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IL-4 Rabbit pAb

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Catalog # AP52097

Product Information

Application	WB
Primary Accession	P07750
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	15834
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse IL-4
Epitope Specificity	181-147/147
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Secreted.
DISEASE	Genetic variations in IL4 may be a cause of susceptibility to ischemic stroke (ISCHSTR) [MIM:601367]; also known as cerebrovascular accident or cerebral infarction. A stroke is an acute neurologic event leading to death of neural tissue of the brain and resulting in loss of motor, sensory and/or cognitive function. Ischemic strokes, resulting from vascular occlusion, is considered to be a highly complex disease consisting of a group of heterogeneous disorders with multiple genetic and environmental risk factors.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene 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. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	16189
Other Names	Interleukin-4, IL-4, B-cell IgG differentiation factor, B-cell growth factor 1, B-cell stimulatory factor 1, BSF-1, IGG1 induction factor, Lymphocyte

	stimulatory factor 1, Il4, Il-4
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Il4
Synonyms	Il-4
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:3083412). Induces the expression of class II MHC molecules on resting B-cells (PubMed:3498301). Enhances both secretion and cell surface expression of IgE and IgG1 (PubMed:3498301). Also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes (By similarity). Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4 (PubMed:26416964). In addition, plays a critical role in higher functions of the normal brain, such as memory and learning (PubMed:25772794, PubMed:28202615). 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. 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:25847241, PubMed:8624821).
Cellular Location	Secreted.

Background

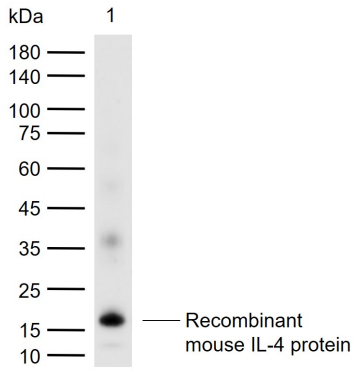
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References

Noma Y.,et al.Nature 319:640-646(1986).
Otsuka T.,et al.Nucleic Acids Res. 15:333-344(1987).
Lee F.,et al.Proc. Natl. Acad. Sci. U.S.A. 83:2061-2065(1986).
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Images

Sample:
Lane 1: Recombinant mouse IL-4 protein, His



(HEK293)(AP52097)
Primary: Anti-IL4 (AP52097) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 17 kDa
Observed band size: 17 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.