

**ChemWhat Technical Data Sheet (TDS)**

|                                 |   |
|---------------------------------|---|
| <b>Catalog Number:</b>          | 121-01C   |
| <b>Source:</b>                  | <i>Escherichia coli</i> .   |
| <b>Molecular Weight:</b>        | Approximately 17.3 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.   |
| <b>Quantity:</b>                | 20µg /100µg /1000µg   |
| <b>AA Sequence:</b>             | RPSGKRCKM QAFRIWDTNQ KTFYLRNNQL IAGYLQGPNI KLEEKIDMVP IDLHSVFLGI<br>HGGKLCCLSCA KSGDDIKLQL EEVNITDL SK NKEEDKRFTF IRSEKGPTTS FESAACPGWF<br>LCTTLEADRP VSLTNTPEEP LIVTKFYFQE DQ  |
| <b>Purity:</b>                  | > 97 % by SDS-PAGE and HPLC analyses.   |
| <b>Biological Activity:</b>     | Fully biologically active when compared to standard. The ED <sub>50</sub> 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 <sup>4</sup> IU/mg in the presence of 50 pg/ml rHuIL-1α.   |
| <b>Physical Appearance:</b>     | Sterile Filtered White lyophilized (freeze-dried) powder.   |
| <b>Formulation:</b>             | Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.  |
| <b>Endotoxin:</b>               | Less than 1 EU/µg of rMuIL-1RA as determined by LAL method.   |
| <b>Reconstitution:</b>          | 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. |
| <b>Shipping:</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.   |
| <b>Stability &amp; Storage:</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>                                  |
| <b>Usage:</b>                   | <b>ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. NOT FOR HUMAN USE.</b>  |

***Murine 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 murine 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 90 % a.a. sequence identity with rat IL-1RA.