

Recombinant Human Interleukin-1 Receptor Antagonist Protein

#R00035

Size: 100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

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 IL1 β . 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 IL1 β and 19 % homology to IL1 α .

AA Sequence

RPSGRKSSKMQAfriwDvNqKTFyLRnnQLVAGYLQ
GPNVNLEEKIDVVPIEPHALFLGIHGGKMCLSCVKSG
DETRLQLEAVNITDLSenRKQDKRFAFIRSDSGPTTSF
ESAACPGWFLCTAMEADQPVSLTNMPDEGVMVTKF
YFQEDE

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.

Product Specification

Synonyms	IL-1RN, IRAP
Accession	P18510
GeneID	3557
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 17.1 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.
Purity	> 96 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by inhibiting IL-1 α -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-1 α .
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/ μ g of rHuIL-1RA as determined by LAL method.