



Recombinant Sheep IL-1RA/IL-1F3

Catalog Number: GR104075

Background

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 (1). This protein binds non-productively to the cell surface interleukin-1 receptor (IL-1R), and inhibits the activities of interleukin 1, alpha (IL1A) and interleukin 1, beta (IL1 β), and modulates a variety of interleukin 1 related immune and inflammatory responses. This gene and five other closely related cytokine genes form a gene cluster spanning approximately 400 kb on chromosome 2. Four alternatively spliced transcript variants encoding distinct isoforms have been reported (2). A polymorphism of this gene is reported to be associated with increased risk of osteoporotic fractures and gastric cancer. Mutations in the IL1ra gene results in a rare disease called deficiency of the interleukin-1–receptor antagonist (DIRA). Variants of the IL1ra gene is also associated with risk of schizophrenia. Elevated levels of IL1RNra has been found in serum of schizophrenia patients. An interleukin 1 receptor antagonist is used in the treatment of rheumatoid arthritis, an autoimmune disease in which IL-1 plays a key role.

References

1. Perrier S, et al. (2006). FEBS Lett. 580(27):6289.
2. Entrez Gene: IL1RN interleukin 1 receptor antagonist.

Description

Size: 5 µg

Components: Thr21-Asp174

Protein accession # W5QI35

Sources: Expressed in E. coli.

Molecular weight: 17 kDa.

Activity: Measured by its ability to inhibit IL-1 α -dependent proliferation in D10.G4.1 mouse helper T cells. The ED50 for this effect is 5-40 ng/ml in the presence of 50 pg/ml of rcIL-1 α .

Endotoxin level: <1.0 EU per µg of the protein by the LAL method.

Purity: > 98%, by SDS-PAGE under reducing conditions and visualized by silver staining.

Formulation: Lyophilized from 1 0.2 µm filtered solution in PBS with BSA as a carrier protein.

Reconstitution: Reconstitute at 50 µg/ml in sterile PBS, store at -20°C up to 3 months.

Shipping and storage: The product is shipped at ambient temperature or with ice pad. Upon receipt, store it immediately at -20°C to avoid lose activity and use it in 6 months.

DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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