Jak1 Mouse mAb

Catalog#: AM1316 | Size: 30μL/50μL/100μL

Main Information

Target	Host Species	Reactivity	Application	MW	Conjugated/Modification
JAK1	Mouse	Human, Rat	WB, IF, IP	130kD (Observed)	Unmodified

Detailed Information

Recommeded Dilution Ratio	WB 1:200-1000; ICC 1:200; IF 1:50-200
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Specificity	This antibody detects endogenous levels of Jak1 and does not cross-react with related proteins.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Storage	-15°C to -25°C/1 year(Do not lower than -25°C)
MW(Observed)	130kD
Modification	Unmodified
Clonality	Monoclonal

Antigen&Target Information

Immunogen	Purified recombinant human Jak1 protein fragments expressed in E.coli.
Specificity	This antibody detects endogenous levels of Jak1 and does not cross-react with related proteins.
Gene Name	Jak1
Other Name	JAK 1 ;JAK 1A ;JAK 1B ;JAK-1 ;JAK1 ;JAK1_HUMAN ;JAK1A ;JAK1B ;Janus kinase 1 ;a protein tyrosine kinase ;Janus kinase 1 ;JTK3 ;Tyrosine protein kinase JAK 1 ;Tyrosine protein kinase JAK1 ;Tyrosine-protein kinase JAK1.

Database Link

Organism	Gene ID	SwissProt
Human	3716	P23458
Mouse		P52332

Background

This gene encodes a membrane protein that is a member of a class of protein-tyrosine kinases (PTK) characterized by the presence of a second phosphotransferase-related domain immediately N-terminal to the PTK domain. The encoded kinase phosphorylates STAT proteins (signal transducers and activators of transcription) and plays a key role in interferon-alpha/beta and interferon-gamma signal transduction. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2016].

Function

Catalytic activity:ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate.,Domain:Possesses two phosphotransferase domains. The second one probably contains the catalytic domain (By similarity), while the presence of slight differences suggest a different role for domain 1.,Domain:The FERM domain mediates interaction with JAKMIP1.,Function:Tyrosine kinase of the non-receptor type, involved in the IFN-alpha/beta/gamma signal pathway. Kinase partner for the interleukin (IL)-2 receptor.,sequence Caution:Translation N-terminally extended.,similarity:Belongs to the protein kinase superfamily. Tyr protein kinase family. JAK subfamily.,similarity:Contains 1 FERM domain.,similarity:Contains 1 protein kinase domain.,similarity:Contains 1 SH2 domain.,subcellular location:Wholly intracellular, possibly membrane associated.,subunit:Interacts with IL31RA, JAKMIP1 and SHB.,tissue specificity: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.

Cellular Localization

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

Tissue Expression

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

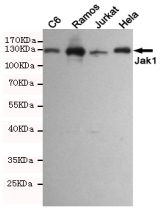
Research Areas

- EGFR tyrosine kinase inhibitor resistance
- PI3K-Akt signaling pathway
- Necroptosis
- Osteoclast differentiation
- Signaling pathways regulating pluripotency of stem cells
- NOD-like receptor signaling pathway
- JAK-STAT signaling pathway
- Th1 and Th2 cell differentiation
- Th17 cell differentiation
- Leishmaniasis
- Toxoplasmosis
- Tuberculosis
- Hepatitis C
- Hepatitis B
- Measles
- Human cytomegalovirus infection
- Influenza A
- Human papillomavirus infection
- Human T-cell leukemia virus 1 infection
- Kaposi sarcoma-associated herpesvirus infection
- Herpes simplex virus 1 infection
- Epstein-Barr virus infection
- Coronavirus disease - COVID-19
- Pathways in cancer
- Viral carcinogenesis
- Pancreatic cancer
- PD-L1 expression and PD-1 checkpoint pathway in cancer

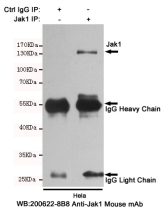
Signaling Pathway

Cellular Processes >> Cell growth and death >> Necroptosis
Cellular Processes >> Cellular community - eukaryotes >> Signaling pathways regulating pluripotency of stem cells
Organismal Systems >> Immune system >> Toll-like receptor signaling pathway
Organismal Systems >> Immune system >> NOD-like receptor signaling pathway
Organismal Systems >> Immune system >> Th1 and Th2 cell differentiation
Organismal Systems >> Immune system >> Th17 cell differentiation
Organismal Systems >> Development and regeneration >> Osteoclast differentiation
Human Diseases >> Cancer: overview >> Pathways in cancer
Human Diseases >> Cancer: overview >> PD-L1 expression and PD-1 checkpoint pathway in cancer
Human Diseases >> Cancer: specific types >> Pancreatic cancer
Environmental Information Processing >> Signal transduction >> JAK-STAT signaling pathway
Environmental Information Processing >> Signal transduction >> PI3K-Akt signaling pathway

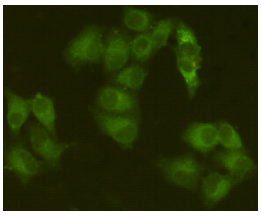
Validation Data



Western blot analysis of extracts from C6,Ramos,Jurkat and Hela cell lysates using Jak1 mouse mAb (1:1000 diluted).Predicted band size:130KDa.Observed band size:130KDa.



Immunoprecipitation analysis of Hela cell lysates using Jak1 mouse mAb.



Immunocytochemistry staining of HeLa cells fixed with 4% Paraformaldehyde and using anti-Jak1 mouse mAb (dilution 1:200).

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