



## Interleukin-1 Receptor Antagonist, human recombinant (rHuIL-1RA)

**Catalog No:** 54592  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** IRAP, IL1F3, IL1RA, IL-1ra3, ICIL-1RA, IL1RN, IL1 inhibitor, IL-1ra, MGC10430

### Background

Interleukin-1 ra is a member of the interleukin 1 cytokine family. 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. This gene and five other closely related cytokine genes form a gene cluster spanning approximately 400 kb on chromosome 2. A polymorphism of this gene is reported to be associated with increased risk of osteoporotic fractures and gastric cancer. Four alternatively spliced transcript variants encoding distinct isoforms have been reported.

### Description

IL-1RA human recombinant 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 17000 Dalton. IL1ra is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

Lyophilized protein with no additives.

### Solubility

It is recommended to reconstitute the lyophilized Interleukin-1ra in sterile 18 MΩ-cm H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized Interleukin 1ra, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-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 prevent freeze-thaw cycles.

### Purity

Greater than 98.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

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

### Activity

The ED<sub>50</sub> 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 2,000,000 IU/mg.

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#### Usage

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