

## IL-1RA Protein, Mouse, Recombinant

### General Information

Synonyms:	IL-1RN;IRAP;Interleukin-1 Receptor Antagonist Protein;IL1 inhibitor;IL-1ra;Il1rn
Protein Construction:	Arg27-Gln178
Species:	Mouse
Expression Host:	E. coli
Accession:	P25085
Molecular Weight:	16 KDa (reducing condition)
AA Sequence:	Arg27-Gln178

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 20 mM Histidine-HCl, 10% Trehalose, 0.05% Tween 80, pH5.3.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Interleukin-1 receptor antagonist protein (Il1rn), also known as IL-1ra, IRAP or IL1 inhibitor, 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. The mouse Il1rn gene encodes a 178 amino acids (aa) protein with a 26 aa signal peptide. Mouse Il1rn protein shares 26% and 19% identity with its homologues IL-1 beta and IL-1 alpha, respectively. Il1rn can Inhibits the activity of interleukin-1 by

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binding to receptor IL1R1 and preventing its association with the coreceptor IL1RAP for signaling, but has no interleukin-1 like activity. Recently, an recombinant human Il1rn protein is used in the treatment of rheumatoid arthritis, an autoimmune disease in which IL-1 plays a key role.

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