

# Anti-IL-4R Antibody

## HA500454



<b>Product Type:</b>	Rabbit polyclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IHC-P, IF-Tissue
<b>Molecular Wt:</b>	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 $\alpha$  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 $\Phi$ ) downregulate inflammatory mediators such as IFN $\gamma$  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:** THP-1 cell lysate, Daudi cell lysate, 293T cell lysate, K-562 cell lysate, Jurkat cell lysate, MCF7 cell lysate, Ramos cell lysate, PC-12 cell lysate, Mouse spleen tissue lysate, Mouse pancreas tissue lysate, Rat pancreas tissue lysate.

**Subcellular location:** Cell membrane; Secreted.

**Database links:** SwissProt: P24394 Human | P16382 Mouse | Q63257 Rat

**Recommended Dilutions:**

<b>WB</b>	1:2,000
<b>IHC-P</b>	1:600
<b>IF-Tissue</b>	1:500

**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.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

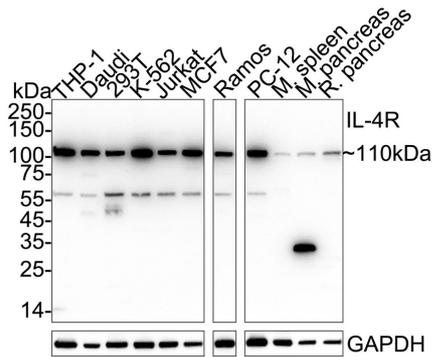
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## Images

**Fig1:** Western blot analysis of IL-4R on different lysates with Rabbit anti-IL-4R antibody (HA500454) at 1/2,000 dilution.



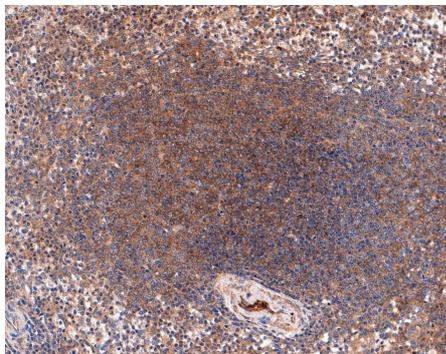
Lane 1: THP-1 cell lysate (20 µg/Lane)  
 Lane 2: Daudi cell lysate (20 µg/Lane)  
 Lane 3: 293T cell lysate (20 µg/Lane)  
 Lane 4: K-562 cell lysate (20 µg/Lane)  
 Lane 5: Jurkat cell lysate (20 µg/Lane)  
 Lane 6: MCF7 cell lysate (20 µg/Lane)  
 Lane 7: Ramos cell lysate (20 µg/Lane)  
 Lane 8: PC-12 cell lysate (20 µg/Lane)  
 Lane 9: Mouse spleen tissue lysate (40 µg/Lane)  
 Lane 10: Mouse pancreas tissue lysate (40 µg/Lane)  
 Lane 11: Rat pancreas tissue lysate (40 µg/Lane)

Predicted band size: 90 kDa  
 Observed band size: 110 kDa

Exposure time: 1 minute; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA500454) at 1/2,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.



**Fig2:** Immunohistochemical analysis of paraffin-embedded human spleen tissue with Rabbit anti-IL-4R antibody (HA500454) at 1/600 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (HA500454) at 1/600 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

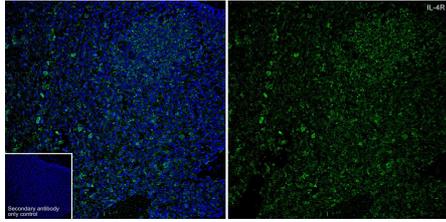
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**Fig3:** Application: IF-Tissue

Species: Human

Site: tonsil

Sample: Paraffin-embedded section

Antibody concentration: 1/500

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

### Background References

1. Herz J et al. GABAergic neuronal IL-4R mediates T cell effect on memory. *Neuron*. 2021 Nov
2. 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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