

IL-1R1 Protein, Cynomolgus (HEK293, His)

Cat. No.:	HY-P76996
Synonyms:	Interleukin-1 receptor type 1; IL-1R-1; CD121a; IL1R1; IL1R; IL1RA; IL1RT1
Species:	Cynomolgus
Source:	HEK293
Accession:	F7GVA6 (D21-T332)
Gene ID:	711726
Molecular Weight:	Approximately 47-75 kDa

PROPERTIES

AA Sequence	<pre> DKCNEREEKI ILVSSANEID VRPCPLNPNE YKGTITWYKN DSKTPISTEQ ASRIHQHKKK LWFVPAKVED SGHYVCVVRN SSYCLRIKIT AKFVENEPNL CYNAEAIFKQ RLPVAGDGG L VCPYMEFFKD ENNELPKLLW YKDCKPLLLD NIHFSGVKDR LIVMNVAEKH RGNYTCHASY TYLGKQYPIT RVIEFITLEE NKPTRPVIVS PANETIEVDL GSQIQLICNV TGQLSDTAYW KWNGSFIDED DPVLGEDYYS VENPANKRRS TLTITVLNISE TESRFYKHPF TCLARNTHGM DAA YVQLIYP VT </pre>
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human IL1RA at 2 µg/mL (100 µl/well) can bind Cynomolgus IL1R1 His, the EC ₅₀ of Cynomolgus IL1R1 His is 2.5-15 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	IL-1R1 (CD121a), a member of IL-1 receptor, is a receptor for IL-1α, IL-1β, IL-1Ra and IL-38, thereby mediating IL-1-dependent
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activation^[1]. IL-1R1 is expressed in specific endothelial cells, ventricular cells, astrocytes, and neurons^[2]. IL-1R1 binds to IL-1 by forming a heterodimer with IL-1R3 (IL-1RAcP). The heterodimer is responsible for the signal transduction by the hydrolysis of GTP, followed by JNK and p38 MAP kinase^[3]. Upon binding of IL-1, IL-1R1 initiates the downstream signaling cascade (MAPK p38 and NF- κ B pathway)^[4]. IL-1R1 mediates immune and inflammatory responses. IL-1R1 mediates the activation of NF- κ B, MAPK pathway.

REFERENCES

- [1]. Diana Boraschi, et al. The family of the interleukin-1 receptors. *Immunol Rev.* 2018 Jan;281(1):197-232.
- [2]. Daniel P Nemeth, et al. Modulation of Neural Networks by Interleukin-1. *Brain Plast.* 2021 Aug 23;7(1):17-32.
- [3]. Naoe Kaneko, et al. The role of interleukin-1 in general pathology. *Inflamm Regen.* 2019 Jun 6;39:12.
- [4]. Yonggang Sha, et al. A role of IL-1R1 signaling in the differentiation of Th17 cells and the development of autoimmune diseases. *Self Nonself.* 2011 Jan;2(1):35-42.
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Caution: Product has not been fully validated for medical applications. For research use only.

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