

Recombinant Ovine Cytokines	Estimated concentration (ng/ml)	Estimated biological activity (U/ml)	Bioassay	References
IL-1 β	25	In progress	Induction of IL-8 release by ovine cells	In preparation
IL-2	40	Under titration	Proliferation of ConA-activated ovine T cell blasts	Deane <i>et al</i> (2000). <i>J. Virol.</i> 74 ,1313-1320.
IL-3	500	Under titration	Induction of colony growth in ovine bone marrow cultures in synergy with ovine stem cell factor	McInnes <i>et al</i> (1993). <i>Exp. Hematol.</i> 21 ,1528-1534. Macaldowie <i>et al</i> (1997). <i>Vet. Immunol. Immunopathol.</i> 60 , 97-110; McInnes <i>et al</i> (1999). <i>Cytokine</i> 11 , 249-256.
IL-4	ND	100	Induction of intelectin expression by ovine tracheal explants	Hope <i>et al</i> (2005). <i>J. Immunol. Methods</i> 301 , 114-123; French <i>et al</i> (2007). <i>Vet. Immunol. Immunopathol.</i> 120 , 41-46.
IL-5	ND	100	Induction of eosinophil growth in ovine bone marrow cultures	Stevenson <i>et al</i> (1998). <i>Vet. Immunol. Immunopathol.</i> 66 , 359-365.
IL-6	ND	In progress	In progress	In preparation
IL-8/CXCL8	40	In progress	In progress	In preparation
IL-10	ND	6500	Inhibition of ConA-induced proliferation of ovine T cells	Kwong <i>et al.</i> (2002). <i>Vet. Immunol. Immunopathol.</i> 85 , 213-223; Wattegedera <i>et al</i> (2004). <i>Vet. Immunol. Immunopathol</i> 102 , 67-76.
IL-12	ND	3200	Induction of IFN- γ release by ovine T cells	Hope <i>et al</i> (2002). <i>J. Immunol. Methods</i> 266 , 117-126; Wattegedera <i>et al</i> (2004). <i>Vet. Immunol. Immunopathol.</i> 102 , 67-76.
GM-CSF	20,000	100,000	Stimulation of granulocyte-macrophage colonies in ovine bone marrow cultures	McInnes and Haig (1991). <i>Gene</i> 105 , 275-279. Entrican <i>et al</i> (1996). <i>Vet. Immunol. Immunopathol.</i> 50 , 105-115; McInnes <i>et al</i> (1999). <i>Cytokine</i> 11 , 249-256. Rooke <i>et al</i> (2005). <i>Reprod. Fertil. Dev.</i> 17 , 513-521.
IFN- γ	5	10,000	Inhibition of Semliki virus replication; Inhibition of chlamydial growth	Graham <i>et al</i> (1995). <i>J. Comp. Pathol.</i> 112 , 185-195. Entrican <i>et al</i> (1998). <i>Comp. Immunol. Microbiol. Infect. Dis.</i> 21 , 15-26.
SCF	ND	Under titration	Induction of colony growth in ovine bone	Macaldowie <i>et al</i> (1997). <i>Vet. Immunol. Immunopathol.</i> 60 , 97-110; McInnes <i>et al</i> (1999). <i>Cytokine</i> 11 , 249-256.

			marrow cultures in synergy with ovine IL-3	
TNF-α	100	50	Lysis of murine L929 cells; Induction of IL-8 release by ovine cells	In preparation
Recombinant Bovine Cytokines	Estimated concentration (ng/ml)	Estimated biological activity (U/ml)	Bioassay	References
IL-2	ND	In progress	Proliferation of ConA-activated bovine T cell blasts	In preparation
IL-4	70	Under titration	Development of bovine dendritic cells in synergy with bovine GM-CSF	Hope <i>et al</i> (2005) <i>J. Immunol. Methods</i> 301 , 114-123.
IL-10	ND	Under titration	In preparation	In preparation
GM-CSF	ND	Under titration	Development of bovine dendritic cells in synergy with bovine IL-4	In preparation
IFN-αG	ND	5000	Inhibition of Semliki virus replication	Chaplin <i>et al</i> (1996). <i>J. Interferon. Cytokine Res.</i> 16 , 25-30.