

# Recombinant Rat Il1r1 Protein, C-His-tagged

## Product Information

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<b>Cat</b>	IMP-4678
<b>Official Symbol</b>	Il1r1
<b>Product Overview</b>	Recombinant rat IL1R1 (NP_037255.3) extracellular domain (Met 1-Lys 352) was expressed, fused with a polyhistidine tag at the C-terminus.
<b>Description</b>	<p>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 cytokines 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<math>\beta</math> activity-dependent, acting through the IL-1 type 1 receptor (IL-1R1), as co-application of the IL-1 type 1 receptor antagonist protein (IL-1ra) blocks IL-1<math>\beta</math> 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.</p>
<b>Expression System</b>	HEK293
<b>Species</b>	Rat
<b>Tag</b>	C-His
<b>Predicted N Terminal</b>	Leu 34
<b>Form</b>	Lyophilized from sterile PBS, pH 7.4, 5 % trehalose, 5% mannitol and 0.01% Tween80.
<b>Molecular Mass</b>	The recombinant rat IL1R1 comprises 330 amino acids and predicts a molecular mass of 38.5 kDa. The apparent molecular mass of the rat IL1R1 is approximately 50-60 kDa in SDS-PAGE under reducing conditions due to glycosylation.
<b>Protein length</b>	Met1-Lys352
<b>Endotoxin</b>	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method

**Purity**

> 95 % as determined by SDS-PAGE

**Storage**

Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

**Reconstitution**

A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.

**SDS-PAGE**