



## Interleukin-1 Receptor Antagonist, rat recombinant (rrIL-1RA)

**Catalog No:** 97489  
**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 rat recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 152 amino acids and having a molecular mass of 17.5 kDa. IL 1RA rat is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

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

### 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 IL 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. Please prevent freeze-thaw cycles.

### Purity

Greater than 95.0% as determined by SDS-PAGE.

### Amino Acid Sequence

HPAGKRPCMK QAFRIWDTNQ KTFYLRNNQL IAGYLQGPNT KLEEKIDMVP IDFRNVFLGI HGGKLCLSCV KSGDDTKLQL  
EEVNITDLNK NKEEDKRFTF IRSETGPTTS FESLACPGWF LCTTLEADHP VSLTNTPKPEP CTVTKFYFQE DQ

### Activity

Fully biologically active when compared to standard. Measured by its ability to inhibit IL1-dependent proliferation in D10.G4.1 mouse helper T cells. The ED50 for this effect is typically 30 - 150 ng/ml (corresponding to a specific activity of 6,667 - 33,334 units/mg) in the presence of 50 pg/ml of rrIL1.

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#### Usage

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