

IL-1RA, Human

Cat. No.: Z00367-1

Size: 1.0 mg

Synonyms: rHuIL-1ra; IL1 Receptor Antagonist; Interleukin-1 Receptor Antagonist; Interleukin1 Receptor Antagonist

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 IL1-beta on the production of soluble and intracellular forms of IL1-ra. The regulated expression of IL1ra 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. Recombinant Human IL-1RN produced in *E. coli* is a non-glycosylated, N-terminal methionyl form of the human naturally-occurring polypeptide chain containing 153 amino acids and having a molecular mass of 17,258 Da.

Source: *E. coli*

Species: Human

Biological Activity: The ED50 as determined by the dose-dependant inhibition of IL-1 stimulation of D10S cells was found to be 0.5 ng/ml, corresponding to a Specific Activity of 2.0×10^6 IU/mg.

Molecular Weight: 17,258 Da

Sequence Analysis: The sequence of the first five N-terminal amino acids was determined and was found to be Met-Arg-Pro-Ser-Gly.

Formulation: The protein was lyophilized after extensive dialysis against 50mM Tris-HCl, pH7.5, 200mM NaCl buffer.

Reconstitution: It is recommended to reconstitute the lyophilized rHuIL-1ra in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Purity: Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Anion-exchange FPLC.
- (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

Endotoxin Level: Less than 0.1 ng/µg (IEU/µg) of IL-1 ra.

Storage: Lyophilized rHuIL-1 ra although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuIL-1ra should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid repeated freeze-thaw cycles.