

Anti-IL-4R Antibody

HA500453



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell
Molecular Wt:	Predicted band size: 90 kDa

Description: This gene encodes the alpha chain of the interleukin-4 receptor, a type I transmembrane protein that can bind interleukin 4 and interleukin 13 to regulate IgE antibody production in B cells. Among T cells, the encoded protein also can bind interleukin 4 to promote differentiation of Th2 cells. A soluble form of the encoded protein can be produced by an alternate splice variant or by proteolysis of the membrane-bound protein, and this soluble form can inhibit IL4-mediated cell proliferation and IL5 upregulation by T-cells. Allelic variations in this gene have been associated with atopy, a condition that can manifest itself as allergic rhinitis, sinusitis, asthma, or eczema. Two transcript variants encoding different isoforms, a membrane-bound and a soluble form, have been found for this gene. Interactions of IL-4 with TNF α promote structural changes to vascular endothelial cells, thus playing an important role in tissue inflammation. The binding of IL-4 or IL-13 to the IL-4 receptor on the surface of macrophages results in the alternative activation of those macrophages. Alternatively activated macrophages (AAM Φ) downregulate inflammatory mediators such as IFN γ during immune responses, particularly with regards to helminth infections. IL4 signalling also determines the levels of CD20 on normal and malignant B cells by activation the transcription factor STAT6.

Immunogen: Synthetic peptide within Human IL-4R aa 101-150 / 825.

Positive control: PC-3M cell lysates, PC-3M.

Subcellular location: Cell membrane; Secreted.

Database links: SwissProt: P24394 Human

Recommended Dilutions:

WB 1:500

IF-Cell 1:100

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Immunogen affinity purified.

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Images

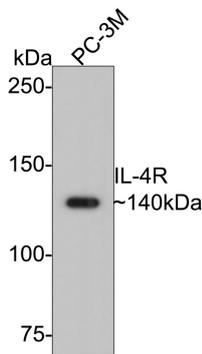
Fig1: Western blot analysis of IL-4R on PC-3M cell lysates with Rabbit anti-IL-4R antibody (HA500453) at 1/500 dilution.

Lysates/proteins at 10 µg/Lane.

Predicted band size: 90 kDa
Observed band size: 140 kDa

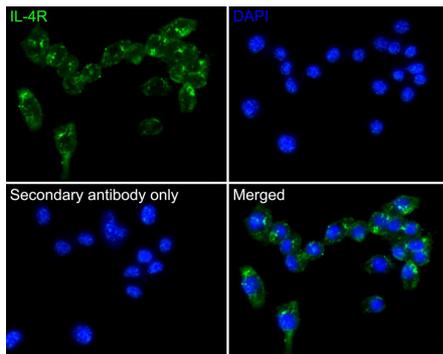
Exposure time: 2 minutes;

8% SDS-PAGE gel.



Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (HA500453) at 1/500 dilution was used in 5% NFDN/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

Fig2: Immunocytochemistry analysis of PC-3M cells labeling IL-4R with Rabbit anti-IL-4R antibody (HA500453) at 1/100 dilution.



Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 °C, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-IL-4R antibody (HA500453) at 1/100 dilution in 2% negative goat serum overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

- Herz J et al. GABAergic neuronal IL-4R mediates T cell effect on memory. *Neuron*. 2021 Nov
- Norseeda W et al. Association of IL-4 and IL-4R Polymorphisms with Litter Size Traits in Pigs. *Animals (Basel)*. 2021 Apr

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