Recombinant Human IL-1 RI
Catalog Number: 269-1R

DESCRIPTION

Source
Mouse myeloma cell line, NS0-derived human IL-1 RI protein
Asp21-Thr332
Accession # P14778

N-terminal Sequence Analysis
Asp21

Predicted Molecular Mass
36 kDa

SPECIFICATIONS

SDS-PAGE
55 kDa, reducing conditions

Activity
Measured by its ability to inhibit IL-1β-dependent proliferation in D10.G4.1 mouse helper T cells. Symons, J.A. et al. (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M.J. et al. (eds): IRL Press. 272. Approximately 0.2-1.0 µg/mL of IL-1 RI will inhibit 50% of the biological response due to 30 pg/mL of recombinant human IL-1β.

Endotoxin Level
<0.10 EU per 1 µg of the protein by the LAL method.

Purity
>97%, 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

Two distinct types of receptors that bind the pleiotropic cytokines IL-1α and IL-1β have been described. The IL-1 receptor Type I is an 80 kDa transmembrane protein that is expressed predominantly by T cells, fibroblasts, and endothelial cells. IL-1 receptor Type II is a 68 kDa transmembrane protein found on B lymphocytes, neutrophils, monocytes, large granular leukocytes and endothelial cells. Both receptors are members of the immunoglobulin superfamily and show approximately 28% sequence identity in their extracellular domains. The two receptor types do not heterodimerize into a receptor complex.

An IL-1 receptor accessory protein that can heterodimerize with the Type I receptor in the presence of IL-1α or IL-1β but not IL-1ra, was identified (1). This Type I receptor complex appears to mediate all the known IL-1 biological responses. The receptor Type II has a short cytoplasmic domain and does not transduce IL-1 signals. In addition to the membrane-bound form of IL-1 RII, a naturally-occurring soluble form of IL-1 RII has been described. It has been suggested that the Type II receptor, either as the membrane-bound or as the soluble form, serves as a decoy for IL-1 and inhibits IL-1 action by blocking the binding of IL-1 to the signaling Type I receptor complex. Recombinant IL-1 soluble receptor Type I is a potent antagonist of IL-1 action.

References: