Human IL-1RA / IL1RN Protein (Fc Tag)

Catalog Number: **10123-H01H**

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Biological Solution Specialist

General Information

Gene Name Synonym:

DIRA; ICIL-1RA; IL-1ra; IL-1ra3; IL-1RN; IL1F3; IL1RA; IRAP; MVCD4; F630041P17Rik; IL-1ra

Protein Construction:

A DNA sequence encoding the mature form of human IL1RA (NP_776214.1) (Arg 26-Glu 177) was fused with the Fc region of human IgG1 at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Glu 20

Molecular Mass:

The recombinant human IL1RA/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 389 amino acids and predicts a molecular mass of 43.8 kDa. As a result of glycosylation, the rh IL1RA/Fc monomer migrates as approximately 45-55 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.2

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

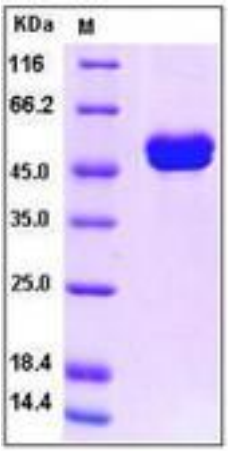
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1.Langdahl BL, *et al*. (2000) Osteoporotic fractures are associated with an 86-base pair repeat polymorphism in the interleukin-1--receptor antagonist gene but not with polymorphisms in the interleukin-1beta gene. J Bone Miner. 15 (3): 402-14.
2.El-Omar EM, *et al*. (2000) Interleukin-1 polymorphisms associated with increased risk of gastric cancer. Nature. 404 (6776): 398-402.
3.Steinkasserer A, *et al*. (1992) The human IL-1 receptor antagonist gene (IL1RN) maps to chromosome 2q14-q21, in the region of the IL-1 alpha and IL-1 beta loci. Genomics. 13 (3): 654-7.