

Recombinant Porcine Interleukin-1 Receptor Antagonist Protein (rPoIL-1RA)

ChemWhat Technical Data Sheet (TDS)

Catalog Number:	171-01C
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 17.1 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.
Quantity:	5µg/20µg/1000µg
AA Sequence:	HPLGKRPCRMLQAFRIWDVNVQKTFYLRNNQLVAGYLQGPNTKLEEKIDVVPVEPHFVFLGI HGGKLCCLSCV KSGDEMKLQL DAVNITDLRK NSEQDKRFTF IRSDSGPTTS FESAACPGWF LCTALEADQP VGLTNTPKAA VKVTKFYFQQ DQ
Purity:	> 97 % 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 50 ng/ml, corresponding to a specific activity of > 2.0 × 10 ⁴ IU/mg in the presence of 75 pg/ml rPoIL-1α.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 µm filtered concentrated solution in 1 × PBS, pH 7.4, 1 mM DTT.
Endotoxin:	Less than 0.1 EU/µg of rPoIL-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.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● 12 months from date of receipt, -20 to -70 °C as supplied.● 1 month, 2 to 8 °C under sterile conditions after reconstitution.● 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Usage:	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. NOT FOR HUMAN USE.

Porcine Interleukin-1 Receptor Antagonist Protein

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. IL-1RA 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 co-receptor 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 porcine 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 and equine IL-1RA.