

## Recombinant Rat IL1R1/CD121a Protein (His & Fc Tag)

Catalog No. PKSR030395

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

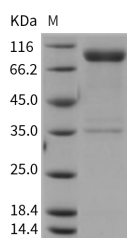
### Description

<b>Synonyms</b>	Il1r1
<b>Species</b>	Rat
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Lys 352
<b>Accession</b>	NP_037255.3
<b>Calculated Molecular Weight</b>	64.6 kDa
<b>Observed molecular weight</b>	90-95 kDa
<b>Tag</b>	C-His-Fc
<b>Bioactivity</b>	Measured by its ability to inhibit IL1 $\alpha$ -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. ). The ED50 for this effect is typically 5-20 $\mu$ g/ml in the presence of 40 pg/mL of recombinant human IL1 $\alpha$ .

### Properties

<b>Purity</b>	> 85 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data



> 85 % as determined by reducing SDS-PAGE.

### For Research Use Only

## Background

Interleukin 1 receptor, type I (IL-1R1) also known as CD121a (Cluster of Differentiation 121a), is an interleukin receptor. IL-1R1/CD121a is a cytokine receptor that belongs to the interleukin 1 receptor family. This protein is a receptor for interleukin alpha (IL1A), interleukin beta (IL1B), and interleukin 1 receptor, type I (IL1R1/IL1RA). IL-1R1/CD121a is an important mediator involved in many cytokine induced immune and inflammatory responses. This protein has been characterized by pharmacological and molecular techniques in the mouse brain. The spindle-shaped astrocytes enclose the wound, separating the healthy from damaged neural tissue. The shape change and subsequent repair processes are IL-1 $\beta$  activity-dependent, acting through the IL-1 type 1 receptor (IL-1R1), as co-application of the IL-1type 1 receptor antagonist protein (IL-1ra) blocks IL-1 $\beta$  induced effects. In the spleen, a slight increase in IL-1R AcP and IL-1R1 was observed during the first hours following LPS stimulation. In conclusion, IL-1R AcP mRNA is expressed in the brain and in other tissues where IL-1R1/CD121a transcripts are found. However, the regulation of its expression is distinct from IL-1R1/CD121a. The high level of expression and the lack of regulation of IL-1R AcP transcripts in the brain under inflammatory conditions suggest that the protein might be constitutively expressed in excess.