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JAK1 Antibody

Rabbit mAb
Catalog # AP91603

Product Information

Application	WB
Primary Accession	P23458
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	JAK 1; JAK 1A; JAK 1B; JAK1; JAK1A; JAK1B; JTK3;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	133277

Additional Information

Dilution	WB 1:500~1:2000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human JAK1
Description	Tyrosine kinase of the non-receptor type, involved in the IFN-alpha/beta/gamma signal pathway. Kinase partner for the interleukin (IL)-2 receptor.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	JAK1 (HGNC:6190)
Synonyms	JAK1A, JAK1B
Function	Non-membrane spanning protein tyrosine kinase that phosphorylates signal-transducing subunits of cytokine receptor complexes like IL2RB, IL10RA, IFNAR2, IL6ST, LIFR, OSMR and IL31RA (PubMed:11909529, PubMed:12133952, PubMed:15194700, PubMed:16239216, PubMed:28111307, PubMed:32750333, PubMed:7615558, PubMed:8232552, PubMed:9188471). Functionally, is involved in the IFN-alpha/beta/gamma signal pathway (PubMed:16239216, PubMed:28111307, PubMed:32750333, PubMed:7615558, PubMed:8232552). Mechanistically, in response to interferon-binding to IFNAR1-IFNAR2 heterodimer, phosphorylates and activates its binding partner IFNAR2, creating docking sites for STAT proteins (PubMed:7759950). Directly phosphorylates STAT proteins but also activates STAT signaling through the transactivation of other JAK kinases associated with signaling receptors (PubMed:16239216, PubMed:32750333, PubMed:8232552). Involved in the MT-RNR2/humanin- mediated signaling

pathway leading to STAT3 phosphorylation (PubMed:27384491). Binding of CNTF or the CLCF1/CLF heterodimer to CNTFR leads to IL6ST/gp130-LIFR dimerization followed by activation of JAK1 and JAK2 which in turns phosphorylate IL6ST/gp130 and LIFR (PubMed:11294841). The tyrosine phosphorylated signaling receptors serve in turn as docking proteins for STAT3 (PubMed:11294841). 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). 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). Involved in the Interleukin-31-mediated signaling pathway through the IL31 receptor complex (heterodimers composed of OSMR and IL31RA) (PubMed:15194700).

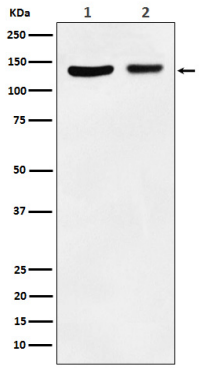
Cellular Location

Endomembrane system; Peripheral membrane protein. Note=Wholly intracellular, possibly membrane associated

Tissue Location

Expressed at higher levels in primary colon tumors than in normal colon tissue. The expression level in metastatic colon tumors is comparable to the expression level in normal colon tissue

Images



Western blot analysis of JAK1 expression in (1) A431 cell lysate; (2) RAW264.7 cell lysate.

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