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TYK2 Antibody

Catalog # ASC11596

Product Information

Application	WB, E
Primary Accession	P29597
Other Accession	NP_003322, 187608615
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	133650
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TYK2 antibody can be used for detection of TYK2 by Western blot at 1 - 2 g/mL.

Additional Information

Gene ID	7297
Other Names	Non-receptor tyrosine-protein kinase TYK2, 2.7.10.2, TYK2
Target/Specificity	TYK2; At least three isoforms of TYK2 are known to exist; this antibody only detects the two longest isoforms.
Reconstitution & Storage	TYK2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	TYK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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

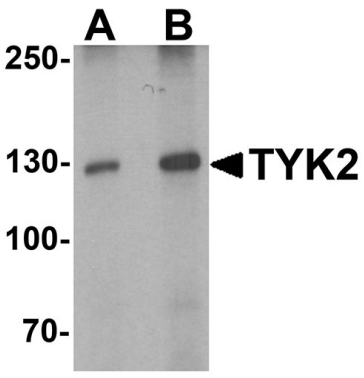
Background

TYK2 Antibody: TYK2 is a member of the Janus kinases (JAKs) protein families. TYK2 associates with the cytoplasmic domain of type I and type II cytokine receptors and promulgate cytokine signals by phosphorylating receptor subunits and is also a 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.

References

Strobl B, Stoiber D, Sexl V, et al. Tyrosine kinase 2 (TYK2) in cytokine signalling and host immunity. Front. Biosci. 2011; 17:3214-32.

Images



Western blot analysis of TYK2 in human small intestine tissue lysate with TYK2 antibody at (A) 1 and (B) 2 µg/mL

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