**PRODUCT INFORMATION**

**Description:** Interleukin-1 receptor antagonist (IL-1RN) is a member of the IL-1 family. Endogenous IL-1RN is produced in numerous animal disease models as well as in human autoimmune and chronic inflammatory diseases. It binds to IL-1 receptors in competition with IL-1, but does not elicit intracellular response from this binding. Its role in counteracting the proinflammatory effects of IL-1 is being studied by numerous research groups.

**Amino-Acid Sequence:** 153aa (The sequence of the first five N-terminal amino acids was determined and was found to be Met-Arg-Pro-Ser-Gly.), non-glycosylated.

**M. W.:** 17,258 Da

**Recombinant:** Expressed in *E. coli*

**Purity:** >95% as determined by RP-HPLC, FPLC and SDS-PAGE.

**Formulation:** IL-1RN was lyophilized after extensive dialysis against PBS.

**Specific Activity:** The ED50 as determined by the dose-dependent inhibition of IL-1 stimulation of D10S cells was found to be 0.5 ng/ml, corresponding to a Specific Activity of 2.0 x 10^6 IU/mg.

**Endotoxin:** Less than 0.1ng/µg (1IEU/µg) of IL-1RN.

**Reconstitution:** It is recommended to reconstitute the lyophilized rHuIL-1RN in sterile 18MΩ-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**Storage:** Lyophilized rHuIL-1RN although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuIL-1RN 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). Aliquot to avoid repeated freeze-thaw cycles.

**REFERENCES**


**FOR RESEARCH USE ONLY**

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**GENE INFORMATION**

**Gene Name:** IL1RN
**Gene Alias:** ICIL-1RA, IL-1ra3, IL1F3, IL1RA, IRAP
**Gene Type:** protein coding
**mRNA Refseq:** NM_000577
**Protein Refseq:** NP_000568
**MIM:** 147679
**GeneID:** 3557
**Chromosome Location:** 2q14.2

**Summary:** The protein encoded by this gene 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.

**Function:** interleukin-1 receptor antagonist activity; protein binding activity