

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Asp22-Arg338 (Ala158Val), with a C-terminal 6-His tag
Accession # Q9ERS7

N-terminal Sequence Analysis Asp22

Predicted Molecular Mass 36.8 kDa

SPECIFICATIONS

SDS-PAGE 55-68 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
Immobilized rmlL-1F5, rmlL-1F6, or rmlL-1F8 at 1 µg/mL (100 µL/well) can bind rmlL-1 Rrp2/his with a linear range of 0.078-5 µg/mL.

Endotoxin Level <1.0 EU per 1 µg of the protein by the LAL method.

Purity >90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

IL-1 Rrp2, also known as IL-1 R6, is a member of the IL-1 R/TLR superfamily. Members of this superfamily have a characteristic Toll-IL-1 R (TIR) domain in their cytoplasmic region. This superfamily can be further divided into three subgroups based on extracellular region analogies. IL-1 Rrp2 belongs to Subgroup 1 which is characterized by the presence of at least one immunoglobulin-like domain (1). Mouse IL-1 Rrp2/IL-1R6 is a 70 kDa type I transmembrane glycoprotein that is synthesized as a 574 amino acid (aa) precursor. The precursor contains a 21 aa signal sequence, a 317 aa extracellular region, a 21 aa transmembrane segment, and a 215 aa cytoplasmic domain (2). The extracellular region contains three C-type Ig-like domains. Within the extracellular region, mouse IL-1 Rrp2 is 64% and 80% aa identical to human and rat IL-1 Rrp2, respectively. Expression of IL-1 Rrp2 is restricted to lung epithelium, monocytes, skin-derived keratinocytes, fibroblasts and, to a lesser extent, endothelial cells (3). Studies have demonstrated that the functional receptor for IL-1F6, IL-1F8 and IL-1F9 is a combination of IL-1 Rrp2 and IL-1 RAcP. This suggests that IL-1 Rrp2 ligands may signal in a similar fashion to IL-1 and IL-18. In each case, there is a binding receptor which, upon ligation, recruits a second receptor as a signaling component, forming an active heterodimeric receptor complex (4).

References:

1. Dunne, A. and L.A. O'Neill, (2003) Sci. STKE Feb 25 (171):re3.
2. Born, T.L. *et al.* (2000) J. Biol. Chem. **275**:29946.
3. Lovenberg, T.S. *et al.* (1996) J. Neuroimmunol. **70**:113.
4. Towne, J.E. *et al.* (2004) J. Biol. Chem. **279**:13677.