

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

Catalog No.: RP01817

Sequence Information

Species **Gene ID**
Rat 60582

Swiss Prot **Tags**
P25086 NO-tag

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

Product Information

Source **Purification**
E. coli ≥ 90 % as
determined by
SDS-PAGE.

Calculated MWObserved MW
17.38 kDa 15-25 kDa

Endotoxin
< 1 EU/μg of the protein by LAL
method.

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

Reconstitution
Centrifuge 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 stabilizer
(e.g. 0.1% BSA, 5% HSA, 10% FBS
or 5% Trehalose), and aliquot the
reconstituted protein solution to
minimize free-thaw cycles.

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 new-onset 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 *E. coli* 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.

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 rIL-1 alpha (Catalog: RP01736), corresponding to a specific activity of 9.54×10⁴~3.82×10⁵ units/mg.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

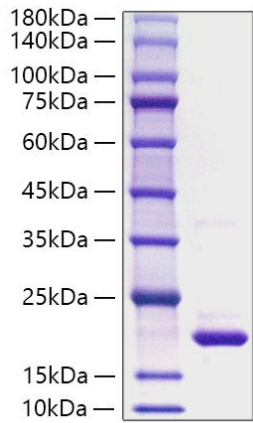
Contact

☎ | 400-999-6126

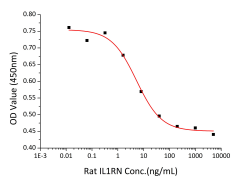
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Validation Data



Recombinant Rat IL-1Ra/IL-1F3/IL-1RN Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



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.