Technical Data Sheet

Recombinant Equine Interleukin-1 Receptor Antagonist (rEqIL-1RA)

Equine Interleukin-1 Receptor Antagonist

IL-1RA was initially called the IL-1 inhibitor which is encoded by the IL1RN gene and it is a member of the interleukin 1 cytokine family. It is secreted by various types of cells including immune cells, epithelial cells, and adipocytes. IL-1RA has functions of inhibiting the activity of interleukin-1 by binding to receptor IL1R1 and preventing its association with the coreceptor IL1RAP for signaling. IL-1RA is also used in the treatment of rheumatoid arthritis, an autoimmune disease in which IL-1 plays a key role. The equus caballus IL-1RA is a single non-glycosylated polypeptide chain containing 152 amino acids and it has been shown to block the inflammatory responses induced by IL-1 both in vitro and in vivo. The protein shows 26 % amino acid homology to IL-1β and 19 % homology to IL-1α. It also shares 78 %~80 % a.a. sequence identity with murine, rat, porcine IL-1RA.

Catalog Number:	RC1F1-12C
Source:	*Escherichia coli.*
Molecular Weight:	Approximately 17.4 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.
Quantity:	5μg/20μg/1000μg
AA Sequence:	HPLGKRPCKM QAFRIWDVNQ KTFYMRNNQL VAGYLQESNT KLQEKIDVVP IEPDALFLGL HGRKLCLACV KSGDEIRFQL EAVNITDLSK NKEENKRFTF IRSNSGPTTS FESAACPGWF LCTAQEADRP VSLTNKPKES FMVTKFYLQE DQ
Purity:	> 95 % by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The ED_{50} as determined by inhibiting IL-1α-dependent proliferation of murine D10S cells is less than 3.0 μg/ml, corresponding to a specific activity of > 333 IU/mg in the presence of 50 pg/ml rHuIL-1α.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Endotoxin:	Less than 1 EU/μg of rEqIL-1RA as determined by LAL method.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer

	containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Storage:	This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.
Usage:	This material is offered by Bio Basic Inc. for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.