



## Interleukin-1 Receptor Antagonist, equine recombinant (reIL-1RA)

**Catalog No:** 97626  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Interleukin-1 receptor antagonist protein, IL-1RN, IL-1ra, IRAP, IL1 inhibitor, IL1RN, IL1RA

### 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

Recombinant Horse Interleukin-1 Receptor Antagonist produced in *E. coli* cells is a single, non-glycosylated, polypeptide chain containing 152 amino acids and having a molecular mass of 17.4 kDa. IL-1RA is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

The IL-1RA was lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

### Solubility

It is recommended to reconstitute the lyophilized IL-1RA in sterile water 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. 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 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

HPLGKRPCMK QAFRIWDVNQ KTFYMRNNQL VAGYLQESNT KLQEKIDVVP IEPDALFLGL HGRKLCLACV KSGDEIRFQL  
EAVNITDLSK NKEENKRFTF IRSNSGPTTS FESAACPGWF LCTAQEADRP VSLTNKPKES FMVTKFYLQE DQ

### Activity

The ED50 as determined by inhibiting IL-1alpha-dependent proliferation of murine D10.G4.1 helper T cells is less than 3.0 µg/ml, corresponding to a specific activity of > 333 IU/mg in the presence of 50 pg/ml rHuIL-1alpha.

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### Usage

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