

IL4 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP5241B

Specification

IL4 Antibody (C-term) - Product Information

Application Primary Accession Other Accession Reactivity Predicted Host Clonality Isotype Antigen Region WB, IHC-P, FC,E <u>P05112</u> <u>P79339</u>, <u>P30368</u> Human, Mouse Monkey, Sheep Rabbit Polyclonal Rabbit IgG 122-151

IL4 Antibody (C-term) - Additional Information

Gene ID 3565

Other Names Interleukin-4, IL-4, B-cell stimulatory factor 1, BSF-1, Binetrakin, Lymphocyte stimulatory factor 1, Pitrakinra, IL4

Target/Specificity

This L4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 122-150 amino acids from the C-terminal region of human L4.

Dilution WB~~1:1000 IHC-P~~1:10~50 FC~~1:10~50 E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

IL4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

IL4 Antibody (C-term) - Protein Information



Name IL4

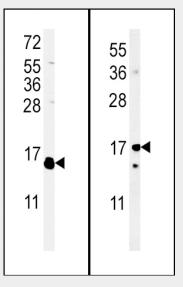
Function Cytokine secreted primarily by mast cells, T-cells, eosinophils, and basophils that plays a role in regulating antibody production, hematopoiesis and inflammation, and the development of effector T-cell responses (PubMed:<u>1993171</u>, PubMed:<u>3016727</u>). Induces the expression of class II MHC molecules on resting B-cells. Enhances both secretion and cell surface expression of IgE and IgG1 (PubMed:<u>1993171</u>). Also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes (PubMed:<u>2521231</u>). Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4. In addition, plays a critical role in higher functions of the normal brain, such as memory and learning (By similarity). Upon binding to IL4, IL4R receptor dimerizes either with the common IL2R gamma chain/IL2RG to produce the type 1 signaling complex, located mainly on hematopoietic cells, or with the IL13RA1 to produce the type 2 complex, which is also expressed on nonhematopoietic cells (PubMed:<u>10219247</u>, PubMed:<u>11526337</u>, PubMed:<u>18243101</u>). Engagement of both types of receptors initiates JAK3 and to a lower extend JAK1 phosphorylation leading to activation of the signal transducer and activator of transcription 6/STAT6 (PubMed:<u>7721895</u>).

Cellular Location Secreted.

IL4 Antibody (C-term) - Protocols

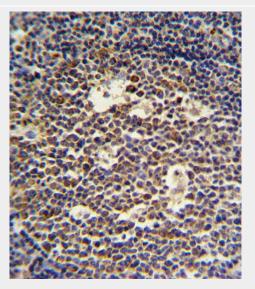
Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>
- IL4 Antibody (C-term) Images

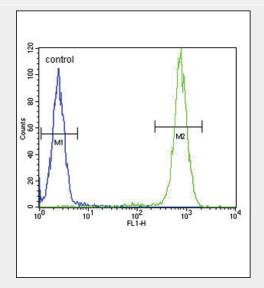


(LEFT)Western blot analysis of IL4 Antibody (C-term) (Cat. #AP5241b) in WiDr cell line lysates

(35ug/lane).IL4 (arrow) was detected using the purified Pab.(RIGHT)Western blot analysis of IL4 Antibody (C-term) (Cat. #AP5241b) in mouse cerebellum cell line lysates (35ug/lane).IL4(arrow) was detected using the purified Pab.



IL4 Antibody (C-term) (Cat. #AP5241b) IHC analysis in formalin fixed and paraffin embedded tonsil followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the IL4 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



IL4 Antibody (C-term) (Cat. #AP5241b) flow cytometric analysis of WiDr cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

IL4 Antibody (C-term) - Background

IL4 is a pleiotropic cytokine produced by activated T cells. This cytokine is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. This gene, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome.



IL4 Antibody (C-term) - References

Wong, H.L., et al. AIDS 24(7):1025-1033(2010) Davila, S., et al. Genes Immun. 11(3):232-238(2010) Trajkov, D., et al. Indian J Tuberc 56(3):117-131(2009)

- IL4 Antibody (C-term) Citations
 - <u>Nasal IL-4(+)CXCR5(+)CD4(+) T follicular helper cell counts correlate with local IgE</u> production in eosinophilic nasal polyps.
 - A SnoRNA-derived piRNA interacts with human interleukin-4 pre-mRNA and induces its decay in nuclear exosomes.