

Recombinant Human IL-1RA

Catalog # FL031

Product Specifications

Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Purity	> 96% by SDS-PAGE or HPLC.
Endotoxin	< 0.1 EU/μg of rHuIL-1RA protein as determined by LAL method.
Expression System	Expressed in E. coli.
Species	Human
Tag	Tag free.
Activity	Fully biologically active when compared to standard. The ED50 as determined by inhibiting IL-1α-dependent proliferation of murine D10S cells is less than 40 ng/ml, corresponding to a specific activity of $\geq 2.5 \times 10^4$ IU/mg in the presence of 50 pg/ml rHu IL-1α.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, with 150 mM NaCl pH 7.4.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a 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 $\leq -20^\circ\text{C}$. Further dilutions should be made in appropriate buffered solutions.
Accession #	P18510 Arg26-Glu177
Amino acid sequence	RPSGRKSSKMQA FRIWDVNQKTFYLRNNQLVAGYLQGPNNLEEKIDVVPIEPHALFLGIHGGKMCLSCVKSGDETRLQLEAVNITDLSENKQDKRF AFIRSDSGP TTSFESAACPGWFLCTAMEADQPVSLTNMPDEGVMVTKFYFQEDE
Molecular weight	Approximately 17.2 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.
Synonyms	IL-1Ra, ICIL-1RA, IRAP, IL-1RN
Stability & Storage	Shipped on wet ice. For long term storage, the product should be stored $\leq -20^\circ\text{C}$. Please avoid repeated freeze-thaw cycles after reconstitution. 36 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.
Precautions	Recombinant Human IL-1RA is for research use only and not for use in diagnostic or therapeutic procedures.

Background

Interleukin-1 receptor antagonist (IL-1RA) is a member of the IL-1 family. IL1RA 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 IL1β. This protein inhibits the activities of interleukin 1, alpha (IL1A) and interleukin 1, beta (IL1B), 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 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. The protein shows 26% amino acid homology to IL1β and 19% homology to IL1α. Recombinant Human IL-1RA is a 17.2kD protein consisting of 153 amino acid residues.

