

Recombinant Rat Interleukin-1 Receptor Antagonist Protein (rRtIL-1RA)

ChemWhat Technical Data Sheet (TDS)

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| Catalog Number: | 141-01C |
| Source: | <i>Escherichia coli</i> . |
| Molecular Weight: | Approximately 17.4 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids. |
| Quantity: | 20µg/100µg/1000µg |
| AA Sequence: | HPAGKRPCCKM QAFRIWDTNQ KTFYLRNNQL IAGYLQGPNT KLEEKIDMVP IDFRNVFLGI HGGKLCCLSCV KSGDDTKLQL EEVNITDLNK NKEEDKRFTF IRSETGPTTS FESLACPGWF LCTTLEADHP VSLTNTPKPEP CTVTKFYFQE DQ |
| Purity: | > 96 % 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 150 ng/ml, corresponding to a specific activity of > 6.7 × 10 ³ IU/mg in the presence of 50 pg/ml rRtIL-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 rRtIL-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. |

Rat 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-RA 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 rat 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. Rat IL-1RA shares 89 % and 73 % a.a. sequence homology with murine and human IL-1RA.