

# Recombinant Human Interleukin-1 Receptor Antagonist (rHuIL-1RA)

## PrimeGene Technical Data Sheet

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<b>Catalog Number:</b>	101-01C
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 17.1 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.
<b>Quantity:</b>	20µg/100µg/1000µg
<b>AA Sequence:</b>	RPSGRKSSKM QAFRIWDVNQ KTFYLRNNQL VAGYLQGPV NLEEKIDVVP IEPHALFLGI HGGKMCLSCV KSGDETRLQL EAVNITDLSE NRKQDKRFAF IRSDSGPTTS FESAACPGWF LCTAMEADQP VSLTNMPDEG VMVTKFYFQE DE
<b>Purity:</b>	> 96 % 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 40 ng/ml, corresponding to a specific activity of > 2.5 × 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 rHuIL-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>	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

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### ***Human Interleukin-1 Receptor Antagonist***

Interleukin-1 receptor antagonist (IL-1RA) is a member of the IL-1 family. IL-1RA is secreted by various types of cells including immune cells, epithelial cells, and adipocytes, and is a natural inhibitor of the pro-inflammatory effect of IL-1β. This protein inhibits the activities of interleukin 1, alpha (IL-1α) and interleukin 1, beta (IL-1β), and modulates a variety of interleukin 1 related immune and inflammatory responses. IL-4 and IL-13 have been shown to amplify the stimulatory effect of IL-1-beta on the production of soluble and intracellular forms of IL1-RA. The regulated expression of IL-1RA in various cell types has been shown to be influenced by cytokines. In synovial fibroblasts the synthesis of IL-1RA is markedly enhanced by IL-1, TNF-α, or PDGF. The protein shows 26 % amino acid homology to IL-1β and 19 % homology to IL-1α.