

Recombinant Human Interleukin-1 Receptor Antagonist Protein

Information

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|--------------------------------|--|
| Gene ID | 3557 |
| Accession # | P18510 |
| Alternate Names | IL-1RN, IRAP |
| Source | Escherichia coli. |
| M.Wt | Approximately 17.1 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids. |
| AA Sequence | RPSGRKSSKM QAFRIWDVNQ KTFYLRNNQL VAGYLQGPVN NLEEKIDVVP IEPHALFLGI HGGKMCLSCV KSGDETRLQL EAVNITDLSE NRKQDKRFAF IRSDSGPTTS FESAACPGWF LCTAMEADQP VSLTNMPDEG VMVTKFYFQE DE |
| Appearance | Sterile Filtered White lyophilized (freeze-dried) powder. |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution |
| Formulation | Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4. |
| Reconstitution | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions. |
| Biological Activity | Fully biologically active when compared to standard. The ED ₅₀ as determined by inhibiting IL-1α dependent proliferation of murine D10S cells is less than 40 ng/ml, corresponding to a specific activity of > 2.5 × 10 ⁴ IU/mg in the presence of 50 pg/ml rHuIL-1α. |
| Shipping Condition | Gel pack. |
| Handling | Centrifuge the vial prior to opening. |
| Usage | For Research Use Only! Not to be used in humans. |

Components and Storage

| Components | 100µg | 500µg |
|---|-------|-------|
| Recombinant Human Interleukin-1 Receptor Antagonist Protein | 100µg | 500µg |

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

| | |
|-----------|---|
| Purity | > 96 % by SDS-PAGE and HPLC analyses. |
| Endotoxin | Less than 1 EU/μg of rHuIL-1RA as determined by LAL method. |

Description

Interleukin-1 receptor antagonist (IL-1RA) is a member of the IL-1 family. IL1RA is secreted by various types of cells including immune cells, epithelial cells, and adipocytes, and is a natural inhibitor of the pro-inflammatory effect of IL1 β . 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. IL-4 and IL-13 have been shown to amplify the stimulatory effect of IL1-beta on the production of soluble and intracellular forms of IL1-RA. The regulated expression of IL1RA in various cell types has been shown to be influenced by cytokines. In synovial fibroblasts the synthesis of IL-1RA is markedly enhanced by IL-1, TNF-alpha, or PDGF. The protein shows 26 % amino acid homology to IL1 β and 19 % homology to IL1 α .

Reference

1. Dinarello, C.A. 1994. FASEB J, 8: 1314-25
2. Perrier, S., F. Darakhshan, and E. Hajdich. 2006. FEBS Lett, 580: 6289-94
3. Dinarello, C.A. 1994. FASEB J, 8: 1314-25.

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