

## DATASHEET

Version 20181206

# IL-1RA, Human

**Cat. No.:** Z02700-1

**Size:** 1.0 mg

**Synonyms:** Interleukin-1 receptor antagonist (IL-1ra), Human;

### Description:

Interleukin-1 receptor antagonist (IL-1ra) is a member of the IL-1 family. Endogenous IL-1ra is produced in numerous animal disease models as well as in human autoimmune and chronic inflammatory diseases. It binds to IL-1 receptors in competition with IL-1, but does not elicit intracellular response from this binding. Its role in counteracting the proinflammatory effects of IL-1 is being studied by numerous research groups. 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 IL-1ra. 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-alpha, or PDGF.

### Amino Acid Sequence:

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00001 RPSGRKSSKM QAFRIWDVNQ KTFYLRNNQL VAGYLQGPV
00041 NLEEKIDVVP IEPHALFLGI HGGKMCLSCV KSGDETRLQL
00081 EAVNITDLSE NRKQDKRFAF IRSDSGPTTS FESAACPGWF
00121 LCTAMEADQP VSLTNMPDEG VMVTKFYFQE DE
```

**Source:** *E. coli*

**Species:** Human

**Biological Activity:** 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  $> 2.5 \times 10^4$  IU/mg in the presence of 50 pg/ml rHuIL-1α.

**Molecular Weight:** Approximately 17.1 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.

**Formulation:** Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.

**Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**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  $\leq -20$  °C. Further dilutions should be made in appropriate buffered solutions.

**Purity:**  $> 96$  % by SDS-PAGE and HPLC analyses.

**Endotoxin Level:** Less than 1 EU/μg of rHuIL-1RA as determined by LAL method.

**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.