

Recombinant Human IL1R1/CD121a Protein (His Tag)

Catalog No. PKSH031848

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

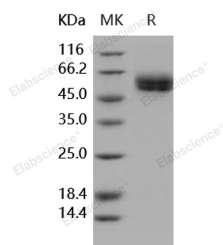
Description

Synonyms	CD121A;D2S1473;IL-1 RI;IL-1R-alpha;IL-1R1;IL1R;IL1RA;P80;Interleukin-1 receptor type 1;IL-1R-1;IL-1RT-1;IL-1RT1;CD121 antigen-like family member A;Interleukin-1 receptor alpha;IL-1R-alpha
Species	Human
Expression Host	HEK293 Cells
Sequence	Met 1-Thr 332
Accession	NP_000868.1
Calculated Molecular Weight	37.7 kDa
Observed molecular weight	55-57 kDa
Tag	C-His
Bioactivity	Measured by its ability to inhibit Interferon gamma secretion by human natural killer lymphoma NK-92 cells in the presence of 500 pg/mL IL1b. The EC50 for this effect is typically 40-200 ng/mL.

Properties

Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	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.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	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.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 97 % 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 β 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 β 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.