Recombinant Rat Il1R1/Il1RA Protein(His Tag)

Catalog Number: PDMR100049

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

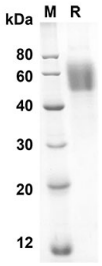
Description

Species	Rat
Source	Mammalian-derived Rat Il1r1 Il1ra protein Leu20-Lys338, with an C-terminal His
Calculated MW	34.9 kDa
Observed MW	50-70 kDa
Accession	Q02955
Bio-activity	Not validated for activity

Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Rat Il1r1 Il1ra proteins, 2 μg/lane of Recombinant Rat Il1r1 Il1ra proteins was resolved with an SDS-PAGE under reducing conditions, showing bands at 34.9 KD

Background

The type I IL-1 receptor (IL-1 RI, designated IL-1 R1 and CD121a) is one of at least nine members of the IL-1 R family with anin the Toll/IL-1 R (TIR) superfamily. IL-1 RI is an 80 kDa type I transmembrane (TM) protein that binds the pleiotropic cytokines IL-1 alpha and IL-1 beta, plus the IL-1 receptor antagonist (IL-1 Ra). Signal transduction requires complex formation with an the IL-1 R accessory protein (IL-1 R AcP/IL-1 R3), another type I TM protein. This complex recruits the adaptor protein MyD88, to initiate signaling in the NF kappa B pathway. Rat IL-1 RI cDNA encodes a 576 amino acid (a a) protein that contains a 19 aa signal sequence, a 319 aa extracellular domain (ECD) with an three C2-type Ig-like domains, a 21 aa TM domain and a 217 aa cytoplasmic region with an a TIR domain. Rat IL-1 RI shares 83%, 65%, 60%, 60% and 54% aa identity with an Mouse, Human, canine, equine and bovine IL-1 RI, respectively. Two additional splice isoforms of rat IL-1 RI have been described. One has an N-terminus that is extended by 14 amino acids, but appears to have equivalent function. The other lacks the TM sequence and is secreted as an ~82 kDa protein that antagonizes the effect of IL-1 beta. Thus, the role of IL-1 in inflammation is under several levels of control, including expression and activation of IL-1 alpha and IL-1 beta, expression of IL-1 RI and its accessory and adaptor proteins, and inhibitory IL-1 R isoforms and decoys (1-6). IL-1 RI is expressed predominantly by T cells, fibroblasts, and endothelial cells and mediates acute phase inflammatory responses including fever.