

### 3-31-09 CYTOKINES & CHEMOKINES: Gene expression, bioactivity and targeting for mAb

	US-VIRN clone's GenBank #	Transformed in expression vector	√ Expressed in yeast (OR expected date)	√ Purified on FPLC (OR expected date)	Bioactivity affirmed	Will monoclonal antibodies be produced?
<b>CATFISH</b>						
IFN $\gamma$	DQ124250	√	4/09			Yes
Type I IFN	AY847295	√	4/09			
<b>CATTLE</b>						
CCL2	EU276069	√	√	√	Protein at UMass	Test at Cornell with $\alpha$ -swine CCL2 mAbs made
CCL5	EU276060	√	√	√	Protein at UMass	
CCL11	EU744565	√	3/31/09			
CXCL9	EU276061	√	√	√	(UMass) variable results	
CXCL10	EU276062	√	2/10/09			
CXCL11	EU276063	√	√	√	YES (UMass) but less than R&D's	
IFN- $\gamma$	EU276066	√	9/08, 2/3/09	√	YES (UMass) low for 1 lot and negative for others	
IFN- $\alpha$	EU276064	√	√	√	YES (UMass) low activity-new lot expressed in 1/09?	Yes, protein at UMass
IFN- $\beta$	EU276065	√	3/24/09			
IL-1 $\beta$	EU276067	√	√			
IL-2	EU276068	√	√	√	YES on TF1 cells; YES (UMass) on bovine PBMC at UMass	
IL-4	EU276069	√	√	√	YES on TF1 cells; Protein at UMass	
IL-5	EU276070	√	3/17/09			
IL-6	EU276071	√	√	√	Yes (UMass) not bioactive on B9 cells; others have reported that B9 cells do not work with bovine	Yes, protein at UMass
IL-7	EU276072	√	3/17/09			
IL-8	EU276073	√	√	√	Protein at UMass	Sheep mAb made by

						BBSRC cross-rx
IL-10	EU276074	√	2/17/09, 3/10/09		Expression issues	
IL-12p35	EU276075	√	3/31/09			
IL-12p40	EU276076	√	2/10/09			
IL-13	EU276077	√	√	√	YES on TF1 cells; Protein at UMass	Yes, fusion done 2x's at UMass
IL-15	EU682380	√	√	√	Protein at UMass	
IL-17	EU682381	√	√	√	Protein at UMass	Yes, protein at UMass; also at BBSRC
IL-18	EU276078	√	1/27/09, 3/3/09	√		
IL-23	EU616677	√	√	√	One chain expressed so no bioassay	Mice immunized
TNF- $\alpha$	EU276079	√	1/13/09, 2/3/09	√	Protein at UMass	Protein at UMass
<b>CHICKEN</b>						
CCL4	NM001030360	√	√	√	Protein at BARC	
CCL20	NM204438	√	√	√	Protein at BARC	
IFN- $\gamma$	AH009942	√	3/17/09			
IL-1 $\beta$	Y15006	√	3/17/09			
IL-2	AF017645		√	√	Protein at BARC	
IL-4	NM 001007079	√	1/20/09, 3/3/09, 3/31/09		Expression issues	Yes
IL-10	NM 001004414	√	√	√	YES (BARC)	√, MAbs made at UMass
IL-12p35	NM213588	√	3/24/09			
IL-12p40	Ay262752	√	4/09			
IL-15	NM 204571	√	3/17/09	√?		Yes
IL-16	AJ508678	√	√	√	YES (BARC)	√, MAbs made at UMass
IL-17	AJ493595		3/3/09			Yes
IL-17D	Ef570583	√	3/17/09			Yes
IL-18	AJ277865	√	√	√	YES (BARC)	Yes, fusing 4/16/09 at UMass
LITAF	AY765397	√	4/09			
Lymphotactin	AF006742	√	4/09			
MIF	M95776	√	3/24/09			
TNFSF15 (TL1A)	NM001024578	√	3/24/09			

HORSE						
CCL2	EU438774	√	1/13/09	√	Protein at UMass for migration assay; Did not induce basophil degranulation (Cornell)	6 α-swine CCL2 mAb react with equine CCL2
CCL3	EU438775	√	3/17/09			
CCL5	EU744564	√	3/10/09			
CCL11	In progress	√	3/10/09			
CXCL9	EU438776	√	√	√		Yes, mice immunized at Cornell
CXCL10	EU438777	√	√	√		Yes, mice immunized at Cornell
GM-CSF	EU438778	√	√	√	Protein at Cornell	Yes, mice immunized at Cornell
IFN-γ	U04050	√	√	√		Yes, fusion done at Cornell
IFN-α1	EU682378	√	√			
IL-1β	EU438767	√	√	√	Protein at Cornell	Yes, mice immunized at Cornell
IL-2	EU438768	√	√	√	YES (UKentucky)	√ 6 mAb made
IL-4	EU438769	√	√	√	YES (UKentucky)	√ 4 mAb made
IL-5	U91947	√	3/10/09			
IL-6	EU438770	√	√	√	YES, B9 cells	Yes, fusion made at Cornell, weak clones
IL-10	EU438771	√	3/17/09			
IL-12 p35/p40			4/09			
IL-13	EF645663	√	4/7/09			
IL-15	EU682379	√	√	√	Protein at UMass	Yes, Fusion done at Cornell
IL-17	EU744563-no s.s.	√	2/10/09	?		
IL-18	EU438772	√	4/09			
IL-23	EU438773	√	√			

TGF- $\beta$	X99438	√	4/7/09			
TNF- $\alpha$	EU438779	√	3/24/09			
<b>SWINE</b>						
CCL2	EU682382	√	√	√	Protein at BARC	√, 12 mAb and 6 X-rx with equine CCL2
CCL3L1	EU364893	√	4/09			
CCL4	EU364894	√	3/24/09			
CCL5	EU44561	√	√	√	Protein at BARC	Yes, Protein at UMass
CXCL9	EU36897	√	√			
CXCL10	EU364898	√	√	√	YES (BARC)	√, Fusion done, 1 mAb; KF sending new batch for more mAb
CXCL11	EU682377	√	√	√	YES (BARC)	√ Fusion done, 1 mAb; KF sending new batch for more mAb
IL-7	EU364895	√	2/3/09 (need to repeat)			
IL-13	EU682383	√	√ (repeated)	√ 3/09	Low activity on TF1 cells and at PIADC; 3/31/09 protein at BARC	Yes, fused 3/9 and 2/23; KF sending new batch for more mAb
IL-15	NM 214390	√	√	√	Protein at BARC	Yes
IFN- $\alpha$	EU364896	√	√, repeating	√	NO (UMass) activity on MBDK cells	NO!
IFN- $\beta$ 1	EU744562	√	√	√	YES (UMass) on MBDK cells	Yes, fusing 4/2 at UMass
TNF- $\alpha$	EU682384	√	√			
<b>TROUT</b>						
IFN1	AM489418	√	√	Low expression		Yes
IFN2	AJ582754	√	√	Low expression		Yes
IFN3	AM235738	√				Yes
IFN $\gamma$	AJ616215	√	3/10/09			Yes
IFN?		Will express at USGS				Yes