

Recombinant Human IL-1RA/IL1RN Protein

Catalog Number: PKSH031854

Note: Centrifuge before opening to ensure complete recovery of vial contents.

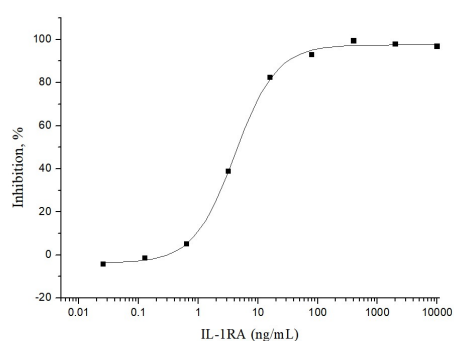
Description

Species	Human
Source	E.coli-derived Human IL-1RA/IL1RN protein Arg 26-Glu 177
Calculated MW	17.3 kDa
Observed MW	17.3 kDa
Accession	NP_776214.1
Bio-activity	1. Immobilized human IL1RA at 10 µg/ml (100 µl/well) can bind human IL1R2-Fc, The EC ₅₀ of human IL1R2-Fc is 0.04-0.1 µg/mL. 2. Immobilized human IL1RA at 10 µg/ml (100 µl/well) can bind human IL1R1-Fc, The EC ₅₀ of human IL1R1-Fc is 0.08-0.2 µg/mL. 3. Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells in the presence of 250pg/mL IL1a. The EC ₅₀ for this effect is typically 3-12 ng/mL.

Properties

Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells in the presence of 250pg/mL IL1a. The EC₅₀ for this effect is typically 3-12 ng/mL.

Background

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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 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.

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