

Interleukin-1 Receptor Antagonist

Human, Recombinant (rHuIL-1RN)

Expressed in *E. coli*

Cat. No. CRP0826

Lot. No. (See product label)

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-dependant inhibition of IL-1 stimulation of D10S cells was found to be 0.5 ng/ml, corresponding to a Specific Activity of 2.0×10^6 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.

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

REFERENCES

- 1.C.A. Dinarello. The interleukin-1 family: 10 years of discovery. FASEB Journal. 1994; 8(15): 1314-1325
- 2.Arend WP, Malyak M, et al. Interleukin-1 receptor antagonist: role in biology. Annu. Rev. Immunol. 1998; 16: 27-55
- 3.Sehouli J, Mustea A, Könsgen D, et al. Polymorphism of IL-1 receptor antagonist gene: role in cancer. Anticancer Res. 2003; 22 (6A): 3421-3424

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