Data Sheet (Cat.No.TMPY-03078)

TargetMol

IL-1R2 Protein, Mouse, Recombinant (hFc)

General Information

Synonyms: CD121b;interleukin 1 receptor, type II;Il1r-2

Protein Construction: A DNA sequence encoding the mouse IL1R2 (P27931) (Met1-Glu355) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Phe 14

Species: Mouse

Expression Host: HEK293 Cells

Accession: P27931

Molecular Weight: 65.1 kDa (predicted); 91 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity: Measured by its ability to bind biotinylated recombinant human IL1α in a functional ELISA.

Purity: > 85 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

Interleukin 1 receptor, type II (IL1R2) also known as CD121b (Cluster of Differentiation 121b) is a cytokine receptor that belongs to the interleukin-1 receptor family. This protein binds interleukin alpha (IL1A), interleukin beta (IL1B), and interleukin 1 receptor, type I (IL1R1/IL1RA), and acts as a decoy receptor that inhibits the activity of its ligands. The pleiotropic cytokine IL1 is produced to regulate the development and maintenance of the inflammatory responses and binds to specific plasma membrane receptors on cells. Two distinct types of IL1 receptors that can bind IL1 specifically have been identified, designated as IL1RI (IL1RA) and IL1RII (IL1RB). IL1R1 contributes to IL-1

signaling, whereas the IL-1R2/CD121b has no signaling property and acts as a decoy for IL-1. IL-1R2/CD121b structurally consisting of a ligand-binding portion comprised of three Ig-like domains, a single transmembrane region, and a short cytoplasmic domain is expressed in a variety of cell types including B lymphocytes, neutrophils, monocytes, large granular leukocytes, and endothelial cells. Interleukin 4 (IL4) is reported to antagonize the activity of interleukin 1 by inducing the expression and release of this cytokine.

Reference

Cannon JG, et al. (1997) Interleukin-1 beta, interleukin-1 receptor antagonist, and soluble interleukin-1 receptor type II secretion in chronic fatigue syndrome. J Clin Immunol. 17 (3): 253-61.

Liu C, et al. (1996) Cloning and characterization of an alternatively processed human type II interleukin-1 receptor mRNA. J Biol Chem. 271 (34): 20965-72.

Van der Poll T, et al. (1997) Antiinflammatory cytokine responses during clinical sepsis and experimental endotoxemia: sequential measurements of plasma soluble interleukin (IL)-1 receptor type II, IL-10, and IL-13. J Infect Dis. 175 (1): 118-22.

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