 (VIRN)	..	S.V..F..L..T..	GI..	K.DR..	M..S..H..	N..	..	T..I..	..	RTQREA*	..
Ss CXCL10 (mature)	..	..	GI..	K.DR..	M..S..H..	N..	..	T..I..	..	RTQREA*	..
Ss CXCL10 (AY789646)	..	S.V..F..L..T..	GI..	K.DR..	M..S..H..	N..	..	T..I..	..	RTQREA*	..
Ss CXCL10 (Q5S1S3)	..	S.V..F..L..T..	GI..	K.DR..	M..S..H..	N..	..	T..I..	..	RTQREA	..

# CXCL11

	10	20	30	40	50	60	70	80	90	100																								
Hs CXCL11 NM_005409	MSVKG	MAIALAVIIL	CATVVQ	G	~	~	~	FPMFKR	GRCLCI	GPVKAVK	VADIEKASIMYPSN	CDKIEVIITL	KENKG	QRCLNPKSKQ	ARLI	IKKVE	ERKNF	*	~	~														
Mm CXCL11 NM_019494	.NR.VT	. . . . .	A.IW	.AA	. . . . .	L.Q	. . . . .	M	. . . . .	M.E	. . . . .	VI	. . . . .	G	. . . . .	V	. . . . .	V.M	AH.R	. . . . .	D.R	. . . . .	MQAI	K	. . . . .	LRR								
Bt CXCL11 XM_594243	. . . . .	V.T	. . . . .	AI	. . . . .	G	. . . . .		. . . . .	V	. . . . .	I	. . . . .	T	. . . . .	T	. . . . .	TH	. . . . .	A	. . . . .	KA	. . . . .	Q	. . . . .	SEKY								
Bt CXCL11 VIRN TH011	. . . . .	V.T	. . . . .	AI	. . . . .	G	. . . . .		. . . . .	V	. . . . .	I	. . . . .	T	. . . . .	T	. . . . .	TH	. . . . .	A	. . . . .	KA	. . . . .	Q	. . . . .	SEKY								
Bt CXCL11 (mature)	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~								
SS EST BX914688	.G	. . . . .	V	. . . . .	F	. . . . .	TI	. . . . .	A	. . . . .		. . . . .	V	. . . . .	I	. . . . .	H	. . . . .	Y	. . . . .	T	. . . . .	V	. . . . .	TAH	R	. . . . .	NV	M	. . . . .	M	. . . . .	LRY	
Ss CXCL11 VIRN TH404	.G	. . . . .	V	. . . . .	F	. . . . .	TI	. . . . .	A	. . . . .		. . . . .	V	. . . . .	I	. . . . .	H	. . . . .		. . . . .	T	. . . . .	V	. . . . .	AH	R	. . . . .	NV	M	. . . . .	M	. . . . .	LRY	
Ss CXCL11 (mature)	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~

Hs CXCL11 NM_005409	.....
Mm CXCL11 NM_019494	QNM*
Bt CXCL11 XM_594243	KNI*
Bt CXCL11 (mature)	KNI*
Bt CXCL11 KF TH-101	KNI*
Ss EST BX914688	QNV*
Ss CXCL11 VIRN TH404	QNV*
Ss CXCL11 (mature)	QNV*

# GM-CSF

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          10         20         30         40         50         60         70         80         90        100
    ....|....|....|....|▼...|....|....|....|....|....|....|....|....|....|....|....|....|....|
Hs CSF2 NM_000758  MWLQSILLLLGTVACSIS~~~APARSPSPSTQPWEHVNAIQEARRLLNLSRDTAAEMNETVEVISEMFDLQEPTCLQTRLELYKQGLRGSLTTKLKGPLTMM
Mm CSF2 NM_009969  MWLQNLLLFLGIVVYSLS~~~APTRSPITVTRPWKHVEAIKEALNLLD~~~DMPVTLNEEVEVVSNEFSFKKLTCVQTRLKIFECGLRGNFTKLKGALNMT
Ec GM-CSF NM_001081882 MWLQNLLLLLGTVVYSMP~~~APTRQSPVTRPWQHVDAIKEALSLLNSSDTAAIMNETVEVVSETFDAEELTCLQTRLKLYKQGLRGSLIKLEGPLTMM
Ec GM-CSF VIRN TH308 MWLQNLLLLLGTVVYSMP~~~APTRQSPVTRPWQHVDAIKEALSLLNSSDTAAIMNETVEVVSETFDAEELTCLQTRLKLYKQGLRGSLIKLEGPLTMM
Ec GM-CSF (mature) ~~~~~~APTRQSPVTRPWQHVDAIKEALSLLNSSDTAAIMNETVEVVSETFDAEELTCLQTRLKLYKQGLRGSLIKLEGPLTMM

          110        120        130        140        150
    ....|....|....|....|....|....|....|....|....|....|....|.
Hs CSF2 NM_000758  ASHYKQHCPPTPETSCATQIITFESFKENLKDFLLVIPFDCWEPVQE*~~~~~
Mm CSF2 NM_009969  ASYYQTYCPPTPETDCETQVTTYADFIDSLKTFLTDIPFECKKPGQK*~~~~~
Ec GM-CSF NM_001081882 ASHYKQHCPPTLETSCATQMITFKSFKKNLKDFLEIPFDCWNPRSKAGLPARS*
Ec GM-CSF VIRN TH308  ASHYKQHCPPTLETSCATQMITFKSFKKNLKDFLEIPFDCWNPRSKAGLPARS*
Ec GM-CSF (mature)  ASHYKQHCPPTLETSCATQMITFKSFKKNLKDFLEIPFDCWNPRSKAGLPARS*
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# IFN-β

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      10      20      30      40      50      60      70      80      90     100
Hs IFNβ (P01574)      M T N K C L L Q I A L L L C F S T T A L S ~ ~ M S Y N L L G F L Q R S S N F Q C K L L W Q L N G R L E Y C L K D R M N F D I P E E I K Q L Q Q F Q K E D A A L T T I Y E M L Q N I F A I F R Q D S S S T
Mm IFNβ (NM_010510)  . N . R W I . H A . F . . . . . ~ I N Y K Q . Q L Q E R T N I R K ~ . E . E . . . . K I N L T Y R A D F K I P M E M T E . M Q K S Y T ~ ~ A F . I Q ~ ~ . . . . . V . L V . . N N F . . .
Mm IFNβ (P01575)    . N . R W I . H A . F . . . . . ~ I N Y K Q . Q L Q E R T N I R K ~ . E . E . . . . K I N L T Y R A D F K I P M E M T E . M Q K S Y T ~ ~ A F . I Q ~ ~ . . . . . V . L V . . N N F . . .
Bt IFNβ (VIRN)      . . Y R . . . M V . . . . . ~ ~ R . . S . . R . Q . . Q . L K E . . . . . G . . P S T P Q H . . E A . . D . Q M . . . M . E . . . . . I . V M . V . H . . G . L T R . F . . .
Bt IFNβ (mature)   ) ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ R . . S . . R . Q . . Q . L K E . . . . . G . . P S T P Q H . . E A . . D . Q M . . . M . E . . . . . I . V M . V . H . . G . L T R . F . . .
Bt IFNβ (M15477)   . . Y R . . . M V . . . . . ~ ~ R . . S . . R . Q . . Q . L K E . . . . . G . . P S T S Q H . . E A . . D . Q M . . . M . E . . . . . I . V M . V . H . . G . L T R . F . . .
Bt IFNβ (P01578)   . . Y R . . . M V . . . . . ~ ~ R . . S . . R . Q . . Q . L K E . . . . . G . . P S T S Q H . . E A . . D . Q M . . . M . E . . . . . I . V M . V . H . . G . L T R . F . . .
Ss IFNβ1 (mature)  ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ S Y D V ~ . R Y Q . . . . L A . . . . . G . . P . T P Q . . . E . . . . . E V . . . M . P P . . . . . V . I . H . . . Q . . G . L . R N F . . .
Ss IFNβ1 (AY687281) . A . . . I . . . . . M . . . . . ~ M S Y D V ~ . R Y Q . . . . L A . . . . . E . . P . T P Q . . . E . . . . . E V . . . M . P P . . . . . V . I . H . . . Q . . G . L . R N F . . .
Ss IFNβ1 (Q68I64) . A . . . I . . . . . M . . . . . ~ M S Y D V ~ . R Y Q . . . . L A . . . . . E . . P . T P Q . . . E . . . . . E V . . . M . P P . . . . . V . I . H . . . Q . . G . L . R N F . . .

      110     120     130     140     150     160     170     180     190
Hs IFNβ (P01574)      G W N E T I V E N L L A N V Y H Q I N H L ~ ~ K T V L E E K L E K E D F T R G K L M S S I ~ ~ H L K R Y Y G R I L H Y L K A K E Y S H C A W T I V R V ~ ~ E I L R N F Y F I N R L T G Y L R N
Mm IFNβ (NM_010510)  . . . . . V R . . D E L ~ . Q T V F L ~ . . . . . Q . E R L T W E M ~ ~ ~ . T A L . . S . . W . V Q R . . L M K . N S Y . M ~ ~ . R A . . F . . L I . R . . . R N F Q . *
Mm IFNβ (P01575)    . . . . . V R . . D E L ~ . Q T V F L ~ . . . . . Q . E R L T W E M ~ ~ ~ . T A L . . S . . W . V Q R . . L M K . N S Y . M ~ ~ . R A . . F . . L I . R . . . R N F Q . *
Bt IFNβ (VIRN)      . . S . . I . D . . E E L . G . M . R . Q P I Q K E I M Q K O N T T A G D T I V P ~ ~ ~ ~ ~ . G K . . F N L M Q . . E S . . D R . . . . . Q V Q . . T . V S . L M . . . . V . D *
Bt IFNβ (mature)   . . S . . I . D . . E E L . G . M . R . Q P I Q K E I M Q K O N T T A G D T I V P ~ ~ ~ ~ ~ . G K . . F N L M Q . . E S . . D R . . . . . Q V Q . . T . V S . L M . . . . V . D *
Bt IFNβ (M15477)   . . S . . I . D . . K E L . W . M . R . Q P I Q K E I M Q K O N S T T E D T I V P ~ ~ ~ ~ ~ . G K . . F N L M Q . . E S . . D R . . . . . Q V Q . . T . V S . L M . . . . V . D *
Bt IFNβ (P01578)   . . S . . I . D . . K E L . W . M . R . Q P I Q K E I M Q K O N S T T E D T I V P ~ ~ ~ ~ ~ . G K . . F N L M Q . . E S . . D R . . . . . Q V Q . . T . V S . L M . . . . V . D *
Ss IFNβ1 (mature)  . . . . . V I K T I . V E L D G . M D D . E T I L E E I M E E . N F P R G D M T I L ~ ~ ~ ~ ~ . K . . L S . . Q . . S . . R S . . . . . Q V . . . . . S . L . . . D . . . *
Ss IFNβ1 (AY687281) . . . . . V I K T I . V E L D G . M D D . E T I L E E I M E E . N F P R G D M T I L ~ ~ ~ ~ ~ . K . . L S . . Q . . S . . R S . . . . . Q V . . . . . S . L . . . D . . . *
Ss IFNβ1 (Q68I64) . . . . . V I K T I . V E L D G . M D D . E T I L E E I M E E . N F P R G D M T I L ~ ~ ~ ~ ~ . K . . L S . . Q . . S . . R S . . . . . Q V . . . . . S . L . . . D . . .

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# IFN-γ

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      10      20      30      40      50      60      70      80      90     100
Hs IFNg (NM_000619)  ~~~MKYTSYILAFQLCIVLGSLSGCYC~~~QDPYVKEAENLKKYFNAGHSDVADNGTLFLGILKNWKEESDRKIMQSQIVSFYFKLFKNEKDDQSIQKSV
Hs IFNg (P01579)    -----
Mm IFNg (NM_008337)  ~~~NA.HC...L.F-LMAVS...~~~HGTVIESL.S.NN...SSGI..EEK~S...D.WR..QKDG.M..L...I...LR..EVL..N.A.SNNIS
Mm IFNg (P01580)    ---NA.HC...L.F-LMAVS...~~~HGTVIESL.S.NN...SSGI..EEK~S...D.WR..QKDG.M..L...I...LR..EVL..N.A.SNNIS
Ec IFNg (VIRN)      ---N...F.....AI...STY..QA~~~AFF..I...E...SNP..G.G.P..D.....D..K..I.....E.L.N.V...MD
Ec IFNg (mature)    -----Y..QA~~~AFF..I...E...SNP..G.G.P..D.....D..K..I.....E.L.N.V...MD
Ec IFNg (U04050)    ---N...F.....AI...STY..QA~~~AFF..I...E...SNP..G.G.P..D.....D..K..I.....E.L.N.V...MD
Ec IFNg (P42160)    ---N...F.....AI...STY..QA~~~AFF..I...E...SNP..G.G.P..D.....D..K..I.....E.L.N.V...MD
Bt IFNg (VIRN)      ---.....F..LL..GL..FS.S.G~~~GQFFR.I...E...SSP..KG.P..SE.....D..K..I.....E.L.N.V..R.MD
Bt IFNg (mature)    -----.....GQFFR.I...E...SSP..KG.P..SE.....D..K..I.....E.L.N.V..R.MD
Bt IFNg (NM_174086) ---.....F..LL..GL..FS.S.G~~~GQFFR.I...E...SSP..KG.P..SE.....D..K..I.....E.L.N.V..R.MD
Bt IFNg (P07353)    ---.....F..LL..GL..FS.S.G~~~GQFFR.I...E...SSP..KG.P..SE.....D..K..I.....E.L.N.V..R.MD
Gg IFNg (VIRN/AH0009942) MTCQT.NLEFV.SVIMIYYG~~~HTASSLNVLQDDIDK..AD..SS.....G.PIIIVEK...T.RNEKR..IL...M.LEMLE.TDKSKPHI.HIS
Gg IFNg (mature)    ~~~~~HTASSLNVLQDDIDK..AD..SS.....G.PIIIVEK...T.RNEKR..IL...M.LEMLE.TDKSKPHT.HIS

      110     120     130     140     150     160     170
Hs IFNg (NM_000619)  TIKEDMNVKFFNSNKKKRDDFEKLTNYSVTDLNVORKAHELIQVMAELSPAAKTGKRRKSQMLFRGRRASQ*
Hs IFNg (P01579)    -----
Mm IFNg (NM_008337)  V.ESHLITT..SNS.A.K.A.MSIAKFE.NNPQ...Q.FN...R.VHQ.L.ESSLR...RC*~~~~~
Mm IFNg (P01580)    V.ESHLITT..SNS.A.K.A.MSIAKFE.NNPQ...Q.FN...R.VHQ.L.ESSLR...RC-----
Ec IFNg (VIRN)      .....LF.....STS.LE..Q..IQIP.N..K.....S...K..ND...K.NLR.....NP.....L.-
Ec IFNg (mature)    .....LFA.....STS.LE..Q..IQIP.N..K.....S...K..ND...K.NLR.....NP.....L.-
Ec IFNg (U04050)    .....LF.....STS.LE..Q..IQIP.N..K.....S...K..ND...K.NLR.....NP.....L.-
Ec IFNg (P42160)    .....LF.....STS.LE..Q..IQIP.N..K.....S...K..ND...K.NLR.....NP.....L.-
Bt IFNg (VIRN)      I..Q..FQ..L.GSSE.LE..K..IQIP.D..QI.....N...K..ND...KSNLR.....N.....M-
Bt IFNg (mature)    I..Q..FQ..L.GSSE.LE..K..IQIP.D..QI.....N...K..ND...KSNLR.....N.....T-
Bt IFNg (NM_174086) I..Q..FQ..L.GSSE.LE..K..IQIP.D..QI.....N...K..ND...KSNLR.....N.....T-
Bt IFNg (P07353)    I..Q..FQ..L.GSSE.LE..K..IQIP.D..QI.....N...K..ND...KSNLR.....N.....M-
Gg IFNg (VIRN/AH0009942) EELYTLKNNLPDG~V..VK..IMD.AKLPMN..RI...AN..FSILQK.VDPPSFK~...SQR.CNC*~~~
Gg IFNg (mat)       EELYTLKNNLPDG~V..VK..IMD.AKLPMN..RI...AN..FSILQK.VDPPSFK~...SQR.CNC*~~~
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# IL-1β

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      10      20      30      40      50      60      70      80      90     100
Hs IL1b NM_000576 MAEVPELASEMMAYYSGNEDDLFFEADGPKQMKCSFQLDLDCPL~DGGIQLRISDHYSKGFRQAASVVAMDKLRKMLVPCPQTFQENDLSTFFPFIFE
Mm IL1b NM_008361 ..T...NC..PPFD~D.N....V...QK..GC..TF..GCP~ES...Q..QQ.IN.S...V.LI..VE..WQLP.SF.W...DE.M...S...
Gg IL1b DQ393267 ..F..D.DVLESSSL.~~EET.Y~~..SCLCLOKKPRLDSEHTTVDV.VTVRKGRGARS..R..VL...T..LRR~.RSRD.ADS...ALLEEV.~
Gg IL1b VIRN Y15006 ..F..D.DVLESSSL.~~EET.Y~~..SCLCLOKKPRLDSEHTTVDV.VTVRKGRGARS..R..VL...T..LRR~.RSRD.ADS...ALLEEV.~
Gg IL1b (mature) ~~~~~
Bt IL1b NM_174093 ..T...PIN.....~D.NE.L...D....SCI.H...GSMG..N...Q..HQF.N.S...VV..I...E...NS~AYAHV.HDD..RSILS....
Bt IL1b VIRN/EU276067 ..T...PIN.....~D.NE.L...D....SCI.H...GSMG..N...Q..HQF.N.S...VV..I...E...NS~AYAHV.HDD..RSILS....
Bt IL1 (mature) ~~~~~
Ec IL1b NM_001082526 ..A..DT~D..T.C...N....E.....G.....SSMGN.....QF.HQL.N.T.KHVV.II...E..K.IP...S.A..DD..RSL.SV...
Ec IL1b VIRN/EU438767 ..A..DT~D..T.C...N....E.....G.....SSMGN.....QF.HQL.N.T.KHVV.II...E..K.IP...S.A..DD..RSL.SV...
Ec IL1b (mature) ~~~~~

      110     120     130     140     150     160     170     180     190     200
Hs IL1b NM_000576 EEPIFFDTWDN~EAYVHDAPVRSLNCTLRDSQOKSLVMSGPYELKALHLQGQDMEQQVVFSMSFVQ~~~~GEESNDKIPVALGLKEKNLYLSCVLKDD
Mm IL1b NM_008361 ...LC.S..DDNLL.C.V.I.Q.HYR...E.....L.D.....N.NIN...I.....P.....G.....M..G
Gg IL1b DQ393267 ~.VT.QRLESSYAGAPAFRYT..QSFDIF.IN..CF.LES.TQ.V....PSSS.K.RLNIALYRPRGPR.SAGTGOM....I.GYK..M...MSGT
Gg IL1b VIRN Y15006 ~.VT.QRLESSYAGAPAFRYT..QSFDIF.IN..CF.LES.TQ.V....PSSS.K.RLNIALYRPRGPR.SAGTGOM....I.GYK..M...MSGT
Gg IL1b (mature) ~~~~~
Bt IL1b NM_174093 ...VI.E.SSDE~~FLC...Q.IK.K.Q.RE...LAS.CV...LS.E.NRE..C.....~RDN.....I.D.....K.G.
Bt IL1b VIRN/EU276067 ...VI.E.SSDE~~FLC...Q.IK.K.Q.RE...LAS.CV...LS.E.NRE..C.....~RDN.....I.D.....K.G.
Bt IL1 (mature) ~~~~~
Ec IL1b NM_001082526 ...IC.N..DD~~~.C..A.H.V..R...IYH...L.AC..Q.V.N.ENTN...C.....~ET.....GM..G
Ec IL1b VIRN/EU438767 ...IC.N..DD~~~.C..A.H.V..R...IYH...L.AC..Q.V.N.ENTN...C.....~ET.....GM..G
Ec IL1b (mature) ~~~~~

      210     220     230     240     250     260     270     280
Hs IL1b NM_000576 KPTLQLESVDPKNYPKKMEKRFVFNKIEINNK~LEFESAQFPNWIYSTSQAENMPVFLGGTKGGQDITDFTMQFVSS*
Mm IL1b NM_008361 T.....Q.....VKS~~V.....E.....HK.....~NNS...I...ES...*
Gg IL1b DQ393267 E.....EA.VMRDIDSVELT..I.YRLDSPTEGTTR...A.G.F.C..LQPRQ..GITNQPDQVN.ATYKLSGR*~
Gg IL1b VIRN Y15006 E.....EA.VMRDIDSVELT..I.YRLDSPTEGTTR...A.G.F.C..LQPRQ..GITNQPDQVN.ATYKLSGR*~
Gg IL1b (mature) E.....EA.VMRDIDSVELT..I.YRLDSPTEGTTR...A.G.F.C..LQPRQ..GITNQPDQVN.ATYKQSGR*~
Bt IL1b NM_174093 T.....E...V...RN.....Y.T..K.T~V...VLY.....I.ER...HFR.....R.ETL.P*
Bt IL1b VIRN/EU276067 T.....E...V...RN.....Y.T..K.T~V...VLY.....I.ER...HFR.....R.ETL.P*
Bt IL1 (mature) T.....E...V...RN.....Y.T..K.T~V...VLY.....I.ER...HFR.....R.ETL.P*
Ec IL1b NM_001082526 .....T..NT..R.....M..KGN~V...MY.....KK...N.R..R...I.EIT.A*
Ec IL1b VIRN/EU438767 .....T..NT..R.....M..KGN~V...MY.....KK...N.R..R...I.EIT.A*
Ec IL1b (mature) .....T..NT..R.....M..KGN~V...MY.....KK...N.R..R...I.EIT.A*
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# IL-2

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      10      20      30      40      50      60      70      80      90     100
Hs IL-2 (NM_000586) MYRMQLLSICALSLALVTNS~APTSSTKKTQLQLLEHLLLDLQMIILNGINNYKNPKLTRMLTFKPYMPKK~ATELKHLLQCLEEELKPLEEVLNLAQS
Hs IL-2 (P60568)
Ec IL-2 (VIRN) ..K...A...T..VLA.....KRE..Q..KQ.QM..KLL.E.V..N....SK.....IN.....M.KNFL.
Ec IL-2 (mature) .....KRE..Q..KQ.QM..KLL.E.V..N....SK.....IN.....M.KNFL.
Ec IL-2 (NM_001085433) ..K...A...T..VLA.....KRE..Q..KQ.QM..KLL.E.V..N....SK.....IN.....M.KNFL.
Ec IL-2 (P37997) .....KRE..Q..KQ.QM..KLL.E.V..N....SK.....IN.....M.KNFL.
Bt IL-2 (VIRN) ..KI.....T...A.G.....GN.MKEVKS.....LL.EKVK.PE.L.S..H..D..V..VN.....K..L...L.....P.
Bt IL-2 (mature) .....GN.MKEVKS.....LL.EKVK.PE.L.S..H..D..V..VN.....K..L...L.....P.
Bt IL-2 (NM_180997) .SA.YKIQLLSICIALTLALVANG~.....GN.MKEVKS.....LL.EKVK.PE.L.S..H..D..A..VN.....K..L...L.....P.
Bt IL-2 (P05016) ..KI.....T...A.G.....GN.MKEVKS.....LL.EKVK.PE.L.S..H..D..V..VN.....K..L...L.....P.
Gg IL-2 (VIRN/AF017645) .MCKV.IFGCISVAM.M.TAYG~.SL..AKR.PLQT.IKD~~~LE..EN.K.KIHLE.YTPTEETQECTQOQLQCY.GEVVT.KK.TEDDT.IKEEFVT
Gg IL-2 (mature) .....SL..AKR.PLQT.IKD~~~LE..EN.K.KIHLE.YTPTEETQECTQOQLQCY.GEVVT.KK.TEDDT.IKEEFVT
Gg IL-2 (O73883) .MCKV.IFGCISVAM.M.TAYGA~.SL..AKR.PLQT.IKD~~~LE..EN.K.KIHLE.YTPTEETQECTQOQLQCY.GEVVT.KK.TEDDT.IKEEFVT

      110      120      130      140      150      160
Hs IL-2 (NM_000586) KNFHLRPRD~LISNINVIVLELKGSETTFMCEYADETATIVEFLNRWITFCQSIISTLT*
Hs IL-2 (P60568)
Ec IL-2 (VIRN) .....DIKE.M.....T..G.....R.T..D..G.....K.....F..M.**LS
Ec IL-2 (mature) .....DIKE.M.....T..G.....R.T..D..G.....K.....F..M.*
Ec IL-2 (NM_001085433) .....DIKE.M.....T..G.....R.T..D..G.....K.....F..M.*
Ec IL-2 (P37997) .....DIKE.M.....T..G.....R.T..DN..E.....K.....
Bt IL-2 (VIRN) ..LNP.EIKDSMD..KR.....Q.....R.T..D.A.VNA.....K.....Y..M.*
Bt IL-2 (mature) ..LNP.EIKDSMD..KR.....Q.....R.T..D.A.VNA.....K.....Y..M.*
Bt IL-2 (NM_180997) ..LNP.EIKDSMD..KR.....Q.....R.T..D.A.VNA.....K.....Y..M.*
Bt IL-2 (P05016) ..LNP.EIKDSMD..KR.....Q.....R.T..D.A.VNA.....K.....Y..M.
Gg IL-2 (VIRN/AF017645) AIQNIKKNLKSILTGL.HTGS.C.I~~~~..ANNKKKFPDFLHELTNFVRYLQK*
Gg IL-2 (mature) AIQNIKKNLKSILTGL.HTGS.C.I~~~~..ANNKKKFPDFLHELTNFVRYLQK*
Gg IL-2 (O73883) AIQNIKKNLKSILTGL.HTGS.C.I~~~~..ANNKKKFPDFLHELTNFVRYLQK

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# IL-4

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      10      20      30      40      50      60      70      80      90     100
Hs IL4 NM_000589 ~MGLTSQLLPPLFFLLACAGNFVHGKCDITLQEIIKTLNLSLTEQ~KTLCTELTVDIFAASKNTTEKETFCRAATVLRQFYSHHEKDTRCLGATAQQF
Ec IL4 EU000425 ~...Y..I.A.VC...TS..IQ.C.Y.....N..DGKG.NS.M...A.A..GP...DG...I...K..Q.L.KR.DR~~~~~
Ec IL4 VIRN EU438769 ~...Y..I.A.VC...TS..IQ.C.Y.....N..DGKG.NS.M...A.A..GP...DG...I...K..Q.L.KR.DR~~~~~
Ec IL4 (mature) ~~~~~C.Y.....N..DGKG.NS.M...A.A..GP...DG...I...K..Q.L.KR.DR~~~~~
Bt IL4 NM_173921 ~...Y..I.V.VC..V.TSH.....A.....I..TR~NS.M..P.A.V...P.....VGIE..RI.RS.~~~~~
Bt IL4 VIRN EU276069 ~.....I.V.VC..V.TSH.....A.....I..TR~NS.M..P.A.V...P.....VGIE..RI.RS.~~~~~
Bt IL4 (mature) ~~~~~A.....I..TR~NS.M..P.A.V...P.....VGIE..RI.RS.~~~~~
Gg IL4 (VIRN) NM_001007079 MSSSLPT..AL.VL.AGPGAVPTLCLQLSVP.M.S.RIV.DIQGE~VS.VKMN.....DN.TNNKT.LL.K.S.IVWESQHC.KN~~~~~
Gg IL4 (mature) ~~~~~LQLSVP.M.S.RIV.DIQGE~VS.VKMN.....DN.TNNKT.LL.K.S.IVWESQHC.KN~~~~~

      110      120      130      140      150
Hs IL4 NM_000589 HRHKQLIRFLKRLDRNLWGLAGLNSCPVKEANQST~LENFLERLKTIMREKYSKCSS*
Ec IL4 EU000425 ~~~SLIKEC.SG....K.M.NGTC.T.N..KK.~~KD.....K.....*~~
Ec IL4 VIRN EU438769 ~~~SLIKEC.SG....K.M.NGTC.T.N..KK.~~KD.....K.....*~~
Ec IL4 (mature) ~~~SLIKEC.SG....K.M.NGTC.T.N..KK.~~KD.....K.....*~~
Bt IL4 NM_173921 ~~~TC.NK..GG....NS..SKTCS~N..KT..ST.KDL.....K.....*~~
Bt IL4 VIRN EU276069 ~~~TC.NK..GG....NS..SKTCS~N..KT..ST.KDL.....K.....*~~
Bt IL4 (mature) ~~~TC.NK..GG....NS..SKTCS~N..KT..ST.KDL.....K.....*~~
Gg IL4 (VIRN) NM_001007079 ~~~~~QGLFLNMRQL.NASSTSLKA.CPT.AGN.TSM.K..AD.R.FFHQLAKNK*~~
Gg IL4 (mature) ~~~~~QGLFLNMRQL.NASSTSLKA.CPT.AGN.TSM.K..AD.R.FFHQLAKNK*~~
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# IL-5

	10	20	30	40	50	60	70	80	90	100
	<pre> ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....  Hs IL-5 (NM_010558) MRMLLHLSLLALGAAYVYA~IPEIPTSALVKE<sup>▼</sup>TLALLSTHRTLLIANETLRIPVPVHKNHQLCTEEIFQIGITLESQTVQGGTVERLFKNLSLIK<sup>Y</sup>I Hs IL-5 (P05112) ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....  Mm IL-5 (NM_010558) ..RM.LHLSVLTLS<sup>C</sup>VWAT~<sup>AM</sup>..M.TV...TQ.A.A.TS..M.L..T...IG...LDI.KN..R...M.Q..... Mm IL-5 (P04401) ..RM.LHLSVLTLS<sup>C</sup>VWAT~<sup>AM</sup>..M.TV...TQ.A.A.TS..M.L..T...IG...LDI.KN..R...M.Q..... Ec IL-5 (U91947) .....V.....C~~LAV.S.MNR.A..T.....GDGN.M.T.E.....I.V...D.KN...DA.AK.Q.....G.. Ec IL-5 (O02699) .....V.....C~~LAV.S.MNR.A..T.....GDGN.M.T.E.....I.V...D.KN...DA.AK.Q.....G.. Bt IL-5 (VIRN) ...H...T.V.....C.NA~<sup>V</sup>.STMNR.A..T...S.....GDGN.M.T.Q.T...I.V...D.KN.A.DA.KKI.Q.....E.. Bt IL-5 (mature) ~~~~~~V.STMNR.A..T...S.....GDGN.M.T.Q.T...I.V...D.KN.A.DA.KKI.Q.....E.. Bt IL-5 (NM_173922) ...H...T.V.....C.NA~<sup>V</sup>.STMNR.A..T...S.....GDGN.M.T.Q.T...I.V...D.KN.A.DA.KKI.Q.....E.. Bt IL-5 (P52173) ...H...T.V.....C.NA~<sup>V</sup>.STMNR.A..T...S.....GDGN.M.T.Q.T...I.V...D.KN.A.DA.KKI.Q.....E.. </pre>									
	110	120	130							
	<pre> ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....  Hs IL-5 (NM_010558) DGQKKKCGEERRRVN<sup>Q</sup>FLDYL<sup>Q</sup>EFLGVMNTEWII<sup>E</sup>S* Hs IL-5 (P05112) ..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....  Mm IL-5 (NM_010558) .R..E.....TR.....S...AM.G* Mm IL-5 (P04401) .R..E.....TR.....S...AM.G* Ec IL-5 (U91947) .L.....G..W..K.....I...T..G* Ec IL-5 (O02699) .L.....G..W..K.....I...T..G Bt IL-5 (VIRN) .L..R...G..W..K.....V...I...TM..* Bt IL-5 (mature) .L..R...G..W..K.....V...I...TM..* Bt IL-5 (NM_173922) .L..R...G..W..K.....V...I...TM..* Bt IL-5 (P52173) .L..R...G..W..K.....V...I...TM.. </pre>									

# IL-6

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      10      20      30      40      50      60      70      80      90     100
Hs IL-6 (NM_000600) MNSFSTSAFGPVAFSLGLLLVLPAAFP~APVPPGEDSKDVAAPHRQP~L~TSSERIDKQIRYILDGIALRKETCNKSNMCESSKEALAENNLLNLPK
Hs IL-6 (P05231)
Mm IL-6 (NM_031168) .K~.LSARDFHPVAF..M..TTT~AFPTSQVRRG.FTEDTT.N.~VY~.T.QVGLLITHVLWEIVE~M..L..GNSD.MNNDD.....K..E
Mm IL-6 (P08505) .K~.LSARDFHPVAF..M..TTT~AFPTSQVRRG.FTEDTT.N.~VY~.T.QVGLLITHVLWEIVE~M..L..GNSD.MNNDD.....K..E
Ec IL-6 (VIRN) ....F..TVT.....MAT.....FPT.L.L..E~TTSNG~.L..TADKTKQH.K..GK...KN.M..NFSK..N..V.....
Ec IL-6 (mature) ~~~~~T.L.L..E~TTSNG~.L..TADKTKQH.K..GK...KN.M..NFSK..N..V.....
Ec IL-6 (U64794) ....F..TVT.....MAT.....FPT.L.L..E~TTSNG~.L..TADKTKQH.K..GK...KN.M..NFSK..N..V.....
Ec IL-6 (Q95181) ...L..TVT.....MAT.....FPT.L.L..E~TTSNG~.L..TADKTKQH.K..GK...KN.M..NFSK..N..V.....
Bt IL-6 (VIRN) ...RF...T.F.V.....MTS.....FPT.G.L..F.NDIT.G.~LL~.TP.KTEAL.KRMV.K..M..I.E.NDE.....T...K....
Bt IL-6 (mature) ~~~~~G.L..F.NDIT.G.~LL~.TP.KTEAL.KRMV.K..M..I.E.NDE.....T...K....
Bt IL-6 (NM_173923) ...RF...T.F.V.....MTS.....FPT.G.L..F.NDIT.G.~LL~.TP.KTEAL.KRMV.K..M..I.E.NDE.....T...K....
Bt IL-6 (P26892) ...RF...T.F.V.....MTS.....FPT.G.L..F.NDIT.G.~LL~.TP.KTEAL.KRMV.K..M..I.E.NDE.....T...K....

      110     120     130     140     150     160     170     180     190     200
Hs IL-6 (NM_000600) MAEKDGCQSGFNEETCLVKIITGLLEFEVYLEYLQNRFESEEQARAVQMSTKVLIQFLQKAKNLDAITTPDPTTNASLLTKLQAQNWLODM~T
Hs IL-6 (P05231)
Mm IL-6 (NM_031168) IQRN...Y.T.Y.Q.I..L..SS...YHS...MK.NLKDNKKDKAR.LQDTETLIHIFNQEVK~LHKIVL..PISNA.LTDKLES.K~EWLRTK.
Mm IL-6 (P08505) IQRN...Y.T.Y.Q.I..L..SS...YHS...MK.NLKDNKKDKAR.LQDTETLIHIFNQEVK~LHKIVL..PISNA.LTDKLES.K~EWLRTK.
Ec IL-6 (VIRN) .....Q...M..T..S..QI.....E.KGEK.NIKTM.I....V.I.MQ.M..PEVT.....AKS...A..HS.....EWLKNT.
Ec IL-6 (mature) .....Q...M..T..S..QI.....E.KGEK.NIKTM.I....V.I.MQ.M..PEVT.....AKS...A..HS.....EWLKNT.
Ec IL-6 (U64794) .....Q...M..T..S..QI.....E.KGEK.NIKTM.I....V.I.MQ.M..PEVT.....AKS...A..HS.....EWLKNT.
Ec IL-6 (Q95181) .....Q...M..T..S..QI.....E.KGEK.NIKTM.I....V.I.MQ.M..PEVT.....AKS...A..HS.....EWLKNT.
Bt IL-6 (VIRN) .E.....QAI..IRTTA...YQI..D...EY.GNQ.NV.DLRKNIRT...I.KQ.IA~.L...~A.NT~D..E.M.SS.~EWWKNAK
Bt IL-6 (mature) .E.....QAI..IRTTA...YQI..D...EY.GNQ.NV.DLRKNIRT...I.KQ.IA~.L...~A.NT~D..E.M.SS.~EWWKNAK
Bt IL-6 (NM_173923) .E.....QAI..IRTTA...YQI..D...EY.GNQ.NV.DLRKNIRT...I.KQ.IA~.L...~A.NT~D..E.M.SS.~EWWKNAK
Bt IL-6 (P26892) .E.....QAI..IRTTA...YQI..D...EY.GNQ.NV.DLRKNIRT...I.KQ.IA~.L...~A.NT~D..E.M.SS.~EWWKNAK

      210     220     230     240     250     260
Hs IL-6 (NM_000600) THLILRSFKE~FLQSSLRALRQM*
Hs IL-6 (P05231) .....FLQSSLRALRQM
Mm IL-6 (NM_031168) IQF..K.L~.E~..KVT..ST..T*
Mm IL-6 (P08505) IQF..K.L~.E~..KVT..ST..T
Ec IL-6 (VIRN) .....L~.D...F...V.I.*PWHLRLL*FMGIPSSGQKPVHWAHNLCCSL*RTKSMTLG
Ec IL-6 (mature) .....L~.D...F...V.I.*
Ec IL-6 (U64794) .....L~.D...F...V.I.*PWHLRLL*FMGIPSSGQKPVHWAHNLCCSL*RTKSMSVR
Ec IL-6 (Q95181) .....L~.D...F...V.I.*
Bt IL-6 (VIRN) II...NL~.N...F...I..~K*
Bt IL-6 (mature) II...NL~.N...F...I..~K*
Bt IL-6 (NM_173923) II...NL~.N...F...I..~K*
Bt IL-6 (P26892) II...NL~.N...F...I..~K

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# IL-7

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      10      20      30      40      50      60      70      80      90     100
Hs IL-7 (NM_000880) MFHVSFRYIFGLPPLILVLLPVASS~▼DCDIEGKDGKQYESVLMVSIQLLDSMKEIGSNCLNNEFNFFKRHICDANKEGMFLFRAARKLRQFLKMN~ST
Hs IL-7 (P13232)
Mm IL-7 (NM_008371) .....I.....T.....~E.H.KD.E.A.....I..E~.K.TGTD..P..P..RK.V..DT..AA.N.....K.....I.E
Mm IL-7 (P10168) .....I.....T.....~E.H.KD.E.A.....I..E~.K.TGTD..P..P..RK.V..DT..AA.N.....K.....I.E
Bt IL-7 (VIRN) .....I.....T.....~S...GA.QN...N..D~.N.INFD.....P...K.S..D...AS..N..S.....I.D
Bt IL-7 (mature) ~~~~~S...GA.QN...N..D~.N.INFD.....P...K.S..D...AS..N..S.....I.D
Bt IL-7 (NM_173924) .....I.....T.....~S.R.GA.QN...N..D~.N.INFD.....P...K.S..D...AS..N..S.....I.D
Bt IL-7 (Q8HYR8) .....I.....T.....~S.R.GA.QN...N..D~.N.INFD.....P...K.S..D...AS..N..S.....I.D
Ss IL-7 (VIRN) .....I.....T.....~GV.QN...D~.R.IDFD.....P..L.K.S..D...AS..Y.....K..I..I.E
Ss IL-7 (mature) ~~~~~GV.QN...D~.R.IDFD.....P..L.K.S..D...AS..Y.....K..I..I.E
Ss IL-7 (AB035380) .....I.....T.....~GV.QN...D~.R.IDFD.....P..L.K.S..D...AS..Y.....K..I..I.E
Ss IL-7 (Q9N2G6) .....I.....T.....~GV.QN...D~.R.IDFD.....P..L.K.S..D...AS..Y.....K..I..I.E

      110     120     130     140     150     160     170     180
Hs IL-7 (NM_000880) GDFDLHLLKLVSEGTILLNCTGQVKGRKPAALGEAQPSTKSLEENKSLKEQKLNLDLCFLKRLLEIKTCWNKILMGTKEH*
Hs IL-7 (P13232)
Mm IL-7 (NM_008371) E~.NV...T..Q..QT.V...SK~~~~~.NV.....~.A.....R.....K.SI*
Mm IL-7 (P10168) E~.NV...T..Q..QT.V...SK~~~~~.NV.....~.A.....R.....K.SI
Bt IL-7 (VIRN) D~.K...ST..Q..LT...SKG...PS.S...N...S...Q...I..K.....R.I...*
Bt IL-7 (mature) D~.K...ST..Q..LT...SKG...PS.S...N...S...Q...I..K.....R.I...*
Bt IL-7 (NM_173924) D~.K...ST..Q..LT...SKG...PS.S...N...SR...Q...I..K.....R.I...*
Bt IL-7 (Q8HYR8) D~.K...ST..Q..LT...SKG...PS.S...N...SR...Q...I..K.....R.I...
Ss IL-7 (VIRN) E~.NH..ST..Q..LT.F...SK...PS...L.N...RQG...I..K.....R.A..Y*
Ss IL-7 (mature) E~.NH..ST..Q..LT.F...SK...PS...L.N...RQG...I..K.....R.A..Y*
Ss IL-7 (AB035380) E~.NH..ST..Q..LT.F...SK...PS...L.N...RQG...I..K.....R.A..Y*
Ss IL-7 (Q9N2G6) E~.NH..ST..Q..LT.F...SK...PS...L.N...RQG...I..K.....R.A..Y
```

# IL-8

```

          10          20          30          40          50          60          70          80          90         100
.....|.....|.....|.....|.....▼|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
Hs IL8 NM_000584 MTSKLAVALLAFLISAALC~~~EGAVLPRSAKELRCQCIKTYSKPFHPKFIKELRVIESGPHCANTEIIVKLSDGRELCIDPKENWVQRVVEKFLKRAE
Oa IL8 NM_001009401 .....L.....EA~~~~S.MST.....H.T.....E.S.....TN.K.V.....K..K..QA.....
Bt IL8 NM_173925 .....L.....EA~~~~S.MST.....H.T.....E.S.....TN.N.V..N..K..K..QV.V.....
Bt IL8 VIRN/EU276073 .....L.....EA~~~~S.MST.....H.T.....E.S.....TN.N.V..N..K..K..QV.V.....
BT IL8 (mature) ~~~~~S.MST.....H.T.....E.S.....TN.N.V..N..K..K..QV.V.....

.....|
Hs IL8 NM_000584 NS*~~
Oa IL8 NM_001009401 KQDP*
Bt IL8 NM_173925 KQDP*
Bt IL8 VIRN/EU276073 KQDP*
BT IL8 (mature) KQDP*
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# IL-10

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          10           20           30           40           50           60           70           80           90          100
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
Hs IL10 NM_000572    MHSSALLCCILVLLTGVRASFPGQGTQSENSCTHFPGNLPMMLRDLRDAFSRVKTFQMKD~QLDNLLLKESILEDKGYLGCQALSEMIQFYLEEVMPOAE
Mm IL10 NM_010548    .PG.....L...M.I.R..YSRED.N...VGQSH..LE..T...Q.....T...~...I..TD..MQ.....V.....
Bt IL10 NM_174088    .....F.A..A..RDAS.L.DS..I.L.TS..H...E..A..GEA.....~..HS..TQ...D.....
Bt IL10 VIRN/EU276074 .....F.A..A..RDAS.L.DS..I.L.TS..H...E..A..GK.....~..HS..TQ...D.....
Bt IL10 (mature)    ~~~~~~RDAS.L.DS..I.L.TS..H...E..A..GK.....~..HS..TQ...D.....
Gg IL10 AY647438    .QT~~~~..QA..LLLA.CTLP AHCL.PT.L.SEL..AR..E..VK.EEI.DY..SR.DE.NIQ..SSE..DE..TF...SV...LR..TD..L.R.M
Gg IL10 VIRN/NM_001004414 .QT~~~~..QA..LLLA.CTLP AHCL.PT.L.SEL..AR..E..VK.EEI.DY..SR.DE.NIQ..SSE..DE..TF...SV...LR..TD..L.R.M
Gg IL10 (mature)    ~~~~~~L.PT.L.SEL..AR..E..VK.EEI.DY..SR.DE.NIQ..SSE..DK..TF...SV...LR..TD..L.R.M
Ec IL10 U38200      .....Y..F.A..G..RDR.....TS..H..HE..A.....~...M..NG.....
Ec IL10 VIRN/EU438771 .....Y..F.A..G..RDR.....TS..H..HE..A.....~...M..NG.....
          110          120          130          140          150          160          170          180
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
Hs IL10 NM_000572    NQDDPIKAHVNSLGENLKTLRRLRLRRCHRFPCENKSKAVEQVKNAFNKLEKGIYKAMSEFDIFINYIEAYMTMKIRN*
Mm IL10 NM_010548    KHG.E..E.L...K...M.....SD...DQ.V...N.....C...MI.MKS*
Bt IL10 NM_174088    .HG...E.....K.....K.RV.SE...R.V.....T...T.MOK*
Bt IL10 VIRN/EU276074 .HG...E.....K.....K.RV.SE...R.V.....T...T.MOK*
Bt IL10 (mature)    .HG...E.....K.....K.RV.SE...R.V.....T...T.MOK*
Gg IL10 AY647438    QTSTSHQQSMGD..NM.LG.KATM.....FT..KR...IK.I.ET.E.MD.N.....G.....E.LL.RR.K*
Gg IL10 VIRN/NM_001004414 QTSTSHQQSMGD..NM.LG.KATM.....FT..KR...IK.I.ET.E.MD.N.....G.....E.LL.RR.K*
Gg IL10 (mature)    QTSTSHQQSMGD..NM.LG.KATM.....FT..KR...IK.I.ET.E.MD.N.....G.....E.LL.RR.K*
Ec IL10 U38200      .HG...E.....K...V.....S..S...V.....T.MK.*
Ec IL10 VIRN/EU438771 .HG...E.....K...V.....S..S...V.....T.MK.*
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# IL-12p35

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           10           20           30           40           50           60           70           80           90          100
Hs IL12p35 NM_000882 .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
Mm IL12p35 NM_008351 ~~~~~MCPARSLLLVATLVLLD~HLSLARLNPVATPDPCMFPCLEHSSQNLRAVSNMLQKAR~QTLFYPCTSEEDIDHEDITKDKTSTVEACLPLEL
Bt IL12p35 NM_174355 ~~~~~..QS.Y..FL..A.N~...VI..S~...PAR..SQ.R..KTTDD.VKT..EK.KH.S.A.D.....R.Q..LKT.....
Bt IL12p35 VIRN/EU276075 ~~~~~..L...IS.....HHL P...G.S..TT.AS..RS~..DY.....T.....S.....
Bt IL12p35 (mature) ~~~~~..L...IS.....HHL P...G.S..TT.AS..RS~..DY.....T.....S.....
Ec IL12p35 NM_001082511 ~~~~~..P.G....I...NHLD...T...G...Q..N...T...T.....S.....S..A.....
Gg IL12p35 NM_213588 MAEHGIGIGS.AAR.GVGRCV.LAALC.L.PSTWALPP.AHNLAGK.NC.RA..A.ANEA.L.VQK.RTLGFE..L..V.L..V.NSQSN.IKS.TSQDP

           110          120          130          140          150          160          170          180          190          200
Hs IL12p35 NM_000882 TKNESCLNSRETSFITNGSCLASRKTSFMMALCLSSIYEDLKMYQVEFKTMNAKLLMDPKRQIFLDQNLAVIDEMLQALNFNSETVPOKSSLEEPDFYK
Mm IL12p35 NM_008351 H.....AT...ST.R...PPQ...L..T..G.....T..QAI..A.QNHNHQ..I..KG..VA.....S..H.G..LR..PPVG.A.P.R
Bt IL12p35 NM_174355 AT....A.....H...G....TT..R.....H..QA.....A.A.....D.....P..K.L....
Bt IL12p35 VIRN/ EU276075 AT....A.....H...G....TT..R.....H..QA.....A.A.....D.....P..K.L....
Bt IL12p35 (mature) AT....A.....H...G....TT..R.....H..QA.....A.A.....D.....P..K.L....
Ec IL12p35 NM_001082511 AP....A..I.....TPG.A.S.T.....A.....I..Q.....E..TA..K.....P...GL....
Gg IL12p35 NM_213588 GP~~~~~.N.PVLESSTLD.SK..QG.....T.KA.LGNL~K.LRV.TS..DM...QPR.PAM..P.PSTTLGSFQ

           210          220          230
Hs IL12p35 NM_000882 .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
Mm IL12p35 NM_008351 TKIKLCILLHAFRIRAVTIDRVMSYLNAS*
Bt IL12p35 NM_174355 V.M.....ST.V...N...G..SSA*
Bt IL12p35 VIRN/ EU276075 ..V.....M...SS.*
Bt IL12p35 (mature) ..V.....M...SS.*
Ec IL12p35 NM_001082511 ..V.....N.M.G.....*
Gg IL12p35 NM_213588 GRMR..GV...CL...G.MLG..S.LTAEM*
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# IL-12p40

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      10      20      30      40      50      60      70      80      90     100
Hs IL12p40 NM_002187 MCHQQLVISWFSLVFLASPLVAIWELKKDVVYVVELDWYPDAPGEMVVLTCDTPEEDGITWTLDDQSSEVLGSGKTLTIQVKEFGDAGQYTC~KGGEVLS
Mm IL12p40 NM_008352 .P.K.T...A.L.V...M.M...E...V...T...T.N...D...S...RHG.I...L...L...T...L...T...~...T...
Bt IL12p40 NM_174356 .HP...V...L...I...M...E.N...T...T...S...T...L...T...~...A...
Bt IL12p40 VIRN/ EU276076 .HP...V...L...I...M...E.N...T...T...S...T...L...T...~...A...
Bt IL12p40 (mature) ~~~~~M...E.N...T...S...T...L...T...~...A...
Ec IL12p40 NM_001082516 ...W...L...L...M...E...N...E...S.A.N...W...~...R...
Gg IL12p40 AY262752 ~MSH.LFALL..LSF.AL.E.Q.K.REN...I.SE.NDET.AKK.K...S~DEALPVYWKKG.T.LK.T...TE...P...N...LSA.TH.II.

      110     120     130     140     150     160     170     180     190     200
Hs IL12p40 NM_002187 HSLLLLHKKE~DGIWSTDILKDKQEPKNTFLRCEAKNYSGRFTCWWLT~TISTDLTFSVKSSRGSSDPQGVTCGAATLSAERVRGDNKEY~EYSVECOE
Mm IL12p40 NM_008352 .H...N...E...N~F...K...P...S...V~QRNM..K.NI...SS.P.SRA...M.S...K.TL.ORD.EK...S...
Bt IL12p40 NM_174356 R...~...A.S.K...D..H...~A...K...R...L...K.SLEHR..NK.T...
Bt IL12p40 VIRN/ EU276076 R...~...A.S.K...D..H...~A...K...R...L...K.SLEHR..NK.T...
Bt IL12p40 (mature) R...~...A.S.K...D..H...~A...K...R...L...K.SLEHR..NK.T...
Ec IL12p40 NM_001082516 .H...~...S...K...~A...K...R...L...K.SLEHR..NK.T...
Gg IL12p40 AY262752 Y.FF.IT.VDSN.QMIRS...SY...S~...K...I...S.M.ENE.PSVK.TIR.LK..QG~D...SSP~...ARTD.SVT..TAQ..K

      210     220     230     240     250     260     270     280     290     300
Hs IL12p40 NM_002187 DSACPAAEESLPIEVMVDVAVHKLKYENYSSFFIRDIIKDPDPKQLKPLKNSRQEVSWEYPDITWSTPHSYFSLTFCVQVQGKSKR~EKKD
Mm IL12p40 NM_008352 .VT..T...T...L.ALE.RQQN...ST...M...S...K.F.RI.R.KEKMKETEEGCNQ.G
Bt IL12p40 NM_174356 G...L...V.E...R...N...~...
Bt IL12p40 VIRN/ EU276076 G...L...V.E...R...N...~...
Bt IL12p40 (mature) G...L...V.E...R...N...~...
Ec IL12p40 NM_001082516 G...IV...G...E...SI...N.K...R...
Gg IL12p40 AY262752 ENY..F...HQ.T.MFLEVIDEVE...Q~C.YASTNGT~T.T.K...K...P...R.K.ESTK.Y~KS.V

      310     320     330     340
Hs IL12p40 NM_002187 RVFTDKTSATVICRKNASISVRAQDRYSSSSWSEWASVPCS*
Mm IL12p40 NM_008352 AFLVE...TE.Q.K~GGNVC.Q...N..C.K..C...RVRS*
Bt IL12p40 NM_174356 ~L.M.Q...K.T.H.D.NVR.Q.R...F...S.*
Bt IL12p40 VIRN/ EU276076 ~L.M.Q...K.T.H.D.NVR.Q.R...F...S.*
Bt IL12p40 (mature) ~L.M.Q...K.T.H.D.NVR.Q.R...F...S.*
Ec IL12p40 NM_001082516 .L.M.E...T.H.DGQ.R.Q.R...S.*
Gg IL12p40 AY262752 YDAEQSIQIPKTPGPKDK...Q.R...N...STL~R*
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# IL-13

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      10      20      30      40      50      60      70      80      90     100
Hs IL-13 (NM_002188)  MHPLLNP...LALGLMALLLTTVIALTCLGGFASP~▼~GPVPPSTA~LRELI...EELVNITQNKAPLCNGSMVWSINLTAGM~YCAALESLINVSGCSA
Hs IL-13 (Q4VB52)
Mm IL-13 (NM_008355)  .ALWVTAV...A~L~AP...R.VSLPLT.K...S...D.T~VD.A.G~F.V..D..T.I.N.N.
Mm IL-13 (P20109)    .ALWVTAV...A~L~AP...R.VSLPLT.K...S...D.T~VD.A.G~F.V..D..T.I.N.N.
Bt IL-13 (VIRN)      .A~TAVIVLI~F..LT...S...SA...A.K...V...L...SS~D...S.I.N..V
Bt IL-13 (mature)    .A~TAVIVLI~F..LT...S...SA...A.K...V...L...SS~D...S.I.N..V
Bt IL-13 (AF072807)  .A~TAVIVLI~F..LT...S...SA...A.K...V...L...SS~D...S.I.N..V
Bt IL-13 (Q9XSV9)    .A~TAVIVLI~F..LT...S...SA...A.K...V...L...SS~D...S.I.N..V
Ss IL-13 (VIRN)      .ALW.TL~F..L...HST~A.K...T...V...TS~I.D...
Ss IL-13 (mature)    .ALW.TL~F..L...HST~A.K...T...V...TS~I.D...
Ss IL-13 (AF385625)  .ALW.TL~F..L...HST~A.K...T...V...TS.Q...I.D...
Ss IL-13 (Q95J68)    .ALW.TL~F..L...HST~A.K...T...V...TS.Q...I.D...
Ec IL-13 (DQ889711)  ~NS...S...L...A.L.S.M~A.K...K...V...DT~R...S...T...
Ec IL-13 (Wagner clone) .ALW.TA~A...L...A.L.S.M~A.K...K...A...V...DT~R...S...T...

      110     120     130     140     150     160     170     180     190     200
Hs IL-13 (NM_002188)  IEKTQRLSGF...CPHKVSAGQFSSLHVRDTKIEVAQFVKDLLLHLK...KLFREGQFN*
Hs IL-13 (Q4VB52)
Mm IL-13 (NM_008355)  .YR...I.H.L.NR.APTTVS.LP~H.ITK..SYT.Q...H.P.*
Mm IL-13 (P20109)    .YR...I.H.L.NR.APTTVS.LP~H.ITK..SYT.Q...H.P.*
Bt IL-13 (VIRN)      .QR.K...NAL...P..K.V..EY...L...R.SRIV..NER...*
Bt IL-13 (mature)    .QR.K...NAL...P..K.V..EY...L...R.SRIV..NER...*
Bt IL-13 (AF072807)  .QR.K...NAL...P..K.V..EY...
Bt IL-13 (Q9XSV9)    .QR.K...NAL...P..K.V..EY...
Ss IL-13 (VIRN)      .Q...AL.S...PPSE.VPGK.I...K..RMI..H.*R*SMKNEH*SLQRQ
Ss IL-13 (mature)    .Q...AL.S...PPSE.VPGK.I...K..RMI..H.*R*SMKNEH*SLQRQPFTI*DAD...SFFFQMSGTHWGEGRGG*GGGGVRF
Ss IL-13 (AF385625)  .Q...AL.S...PPSE.VPGK.I...K..RMI..H.*
Ss IL-13 (Q95J68)    .Q...AL.S...PPSE.VPGK.I...K..RMI..H.*
Ec IL-13 (DQ889711)  .QN.RK..TKL...QL...V..ERA...E...
Ec IL-13 (Wagner clone) .QN.RK..TKL...QL...V..ERA...IVL...KN.R.I.HG.KH~VDA

      210     220     230     240     250     260
Hs IL-13 (NM_002188)
Hs IL-13 (Q4VB52)
Mm IL-13 (NM_008355)
Mm IL-13 (P20109)
Bt IL-13 (VIRN)
Bt IL-13 (mature)
Bt IL-13 (AF072807)
Bt IL-13 (Q9XSV9)
Ss IL-13 (VIRN)
Ss IL-13 (mature)    P*LRLEPVL...SALS...LADPSCFPVPCPLSLGASSIRG...SALRGRGWRP...TRP...LLARHGEEASA*HGGN*GI
Ss IL-13 (AF385625)
Ss IL-13 (Q95J68)
Ec IL-13 (DQ889711)
Ec IL-13 (Wagner clone)

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# IL-15

```

      10      20      30      40      50      60      70      80      90     100
Hs IL15 NM_172174      ~~~~~MRISKPHLRISISIQCYLCLLN45SHFLTEAG~IHVFILGCF50SAGLPKTEANWVNVISDLK55KIEDLIQSMHIDATLYTES~DVHP
Mm IL15 NM_008357      ~~~~~K.L.YM.NT.S.F.V.V.ID.RY.E.S.I.T.D.F.
Bt IL15 NM_174090      ~~~~~L.Y.T.F.I.S.QY.N.T.H.I.M.A.
Bt IL15 VIRN/EU682380  ~~~~~Y.T.I.S.QY.N.T.H.I.M.A.
Bt IL15 (mature)      ~~~~~Y.T.H.I.QY.N.T.H.I.M.A.
Ec IL15 XM_001500991  ~~~~~Y.T.H.I.QD.R.I.V.
Ec IL15 VIRN/EU682379  ~~~~~X.TC.I.QD.R.I.V.A.
Ec IL15 VIRN          ~~~~~Y.T.H.I.QD.R.I.V.A.
Ss IL15 EU234503      ~~~~~L.C.TC.IT.T.QH.R.I.M.A.
Ss IL15 NM_214390      ~~~~~L.C.TC.D.T.QH.R.I.M.A.
Ss IL15 (mature)      ~~~~~T.QH.R.I.M.A.
Gg IL15 EU334509      MLGMAQPTQNSAGARRRPE105SQ.T.VK.CL.YQ.Y.FCLLNKKTGLTIFFLC.YV.HCKWSDV.DL.LIKT.ED.VS.ANTYEDI
Gg IL15 VIRN NM_204571  MLGMAQPTQNSAGARRRPE105SQ.T.VK.CL.YQ.Y.FCLLNKKTGLTIFFLC.YV.HCKWSDV.DL.LIKT.ED.VS.ANTYEDI
Gg IL15 (mature)      ~~~~~HCKWSDV.DL.LIKT.ED.VS.ANTYEDI

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      110     120     130     140     150     160     170     180
Hs IL15 NM_172174      SCKVTAMKCF115LLELQVISLES~GDASIHDTVENLIILANNSLSSNGN~VTESGCKECELEEKNIKEFLQSFVHIVQMFINTS*~
Mm IL15 NM_008357      ~~~~~N.LH.Y~SNMTLNE.R.VLY.ST.K.A.TFT.IR.*~
Bt IL15 NM_174090      N.Q.R.LH~KN.T.YEII.TM.SN.IE~K.L.S.K.*~
Bt IL15 VIRN/EU682380  N.Q.R.LH~KN.T.YEII.TM.SN.IE~K.L.S.K.*~
Bt IL15 (mature)      N.Q.R.LH~KN.T.YEII.TM.SN.IE~K.L.S.K.*~
Ec IL15 XM_001500991  N.H.H~RNED.KE.S.LP*~
Ec IL15 VIRN/EU682379  N.H.LH~RNED.KE.S.P.~
Ec IL15 VIRN          N.H.H~RNED.KE.S.P.*~
Ss IL15 EU234503      N.H.LQ~RNSD.S.S.IEY~K.N.K.I.P.*~
Ss IL15 NM_214390      N.R.LQ~RNSD.S.S.IEY~K.N.K.I.P.*~
Ss IL15 (mature)      N.R.LQ~RNSD.S.S.IEY~K.N.K.I.P.*~
Gg IL15 EU334509      E.QEPV.R.F.MK.LH.CDIK125K.RKHD.W.ILKNG.ARFATYQLNST.SKK.Y.FT.I.KVI.RECKKYIN*
Gg IL15 VIRN NM_204571  E.QEPV.R.F.MK.LH.CDIK125K.RKHD.R.IWKNG.ARFATYQLNST.AKK.Y.FT.I.KVI.RECKKYAN*
Gg IL15 (mature)      E.QEPV.R.F.MK.LH.CDIK125K.RKHD.R.IWKNG.ARFATYQLNST.AKK.Y.FT.I.KVI.RECKKYAN*

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# IL-16

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      10      20      30      40      50      60      70      80      90     100
Hs IL16 NM_004513 MDYSFDITTAEDPWVRISDCIKNLFSPIMSENHGHMPLQPNASLNEEEGTQGHDPGTPPKLDTANGTFKVYKSADSSIVKKGPPVAPKPAWFRQSLKGLRN
Mm IL16 NM_010551 .....I.....S.T.....T.G..D...C.E.GLS.M.A...A.R.....G.....
Gg IL16 AB104417 .....DNS.LD...GIDA..GHENRSSEAVLQ..SESEIVSS..L..DENDA.....V.....K
Gg IL16 VIRN AJ508678 .....DNS.LD...GIDA..GHENRSSEAVLQ..SESEIVSS..L..DENDA.....V.....K
Gg IL16 (mature) .....

      110     120     130     140     150     160     170     180     190     200
Hs IL16 NM_004513 RASDPRLPDPALSTQPAPASREHLGSHIRASSSSSSIRQRISSEFTFGSSQLPDKGAQRSLQPSSEAAKPLGKHEEGR~FSGLLGRGAAPTIVPQ
Mm IL16 NM_010551 ..P...RP.EV.SAI..T.V..DPP.PQPQ.....N.....R.V.....TT.FP..QDG.....Q..TV.AKHR
Gg IL16 AB104417 AN..LKPOA.QSP.DLQSVSTK.LQS.LS.LP.RG...K.....SLSAP.S.E.VHR...PK..VQKEQS.SA.WS..APDH..QTFLQCSDNSQQQS
Gg IL16 VIRN AJ508678 AN..LKPOA.QSP.DLQSVSTK.LQS.LS.L.RG...K.....SLSAP.S.E.VHR...PK..VQKEQS.SA.WS..APDH..QTFLQCSSENSQQQS
Gg IL16 (mature) .....

      210     220     230     240     250     260     270     280     290     300
Hs IL16 NM_004513 QPE~QVLSSGSPAASEARDPGVSESPPPGRQPNQKTLPPGPDLLRLLSTQAEESQGPVLKMPQSQRARSFPLTRSQCET~KLLDEKTSKLYSISQVSS
Mm IL16 NM_010551 .T.VESM.TTF.NS..V...LP...QR.ST.A.S...T...S.DT..G.....T.....A.....L..
Gg IL16 AB104417 KSP~A.MGTK.LDR.SCPKDTLAA.SEKSNDA.T...N...A.LTAEAI.TSHVA.LA.VHNL.S.....AT...MM.TF...Y..I...N...
Gg IL16 VIRN AJ508678 KSS~V.MGTK.LDR.SCPKDTLTA.SEKSNDA.TE~N...A.LTAEAI.TSHVA.LA.VHNL.S.....AT...MM.TF...Y..I...N...
Gg IL16 (mature) .....

      310     320     330     340     350     360     370     380     390     400
Hs IL16 NM_004513 AVMKSLCLP~SSISCAQTPCIPKEGASPTSSSNEDSAANGSAETSALDTGFSLNLSLREYTEGLTEAKEDDDGD~HSSLQSGQSVISLLSSEEL
Mm IL16 NM_010551 .....V..G.IT...RV..K.PC.NS...E.FG.AM.S.....S.....PG..TE.RN~C.S.A.....A...
Gg IL16 AB104417 .L.....Q.PVPSGN.AWEAVDTL.Q..VEEDGTSLPP.S.NHHP.....VS.ADSEKEEEKQEQSPQA.AV.....P...
Gg IL16 VIRN AJ508678 .L.....Q.PVPSGN.AWEAVDTL.Q..VEEDGTSLPP.S.NHHP.....VS.ADSEKEEEKQEQSPQA.AV.....P...
Gg IL16 (mature) .....

      410     420     430     440     450     460     470     480     490     500
Hs IL16 NM_004513 KKLIEEVKVLDEATLQKLDGIHVITLHKEEGAGLGFSLAGGADLENKVITVHRVFPNGLASQEGTIQKGNVLSINGKSLKGTTHHDALAILRQAREPRQ
Mm IL16 NM_010551 E.....R.....S.....A.N.....D...
Gg IL16 AB104417 A.....S.....E..D.....NT.....K.....D.....F..A..N..SV.M...Q...
Gg IL16 VIRN AJ508678 A.....S.....E..D.....NT.....K.....D.....F..A..N..SV.M...Q...
Gg IL16 (mature) .....

      510     520     530     540     550     560     570     580     590     600
Hs IL16 NM_004513 ..▼|.....AVIVTRKLTPEAMPDLNSSTDAASASAADVSVESAEATVCTVILEKMSAGLGFSLGEGKGSLLHGDKPLTINRIFKGAASEQSETVQPGDEILQLGCT
Mm IL16 NM_010551 .....RT.V..TH.....I.....K.....T.....T...G.M.....A...
Gg IL16 AB104417 ..V...AK~DGEKSH.V.IG.ST.S~V..A.Q...T.E.I..I..D.TA.....I.....II.....TSL...SP.....L..VHT.
Gg IL16 VIRN AJ508678 ..V...AK~DGEKSH.V.IG.ST.S~V..A.Q...T.E.I..I..D.TA.....I.....II.....TSL...SP.....L..VHT.
Gg IL16 (mature) .....V...A.Q...T.E.I..I..D.TA.....I.....II.....TSL...SP.....L..VHT.

      610     620     630     640
Hs IL16 NM_004513 AMQGLTRFEAWNIIKALPDGPTIVIRRKSLQSKETTAAGDS*
Mm IL16 NM_010551 .V.....V.....T...C.Q...SA.*
Gg IL16 AB104417 .L.....I.AI.K..NPS.VTKK.SETL*
Gg IL16 VIRN AJ508678 .L.....I.AI.K..NPS.VTKK.SETL*
Gg IL16 (mature) .L.....I.AI.K..NPS.VTKK.SETL*
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# IL-17

	10	20	30	40	50	60	70	80	90	100
Hs IL17A NM_002190	MTPGKTS~~~LVS~L L L L L S L E A I V K A G I T I P ~~~~~R N P G C P N S E D K N F P R T V M V N L N I H N ~~~R N T N T N E K R S S D Y Y N R S T S P W N L H R N E D									
Mm IL17a NM_010552	.S. RA. ~~~S. LM. ....A. T. . . . . A A I . ~~~~~Q S S A . . . T . A . D . L Q N . K . . . K V F . S L G A K V S S ~ R . P . . . L . . . . . T . . . . .									
Bt IL17 NM_001008412	.ASMR. ~~~SM. ~~~.....V. L. . . . . V I . ~~~~~Q S . . . . . P T . . . . . Q H . R . . . . . V . . . . . S . . . . . S ~ R . P T . . H K . . . . . T . . . . .									
Bt IL17 VIRN/EU682381	.ASMR. ~~~SM. ~~~.....V. L. . . . . V I . ~~~~~Q S . . . . . P T . . . . . Q H . R . . . . . V . . . . . S . . . . . S ~ R . P T . . H K . . . . . T . . . . .									
Bt IL17 (mature)	~~~~~. . . . . V I . ~~~~~Q S . . . . . P T . . . . . Q H . R . . . . . V . . . . . S . . . . . S ~ R . P T . . H K . . . . . T . . . . .									
Ec IL17 XM_001498896	.A. LR. ~~~S. ~~~.....V. . . . . V . . . . . ~~~~~Q . . E . . T G . . . . . Q N . K I . . . V L . . . . . K . . S ~ R . A . . . H . . . . .									
Ec IL17 (mature)	~~~~~. . . . . V . . . . . ~~~~~Q . . E . . T G . . . . . Q N . K I . . . V L . . . . . K . . S ~ R . A . . . H . . . . .									
Gg IL17 VIRN_AJ493595	.S. IPY. P L F R P L L L V . . A M . . A S I S A H G K V I R . G L E P E S L F K K A D A . . L T Q K . G K . Q . . R . . I S . S . . . . M . Q D . . . V T L . I S K . . L A . . D Y R I D . .									
Gg IL17 (mature)	~~~~~. . . . . ~~~~~S I S A H G K V I R . G L E P E S L F K K A D A . . L T Q K . G K . Q . . R . . I S . S . . . . M . Q D . . . V T L . I S K . . L A . . D Y R I D . .									
Gg IL17 AY920750	.S. IPY. P L F R P L L L V . . A M . . A S I S A H G K V I R . G L E P E S L F K K A D A . . L T Q K . G K . Q . . R . . I S . S . . . . M . Q D . . . V T L . I S K . . L A . . D Y R I D . .									
	110	120	130	140	150	160	170			
Hs IL17A NM_002190	P E R Y P S V I W E A K C R H L G C I N A D G N V D Y H M N S V P I Q Q E I L V L R R E P P H C P N S F R L E K I L V S V G C T C V T P I V H H V A *									
Mm IL17a NM_010552	.D. . . . . Q . . Q R . V . E . K L . H . . . . L . . . . . K . . E S . F T . V . M . G . . . . A S . R Q A . *									
Bt IL17 NM_001008412	. . . . . S . S . . . . E . K . H . . . . T . . . . . S Q . . H . . . . M . A . . . . . R . L . *									
Bt IL17 VIRN/EU682381	. . . . . S . S . . . . E . K . H . . . . T . . . . . S Q . . H . . . . M . A . . . . . R . L . *									
Bt IL17 (mature)	. . . . . S . S . . . . E . K . H . . . . T . . . . . S Q . . H . . . . M . A . . . . . R . L . *									
Ec IL17 XM_001498896	. . . . . . . . . . V . E . K . F . . . . . S Q N . H . Q . . M . A . . . . . R . M G *									
Ec IL17 (mature)	. . . . . . . . . . V . E . K . F . . . . . S Q N . H . Q . . M . A . . . . . R . M G *									
Gg IL17 VIRN_AJ493595	H N . F . R L V A D . Q . . S R . V . S A . Q L . H S V . . . . K . . . . . K G . Q H . Y . . K M I T . . . . . L I Q . Q . *									
Gg IL17 (mature)	H N . F . R L V A D . Q . . S R . V . S A . Q L . H S V . . . . K . . . . . K G . Q H . Y . . K M I T . . . . . L I Q . Q . *									
Gg IL17 AY920750	H N . F . R L V A D . Q . . S R . V . S A . Q L . H S V . . . . K . . . . . K G . Q H . Y . . K M I T . . . . . L I Q . Q . *									



# IL-18

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      10      20      30      40      50      60      70      80      90     100
Hs IL18 NM_001562  MAAEPEVDNCFINFAVKFIDNTLYFAEDDENLESDFYFKLESKLSVIRNLNDQVLFIDQG~NRPLFEDMTDSDCRDNAPRTIFITISMYKDSQPRGMAVT
Mm IL18 NM_008360  ...MS~.S.V..KE.M.....P.ENGD...N..R.HCTTA...I.....V.K~RQ.V.....I.QSASE.Q.RL..Y....EV..L...
Bt IL18 NM_174091  ...Q..Y..S..E...N...V..N..D...H...P...I.....N...~Q.V...P...S...Q....Y....LT..L...
Bt IL18 VIRN_EU276078  ...Q..Y..S..E...N...V..N..D...H...P...I.....N...~Q.V...P...S...Q....Y....LT..L...
Bt IL18 (mature)    ...Q..Y..S..E...N...V..N..D...H...P...I.....N...~Q.V...P...S...Q....Y....LT..L...
Ec IL18 Y11131      ...G.....SL.E.....V..N.....R..P..I.....N...~Q.V...P...T...Q.V...Y....LT..L...
Ec IL18 VIRN_EU438772  ...G.....SL.E.....V..N.....R..P..I.....N...~Q.V...P...T...Q.V...Y....LT..L...
Ec IL18 (mature)    ~~~~~R..P..I.....N...~Q.V...P...T...Q.V...Y....LT..L...
Gg IL18 AY920749    ~~~~~MS.EEIAVCAVRLRENLCLYFE~E..C.A.C.DKTIKRFV.V.S.L.VVRPDL.VAA...V..QEVKSGSGMYFD.HCYKTTAPSA..P.A
Gg IL18 VIRN_AJ277865  ~~~~~MS.EEIAVCAVRLRENLCLYFE.DE..C.A.C.DKTIKRFV.V.S.L.VVRPDL.VAA...V..QEVKSGSGMYFD.HCYKTTAPSA..P.A
Gg IL18 (mature)    ~~~~~A.C.DKTIKRFV.V.S.L.VVRPDL.VAA...V..QEVKSGSGMYFD.HCYKTTAPSA..P.A

      110     120     130     140     150     160     170     180     190     200
Hs IL18 NM_001562  ISVKCEKISTLSCEN~~~~KIISFKEMNPPDNIKDTKSDIIFFQRSVPGHDKMQFESSYEGYFLACEKERDLFKLILKKE~~DELGDRSIMFTVQN
Mm IL18 NM_008360  L...DS.M....K.....E..D..E..D.IQ..L...KR...N~.E...L..H..Q..D.A.....K~~.N..K.V...LT.
Bt IL18 NM_174091  ...Q.K.M.....V.....DNEE.....D.I....L.K.....K..N.....Q~~.DNR.K.V.....
Bt IL18 VIRN/EU276078  ...Q.K.M.....V.....DNEE.....D.I....L.K.....K..N.....Q~~.DNR.K.V.....
Bt IL18 (mature)    ...Q.K.M.....V.....DNEE.....D.I....L.K.....K..N.....Q~~.DNR.K.V.....
Ec IL18 Y11131      ...T...K.....S..E..N..EGN.....D.I....L.K.....N.....EK~~.N..K.V.....
Ec IL18 VIRN/EU438772  ...T...K.....S..E..N..EGN.....D.I....L.K.....N.....EK~~.N..K.V.....
Ec IL18 (mature)    ...T...K.....S..E..N..EGN.....D.I....L.K.....N.....EK~~.N..K.V.....
Gg IL18 AY920749    F..QV.DK.YYM.CEKEHGKVVVR.R.GEV.KD.PGESNI.F.KKTFTSCSSKAFK..Y.LEQ.M...F.E.DS.R.....LPRE..VDETTKFV.SH.
Gg IL18 VIRN_AJ277865  F..QV.DK.YYM.CEKEHGKVVVR.R.GEV.KD.PGESNI.F.KKTFTSCSSKAFK..Y.LEQ.M...F.E.DS.R.....LPRE..VDETTKFV.SH.
Gg IL18 (mature)    F..QV.DK.YYM.CEKEHGKVVVR.R.GEV.KD.PGESNI.F.KKTFTSCSSKAFK..Y.LEQ.M...F.E.DS.R.....LPRE..VDETTKFV.SH.

.....|.
Hs IL18 NM_001562  ED*~~~
Mm IL18 NM_008360  LHQS*~
Bt IL18 NM_174091  QN*~~~
Bt IL18 VIRN/EU276078  QN*~~~
Bt IL18 (mature)    QN*~~~
Ec IL18 Y11131      QN*~~~
Ec IL18 VIRN/EU438772  QN*~~~
Ec IL18 (mature)    QN*~~~
Gg IL18 AY920749    .RHNL*
Gg IL18 VIRN_AJ277865  .RHNL*
Gg IL18 (mature)    .RHNL*
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# IL-23

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      10      20      30      40      50      60      70      80      90     100
Hs IL-23 (NM_016584)  MLGSRVAVMLLL~LLPWTAQG~RAVPGGSSPAWTQCQQLSQKLCFLAWSAHPLVGHMDL~REEGDEETTNDVPHIQCGDGDPPQGLRDNSTQFCFLQRI
Hs IL-23 (Q9NPF7)
Mm IL-23 (NM_031252)  .DC..IM.W~.VT.~L..RS..D.A.....RN..M..N..APA..N.L..E...K.N.R..E.....K.....
Mm IL-23 (Q9EQ14)
Ec IL-23 (VIRN)      .....L.....L.PRTAQA~.....A.....PM..V..P...A.....E...E.....P.....
Ec IL-23 (mature)   .....L.....L.PRTAQA~.....A.....PM..V..P...A.....E...E.....P.....
Ec IL-23 (AY704416) .....L.....L.PRTAQA~.....A.....PM..V..P...A.....E...E.....P.....
Ec IL-23 (Q64FU1)   .....L.....L.PRTAQA~.....A.....PM..V..P...A.....E...E.....P.....
Bt IL-23 (VIRN)      ...N.....LL.....~SED.....RG.....Q..M.....LPM.....P...GDK..D..R..E.....S.....
Bt IL-23 (mature)   .....L.....L.PRTAQA~.....A.....PM..V..P...A.....E...E.....P.....

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      110     120     130     140     150     160     170     180     190     200
Hs IL-23 (NM_016584)  HQGLIFYEKLLGSDIFTGEPSSLDPSPVQLHASLLGLSQLLQPEGHHWETQQIPSLSPSQPWQRLLLRFLKILRSLQAFVAVAAARVFAHGAATLSP*
Hs IL-23 (Q9NPF7)
Mm IL-23 (NM_031252)  R..A..KH..D...K..A.....ME..T.....D.PR...M...S..Q..P..S.....L.I.....TEPLVP
Mm IL-23 (Q9EQ14)
Ec IL-23 (VIRN)      ...V.....NG..D.....R.....E...P.....P.....T.*
Ec IL-23 (mature)   ...V.....NG..D.....R.....E...P.....P.....T.**
Ec IL-23 (AY704416) ...V.....NG..D.....R.....E...P.....P.....T.*
Ec IL-23 (Q64FU1)   ...V.....NG..D.....R.....E...P.....P.....T.
Bt IL-23 (VIRN)      .R..V.....NG..D...I..RE...K...E.T.PI.....L.....
Bt IL-23 (mature)   .R..V.....NG..D...I..RE...K...E.T.PI.....L.....*

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Hs IL-23 (NM_016584)
Hs IL-23 (Q9NPF7)
Mm IL-23 (NM_031252)  TA*
Mm IL-23 (Q9EQ14)    TA
Ec IL-23 (VIRN)
Ec IL-23 (mature)
Ec IL-23 (AY704416)
Ec IL-23 (Q64FU1)
Bt IL-23 (VIRN)
Bt IL-23 (mature)

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# Lymphotactin

	10	20	30	40	50	60	70	80	90	100
	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....									
Hs Lymphotactin (NM_002995)	MRLLLILALLGICSLTAYIVEG~...▼...VGSEVSDKRTC...VSLTTQRLPVSRIKTYTITEGSLRAVIFITKRGLKVCADPQATWVRDVVRSMDRKSNTNRNMI									
Hs Lymphotactin (P47992)	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....									
Mm Lymphotactin (NM_008510)	...L.TF.V.C.PWV...~...T.LEESS.N.Q...QK...I.W.AM...V...I...E.K.KAAIKTV.GRAS.K.A									
Mm Lymphotactin (P47993)	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....									
Gg Lymphotactin (VIRN)	.K.HATV.V.VW.GVFALHTAEG~S.A.QSMR.LS.N.S.KVDIRS.VN.EKQKVPVE.M.AN.IRI.VH.EQK.QSAMKRI.RRT.RR*									
Gg Lymphotactin (mature)	~...~...~...~...~...~...S.A.QSMR.LS.N.S.KVDIRS.VN.EKQKVPVE.M.AN.IRI.VH.EQK.QSAMKRI.RRT.RR*									
Gg Lymphotactin (AF006742)	.K.HATV.V.VW.GVFALHTAEG~S.A.QSMR.LS.N.S.KVDIRS.VN.EKQKVPVE.M.AN.IRI.VH.EQK.QSAMKRI.RRT.RR*									
Gg Lympphotactin (O57411)	.K.HATV.V.VW.GVFALHTAEG~S.A.QSMR.LS.N.S.KVDIRS.VN.EKQKVPVE.M.AN.IRI.VH.EQK.QSAMKRI.RRT.RR									
	110	120								
	..... ..... ..... .....									
Hs Lymphotactin (NM_002995)	QTKPTGTQQSTNTAVTLTG*									
Hs Lymphotactin (P47992)	..... ..... ..... .....									
Mm Lymphotactin (NM_008510)	E.V...A.R..S..I....*									
Mm Lymphotactin (P47993)	..... ..... ..... .....									
Gg Lymphotactin (VIRN)										
Gg Lymphotactin (mature)										
Gg Lymphotactin (AF006742)										
Gg Lympphotactin (O57411)										

# MIF

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      10      20      30      40      50      60      70      80      90     100
      |.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
Hs MIF (NM_002415)  MPMFIVNTNVPRASVP~▼DGFLELTQQLAQTGK~~~PPQYIAVHVVPDQLMAFGGSSEPCALCSLHSGKIGGAQNRYSKLLCGLLAERLRISFDRV
Hs MIF (P14174)    .....
Mm MIF (NM_010798) .....~E.....~A.....T.S.TND.....N.....SD.H.....
Mm MIF (P34884)    .....~E.....~A.....T.S.TND.....N.....SD.H.....
Gg MIF (VIRN)      .....TIH...CKDA...~SL.G.....K.....~A.....I...M.S...TD.....Y.....Q.KT.T...DMI.KH.HV.A...
Gg MIF (mature)    .....TIH...CKDA...~SL.G.....K.....~A.....I...M.S...TD.....Y.....Q.KT.T...DMI.KH.HV.A...
Gg MIF (M95776)    .....TIH...CKDA...~SL.G.....K.....~A.....I...M.S...TD.....Y.....Q.KT.T...DMI.KH.HV.A...
Gg MIF (Q02960)    .....TIH...CKDA...~SL.G.....K.....~A.....I...M.S...TD.....Y.....Q.KT.T...DMI.KH.HV.A...

      110     120
      |.....|.....|.....|.....|
Hs MIF (NM_002415)  YINYYDMNAANVGWNNSTFA*
Hs MIF (P14174)    .....*
Mm MIF (NM_010798) .....G.....*
Mm MIF (P34884)    .....G.....
Gg MIF (VIRN)      .....F.I.....G.....*
Gg MIF (mature)    .....F.I.....G.....*
Gg MIF (M95776)    .....F.I.....G.....*
Gg MIF (Q02960)    .....F.I.....G.....

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# TNFα

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      10      20      30      40      50      60      70      80      90     100
Hs TNFa NM_000594 MSTESMIRDVELAEELPKKTGGPQGSRRCLFLSLFSLIVAGATTLFCLLHFGVIGPQREE~FPRDLSLISPLAQA~VRSSSRTPSDKPVAVVAV
Mm TNFa NM_013693 .....Q.M.F.N.....C.....L.....N.....D.K.NG.P...SM.TL~TL...QNS.....
Bt TNFa AY221122 ..K.....V.SE.A.....S.C.....L.....QS.GGP.IN...V.T~L...QAS.N.....D
Bt TNFa VIRN/EU276079 ..K.....V.SE.A.....S.C.....L.....~S.GGP.IN...V.T~L...QAS.N.....D
Bt TNFa (mature) ~~~~~L...QAS.N.....D
Ec TNFa AB035735 .....E.A.A.....C.....L.....QL.NAFQS.N...T~L...
Ec TNFa VIRN/EU438779 .....E.A.A.....C.....L.....QL.NAFQS.N...T~L...
Ec TNFa (mature) ~~~~~L...
Ss TNFa X57321 .....A.A.....C.....L.....E...K.FPAGP.IN...G~L...Q.S~
Ss TNFa VIRN/EU682384 .....A.A.....C.....L.....E...K.FPAGP.IN...G~L...Q.S~
Ss TNFa (mature) ~~~~~X...Q.S~

      110     120     130     140     150     160     170     180     190     200
Hs TNFa NM_000594 PQAEGQLQWLNRRANALLANGVELRDNLVVPSEGLYLIYSQVLFKGGQCPSTHVLLHTISRIAVSYQTKVNLLSAIKSPCORETPEGAEAKPWYEPIY
Mm TNFa NM_013693 H.V.E.E.SQ.....MD.K.....AD...V.....~DY.....V.F.I.E...V...PKD.....L.....
Bt TNFa AY221122 INSP...R.WDSY...M...K.E.....AD.....R.....PLF.....I.....H...W.....
Bt TNFa VIRN/EU276079 INSP...R.WDSY...M...K.E.....AD.....R.....PLF.....I.....H...W.....
Bt TNFa (mature) INSP...R.WDSY...M...K.E.....AD.....R.....PLF.....I.....H...W.....
Ec TNFa AB035735 .....SG.....K.T.....LD.....L.....PS.....LANT.S.Q.....
Ec TNFa VIRN/EU438779 .....SG.....K.T.....LD.....L.....PS.....HT.S.Q.....
Ec TNFa (mature) .....SG.....K.T.....LD.....L.....PS.....HT.S.Q.....
Ss TNFa X57321 VK.....QSGY.....K.K.....TD.....R.....N.F.....
Ss TNFa VIRN/EU682384 VK.....QSGY.....K.K.....TD.....R.....N.F.....
Ss TNFa (mature) VK.....QSGY.....K.K.....TD.....R.....N.F.....

      210     220     230
Hs TNFa NM_000594 LGGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL*
Mm TNFa NM_013693 .....Q.....V.L.K.....V...*
Bt TNFa AY221122 Q.....L.....Y.....*
Bt TNFa VIRN/EU276079 Q.....L.....Y.....*
Bt TNFa (mature) Q.....L.....Y.....*
Ec TNFa AB035735 .....Q.....Q.N.....*
Ec TNFa VIRN/EU438779 .....Q.....Q.N.....*
Ec TNFa (mature) .....Q.....Q.N.....L.....*
Ss TNFa X57321 .....D.....L.....*
Ss TNFa VIRN/EU682384 .....D.....L.....*
Ss TNFa (mature) .....D.....L.....~

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# TNFSF15

	10	20	30	40	50	60	70	80	90	100
Hs TNFSF15 (NM_005118)	MAEDLGLSFGETASVEMLP									
Hs TNFSF15 (O95150)	MAEDLGLSFGETASVEMLP									
Mm TNFSF15 (NM_177371)	...E...G...GVP...V...GCRH...E...AGL...ARSKA...LALTCCCL...SFPILAG...S...L...MAG...VP...KD...MLRAITEERSE...P...S...P...G									
Mm TNFSF15 (Q5UBV8)	...E...G...GVP...V...GCRH...E...AGL...ARSKA...LALTCCCL...SFPILAG...S...L...MAG...VP...KD...MLRAITEERSE...P...S...P...G									
Gg TNFSF15 (VIRN)	.DHGAEITILE.ASATGQASRMHIKEDLR.MRC.VLLCLLAVL..ALPIAYLLA~~~~~GNLRAPT.CPQVVD.RSSH.~~.QRAV.AVTDTLPSAE~~									
Gg TNFSF15 (mature))	.DHGAEITILE.ASATGQASRMHIKEDLR.MRC.VLLCLLAVL..ALPIAYLLA~~~~~GNLRAPT.CPQVVD.RSSH.~~.QRAV.AVTDTLPSAE~~									
Gg TNFSF15 (Q50L61)	.DHGAEITILE.ASATGQASRMHIKEDLR.MRC.VLLCLLAVL..ALPIAYLLA~~~~~GNLRAPT.CPQVVD.RSSH.~~.QRAV.AVTDTLPSAE~~									
	110	120	130	140	150	160	170	180	190	200
Hs TNFSF15 (NM_005118)	DGDKPRAHLTVVVQTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKELLIPESGDYFIYSQVTFRGMTESECSEIRQAGRPNKPD SITVVITKVTDSYPE									
Hs TNFSF15 (O95150)	DGDKPRAHLTVVVQTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKELLIPESGDYFIYSQVTFRGMTESECSEIRQAGRPNKPD SITVVITKVTDSYPE									
Mm TNFSF15 (NM_177371)	~~~~~IKK...AP...L...LS...D...M...G...K...I...S...V...I...T...V...GD...SRGR...M...A...									
Mm TNFSF15 (Q5UBV8)	~~~~~IKK...AP...L...LS...D...M...G...K...I...S...V...I...T...V...GD...SRGR...M...A...									
Gg TNFSF15 (VIRN)	~~~~~KK.E.SSTTGSHL.I.Q..DKR.....NLS.SSNA.V..V...YV.A.....P.DTSS~~~~~TS.V.A.....									
Gg TNFSF15 (mature)	~~~~~KK.E.SSTTGSHL.I.Q..DKR.....NLS.SSNA.V..V...YV.A.....P.DTSS~~~~~TS.V.A.....									
Gg TNFSF15 (Q50L61)	~~~~~KK.E.SSTTGSHL.I.Q..DKR.....NLS.SSNA.V..V...YV.A.....P.DTSS~~~~~TS.V.A.....									
	210	220	230	240	250	260				
Hs TNFSF15 (NM_005118)	PTQLLMGTKSVCEVGSNWFQPIYLGAMFSLQEGDKLMVNVSDISLVDYTKEDKTFFGAFLL*									
Hs TNFSF15 (O95150)	PTQLLMGTKSVCEVGSNWFQPIYLGAMFSLQEGDKLMVNVSDISLVDYTKEDKTFFGAFLL*									
Mm TNFSF15 (NM_177371)	.AR..T.S...ISN...SL...T...E...R.....*									
Mm TNFSF15 (Q5UBV8)	.AR..T.S...ISN...SL...E...R.....*									
Gg TNFSF15 (VIRN)	...TS..TLS.ERN.....VV..EI.....K.....H.....*									
Gg TNFSF15 (mature)	...TS..TLS.ERN.....VV..EI.....K.....H.....*									
Gg TNFSF15 (Q50L61)	...TS..TLS.ERN.....VV..EI.....K.....H.....*									