

Recombinant Rat IL-1Ra/IL-1F3/IL-1RN Protein

Catalog No.: RP01817 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
<i>E.</i>	60582	P25086
coli		

Tags NO-tag

Synonyms

IL-1ra;il1ra;il-1ra;IL1RA

Product Information

Source Purification <I>E. coli</I> > 92% by SDS-PAGE.

Endotoxin

< 1EU/µg

Formulation

Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifµge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

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www.abclonal.com

Background

Interleukin-1 receptor antagonist (IL-1RA) also known as IL1RN 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. A polymorphism of this protein-encoding gene is reported to be associated with an increased risk of osteoporotic fractures and gastric cancer. IL-1RA/IL1RN may inhibit the activity of IL-1 by binding to its receptor and it has no IL-1 like activity. Genetic variation in IL-1RA/IL1RN is associated with susceptibility to microvascular complications of diabetes type 4 (MVCD4). These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of newonset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis. Defects in IL-1RA/IL1RN are the cause of interleukin 1 receptor antagonist deficiency (DIRA) which is also known as deficiency of interleukin 1 receptor antagonist. Autoinflammatory diseases manifest inflammation without evidence of infection, high-titer autoantibodies, or autoreactive T-cells. DIRA is a rare, autosomal recessive, genetic autoinflammatory disease that results in sterile multifocal osteomyelitis, and pustulosis from birth.

Basic Information

Description

Recombinant Rat IL-1Ra/IL-1F3/IL-1RN Protein is produced by <I>E. coli</I> expression system. The target protein is expressed with sequence (His27-Gln178) of rat IL-1Ra/IL-1F3/IL-1RN (Accession #NP_071530.1) fused with no additional amino acid.

Bio-Activity

Measured by its ability to inhibit IL-1 alpha-dependent proliferation in D10.G4.1 mouse helper T cells. The ED₅₀ for this effect is 2.62-10.48 ng/mL in the presence of 50 pg/mL of rrIL-1 alpha(Catalog: RP01736), corresponding to a specific activity of 9.54×10⁴~3.82×10⁵ units/mg.

Storage

Store at -20°C.Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.
 After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Rat IL-1Ra/IL-1F3/IL-1RN Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 15-25 kDa.



Recombinant Rat

IL-1Ra/IL-1F3/IL-1RN inhibit IL-1 alpha-dependent proliferation in D10.G4.1 mouse helper T cells. The ED₅₀ for this effect is 2.62-10.48 ng/mL in the presence of 50 pg/mL of rrIL-1 alpha(Catalog: RP01736), corresponding to a specific activity of $9.54 \times 10^4 \sim 3.82 \times 10^5$ units/mg.