abcam

Product datasheet

Recombinant human IL-4R protein ab167726

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Description

Product name	Recombinant human IL-4R protein
Biological activity	Measured by its ability to inhibit IL4-dependent proliferation of TF1 Human erythroleukemic cells. Approximately 253 ng/mL of ab167726 will inhibit 50% of the biological response due to 0.2 ng/mL of rhIL4.
Purity	> 95 % SDS-PAGE.
Endotoxin level	< 1.000 Eu/µg
Expression system	HEK 293 cells
Accession	P24394
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MKVLQEPTCVSDYMSISTCEWKMNGPTNCSTELRLLYQL VFLLSEAHTCI PENNGGAGCVCHLLMDDVVSADNYTLDLWAGQQLLWKG SFKPSEHVKPRA PGNLTVHTNVSDTLLLTWSNPYPPDNYLYNHLTYAVNIWSE NDPADFRIY NVTYLEPSLRIAASTLKSGISYRARVRAWAQCYNTTWSEW SPSTKWHNSY REPFEQH
Predicted molecular weight	25 kDa including tags
Amino acids	26 to 232
Tags	His tag C-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab167726** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies
	SDS-PAGE

Form	Lyophilized

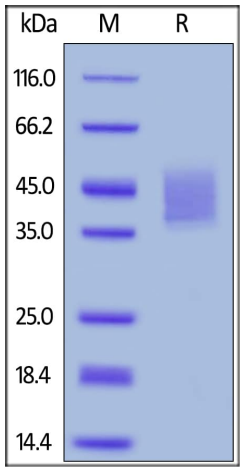
Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 7.40 Constituent: 99% PBS Normally Mannitol or Trehalose are added as protectants before lyophilization. This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Reconstitute with sterile deionized water to a concentration of 400 µg/ml.

General Info

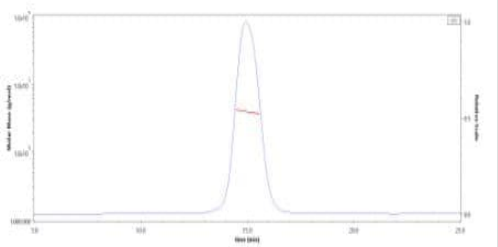
Function	Receptor for both interleukin 4 and interleukin 13. Couples to the JAK1/2/3-STAT6 pathway. The IL4 response is involved in promoting Th2 differentiation. The IL4/IL13 responses are involved in regulating IgE production and, chemokine and mucus production at sites of allergic inflammmation. In certain cell types, can signal through activation of insulin receptor substrates, IRS1/IRS2. Soluble IL4R (sIL4R) inhibits IL4-mediated cell proliferation and IL5 up-regulation by T-cells.
Tissue specificity	Isoform 1 and isoform 2 are highly expressed in activated T-cells.
Sequence similarities	Belongs to the type I cytokine receptor family. Type 4 subfamily. Contains 1 fibronectin type-III domain.
Domain	The extracellular domain represents the IL4 binding protein (IL4BP). The WSXWS motif appears to be necessary for proper protein folding and thereby efficient intracellular transport and cell-surface receptor binding. The box 1 motif is required for JAK interaction and/or activation. Contains 1 copy of a cytoplasmic motif that is referred to as the immunoreceptor tyrosine-based inhibitor motif (ITIM). This motif is involved in modulation of cellular responses. The phosphorylated ITIM motif can bind the SH2 domain of several SH2-containing phosphatases.
Post-translational modifications	On IL4 binding, phosphorylated on C-terminal tyrosine residues. Phosphorylation on any one of tyrosine residues, Tyr-575, Tyr-603 or Tyr-631, is required for STAT6-induced gene induction. The soluble form (sIL4R/IL4BP) can also be produced by proteolytic cleavage at the cell surface (shedding) by a metalloproteinase.
Cellular localization	Secreted and Cell membrane.

Images



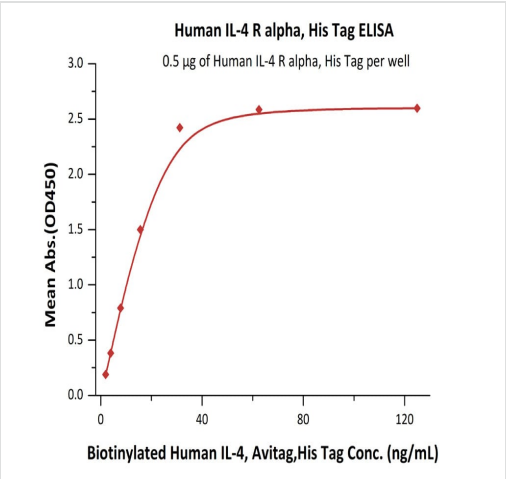
SDS-PAGE - Recombinant human IL-4R protein (ab167726)

Reducing (R) conditions SDS-PAGE of His Tagged Human IL-4 R alpha. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



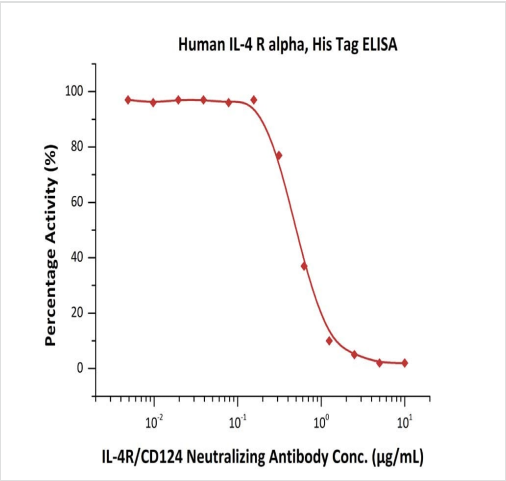
SEC-MALS - Recombinant human IL-4R alpha protein (ab167726)

The purity of ab167726 was more than 85% and the molecular weight of this protein is around 32-48 kDa verified by SEC-MALS.



Functional Studies - Recombinant human IL-4R alpha protein (ab167726)

Immobilized ab167726 at 5μg/mL (100 μL/well) can bind Biotinylated Human IL-4, Avitag, His Tag with a linear range of 2-16 ng/mL.



ELISA - Recombinant human IL-4R alpha protein (ab167726)

Serial dilutions of Monoclonal IL-4R/CD124 Neutralizing Antibody were added into Human IL-4 R alpha, His Tag (Ab167726): Biotinylated Human IL-4, Avitag, His Tag binding reactions. The half maximal inhibitory concentration (IC_{50}) is 0.505 μg/mL (Routinely tested).

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