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phospho-Tyk2 (Tyr1054 + Tyr1055) Rabbit pAb

Catalog # AP99227

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P29597
Other Accession	P29597
Reactivity	Rat, Human, Mouse
Predicted	Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	133650
Physical State	Liquid
Immunogen	KLH conjugated Synthesised phosphopeptide derived from human Tyk2 around the phosphorylation site of Tyr1054/1055
Epitope Specificity	HE(p-Y)(p-Y)RV
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the protein kinase superfamily. Tyr protein kinase family. JAK subfamily.Contains 1 FERM domain.Contains 2 protein kinase domains.Contains 1 SH2 domain.
SUBUNIT	Interacts with JAKMIP1.
DISEASE	Defects in TYK2 are the cause of protein-tyrosine kinase 2 deficiency (TYK2 deficiency) [MIM:611521]; also known as autosomal recessive hyper-IgE syndrome (HIES) with atypical mycobacteriosis. TYK2 deficiency consists of a primary immunodeficiency characterized by recurrent skin abscesses, pneumonia, and highly elevated serum IgE.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a member of the tyrosine kinase and, more specifically, the Janus kinases (JAKs) protein families. This protein associates with the cytoplasmic domain of type I and type II cytokine receptors and promulgate cytokine signals by phosphorylating receptor subunits. It is also component of both the type I and type III interferon signaling pathways. As such, it may play a role in anti-viral immunity. A mutation in this gene has been associated with hyperimmunoglobulin E syndrome (HIES) - a primary immunodeficiency characterized by elevated serum immunoglobulin E. [provided by RefSeq].

Additional Information

Gene ID	7297
Other Names	IMD35; JTK1; TYK2_HUMAN; TYK2; 2.7.10.2; TYK2_MOUSE; tyrosine kinase 2; Tyk2 (phospho-Y1054/Y1055); p-Tyk2; phospho-Tyk2; Tyk2 (phospho-Tyr1054/Tyr1055)

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	TYK2 (HGNC:12440)
Function	Non-membrane spanning protein tyrosine kinase involved in numerous cytokines and interferons signaling, which regulates cell growth, development, cell migration, innate and adaptive immunity (PubMed:10542297, PubMed:10995743, PubMed:7657660, PubMed:7813427, PubMed:8232552). Plays both structural and catalytic roles in numerous interleukins and interferons (IFN-alpha/beta) signaling (PubMed:10542297). Associates with heterodimeric cytokine receptor complexes and activates STAT family members including STAT1, STAT3, STAT4 or STAT6 (PubMed:10542297, PubMed:7638186). The heterodimeric cytokine receptor complexes are composed of (1) a TYK2-associated receptor chain (IFNAR1, IL12RB1, IL10RB or IL13RA1), and (2) a second receptor chain associated either with JAK1 or JAK2 (PubMed:10542297, PubMed:25762719, PubMed:7526154, PubMed:7813427). In response to cytokine-binding to receptors, phosphorylates and activates receptors (IFNAR1, IL12RB1, IL10RB or IL13RA1), creating docking sites for STAT members (PubMed:7526154, PubMed:7657660). In turn, recruited STATs are phosphorylated by TYK2 (or JAK1/JAK2 on the second receptor chain), form homo- and heterodimers, translocate to the nucleus, and regulate cytokine/growth factor responsive genes (PubMed:10542297, PubMed:25762719, PubMed:7657660). Negatively regulates STAT3 activity by promototing phosphorylation at a specific tyrosine that differs from the site used for signaling (PubMed:29162862). Involved in the oncostatin-M-mediated signaling pathway through both type I OSM receptor complex (heterodimers composed of LIFR and IL6ST) and type II OSM receptor complex (heterodimers composed of OSMR and IL6ST) (PubMed:9188471).
Tissue Location	Observed in all cell lines analyzed. Expressed in a variety of lymphoid and non-lymphoid cell lines

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