Anti-IL-4R Antibody [PSH10-86]

HA723253

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IP, IF-Cell
Molecular Wt:	Predicted band size: 90 kDa
Clone number:	PSH10-86

Description: The interleukin 4 receptor is a type I cytokine receptor. It is a heterodimer, that is, composed of two subunits. IL4R is the human gene coding for IL-4Rα, the subunit which combines with either common gamma chain (γc, forming the type I IL4 receptor) or with IL-13Rα1 (forming the type II IL4 receptor). 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 TNFα promote structural changes to vascular endothelial cells, thus playing an important role in tissue inflammation.

Immunogen: Recombinant protein within human IL-4R aa 1-232.

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, RAW264.7 cell lysate, PC-12 cell lysate, Mouse spleen tissue lysate, Mouse pancreas tissue lysate, PC-12.

Subcellular location: Cell membrane; Secreted.

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

Recommended Dilutions:

WB	1:2,000
IP	1-2μg/sample
IF-Cell	1:100

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

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

Purity: Protein A affinity purified.

Images

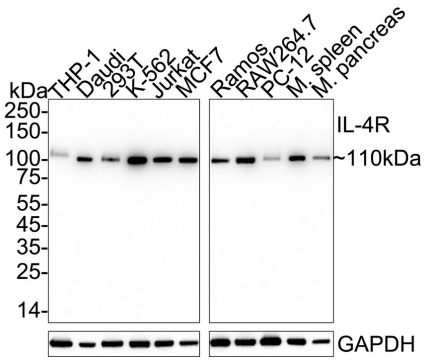

Fig1: Western blot analysis of IL-4R on different lysates with Rabbit anti-IL-4R antibody (HA723253) at 1/2,000 dilution.

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: RAW264.7 cell lysate (20 µg/Lane)
Lane 9: PC-12 cell lysate (20 µg/Lane)
Lane 10: Mouse spleen tissue lysate (40 µg/Lane)
Lane 11: Mouse 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 (HA723253) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

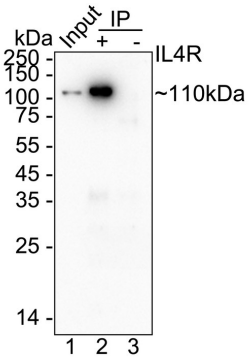

Fig2: IL-4R was immunoprecipitated from 0.2 mg Jurkat cell lysate with HA723253 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA723253 at 1/1,000 dilution. HRP Conjugated Anti-Rabbit IgG for IP Nano-secondary antibody at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: Jurkat cell lysate (input)
Lane 2: HA723253 IP in Jurkat cell lysate
Lane 3: Rabbit IgG instead of HA723253 in Jurkat cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 51 seconds; ECL: K1801

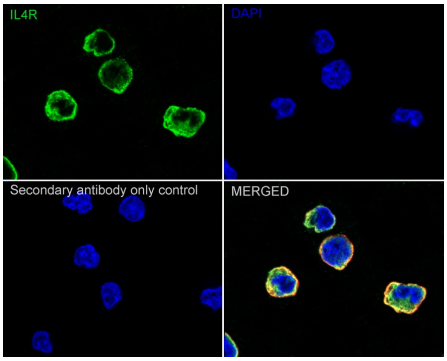

Fig3: Immunocytochemistry analysis of PC-12 cells labeling IL-4R with Rabbit anti-IL-4R antibody (HA723253) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-IL-4R antibody (HA723253) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. 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.

Beta tubulin (HA601187, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

Background References

1. Aranda CJ et al. IgG memory B cells expressing IL4R and FCER2 are associated with atopic diseases. Allergy. 2023 Mar