

# Human IL-1R1 Protein

Cat. No. IL1-HM1R1

## Description

<b>Source</b>	Recombinant Human IL-1R1 Protein is expressed from HEK293 with His tag at the C-Terminus. It contains Leu18-Thr332.
<b>Accession</b>	NP_000868.1
<b>Molecular Weight</b>	The protein has a predicted MW of 37 kDa. Due to glycosylation, the protein migrates to 55-68 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 1EU per $\mu\text{g}$ by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

## Formulation and Storage

<b>Formulation</b>	Lyophilized from 0.22 $\mu\text{m}$ filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu\text{g}/\text{ml}$ is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

Interleukin 1 (IL-1) has long been known for its pleiotropic effects on inflammation that plays a complex, and sometimes contrasting, role in different stages of cancer development. IL-1R1 is the main receptor for both ligands and is expressed by various cell types, including innate and adaptive immune cell types, epithelial cells, endothelial cells, adipocytes, chondrocytes, fibroblasts, etc. IL-1 and IL-1R1 receptor interaction leads to a set of common signaling pathways, mainly the NF- $\kappa\text{B}$  and MAP kinase pathways, as a result of complex positive and negative regulations.

## Assay Data

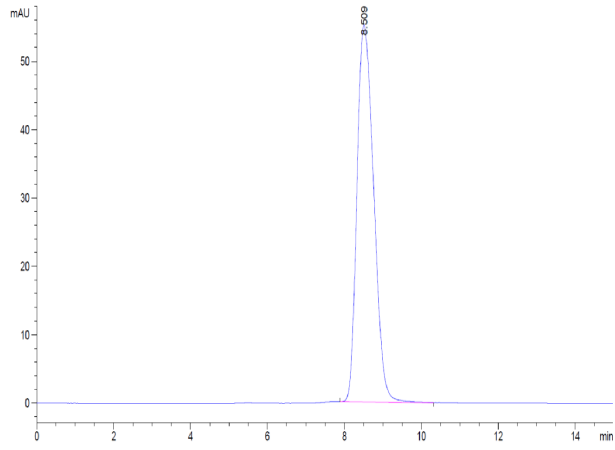
### Bis-Tris PAGE



Human IL-1R1 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

Assay Data



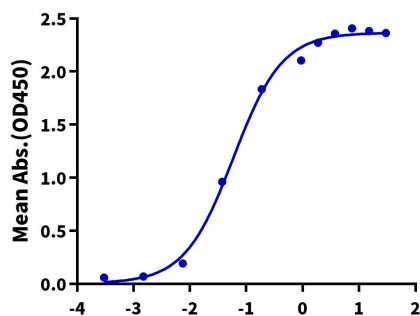
The purity of Human IL-1R1 is greater than 95% as determined by SEC-HPLC.

Assay Data

ELISA Data

**Human IL-1R1, His Tag ELISA**

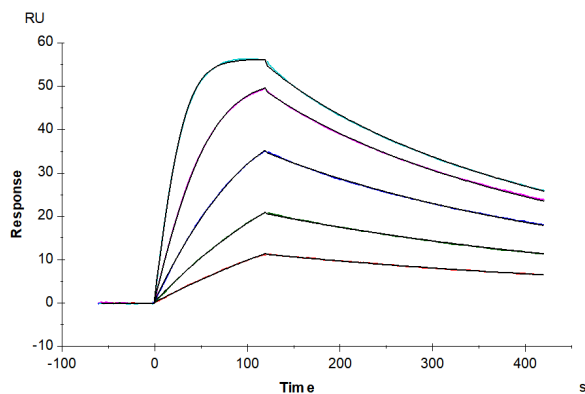
0.5µg Human IL-1R1, His Tag Per Well



Immobilized Human IL-1R1, His Tag at 5µg/ml (100µl/well) on the plate. Dose response curve for Biotinylated Human IL-1 Beta, His Tag with the EC50 of 58.8ng/ml determined by ELISA (QC Test).

Log Biotinylated Human IL-1 Beta, His Avi Tag Conc. (µg/ml)

SPR Data



Human IL-1R1, His Tag captured on CM5 Chip via anti-his antibody can bind Human IL-1 alpha, No tag with an affinity constant of 0.51 nM as determined in SPR assay (Biacore T200).