Technical Data Sheet

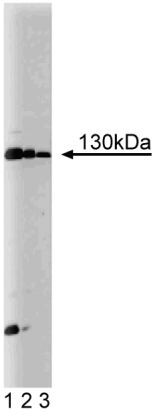
Purified Mouse Anti-JAK1

Product Information

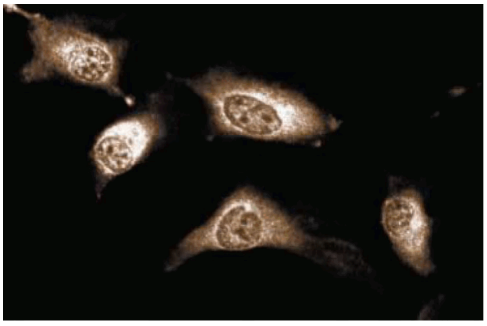
Material Number:	**610231**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	73/JAK1
Immunogen:	Human JAK1 aa. 551-766
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Dog, Rat, Mouse, Chicken, Frog
Target MW:	130 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The JAK family of receptor-associated protein kinases is directly involved in interferon (IFN) response pathways. The JAK family contains at least three members: JAK1, JAK2, and Tyk2. Each protein is approximately 130 kDa and contains a C-terminal tyrosine kinase domain, an adjacent kinase or kinase-related domain, and five other domains that are highly conserved among family members. In several human and murine cell lines, JAK1 is rapidly tyrosine phosphorylated in response to IFN-α and IFN-γ. JAK1 is required for the phosphorylation of the transcription factor Stat1 (p91), in response to IFNs-α or IFN-γ. JAK1 is also necessary for the efficient phophorylation of Stat2 (p113) in response to IFN-α and for the phosphorylation of Tyk2 or JAK2 in response to IFNs-α or IFN-γ, respectively.



Western blot analysis of JAK1 on Jurkat cell lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-JAK1.*



Immunofluorescent staining of Human Endothelial cells.

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Immunoprecipitation	Tested During Development
Immunofluorescence	Tested During Development
Immunohistochemistry	Not Recommended

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611451	Jurkat Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References

Blesofsky WA, Mowen K, Arduini RM. Regulation of STAT protein synthesis by c-Cbl. *Oncogene.* 2001; 20(50):7326-7333. (Clone-specific: Immunoprecipitation, Western blot)

Kawazoe Y, Naka T, Fujimoto M. Signal transducer and activator of transcription (STAT)-induced STAT inhibitor 1 (SSI-1)/suppressor of cytokine signaling 1 (SOCS1) inhibits insulin signal transduction pathway through modulating insulin receptor substrate 1 (IRS-1) phosphorylation. *J Exp Med.* 2001; 193(2):263-269. (Clone-specific: Western blot)

Kopantzev Y, Heller M, Swaminathan N, Rudikoff S. IL-6 mediated activation of STAT3 bypasses Janus kinases in terminally differentiated B lineage cells. *Oncogene.* 2002; 21(44):6791-6800. (Clone-specific: Immunoprecipitation, Western blot)

Muller M, Briscoe J, Laxton C. The protein tyrosine kinase JAK1 complements defects in interferon-alpha/beta and -gamma signal transduction. *Nature.* 1993; 366(6451):129-135. (Biology)

Nicholson SE, Oates AC, Harpur AG, Ziemiecki A, Wilks AF, Layton JE. Tyrosine kinase JAK1 is associated with the granulocyte-colony-stimulating factor receptor and both become tyrosine-phosphorylated after receptor activation. *Proc Natl Acad Sci U S A.* 1994; 91(8):2985-2988. (Biology)

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