

DESCRIPTION	
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat Jak1.
Source	Monoclonal Rat IgG _{2B} Clone # 413104
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Jak1 Pro32-Phe286 Accession # P23458
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

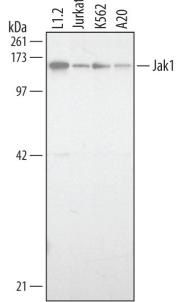
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Intracellular Staining by Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
CytoF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

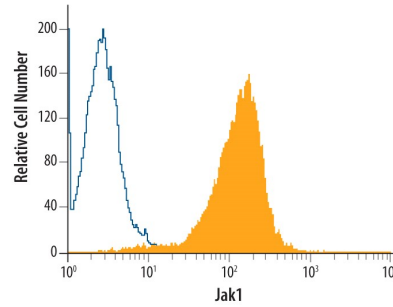
DATA

Western Blot



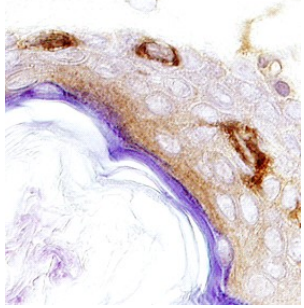
Detection of Human and Mouse Jak1 by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line, K562 human chronic myelogenous leukemia cell line, A20 mouse B cell lymphoma cell line, and L1.2 mouse pro-B cell line. PVDF membrane was probed with 1 µg/mL of Rat Anti-Human/Mouse/Rat Jak1 Monoclonal Antibody (Catalog # MAB4260) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for Jak1 at approximately 130 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.

Intracellular Staining by Flow Cytometry



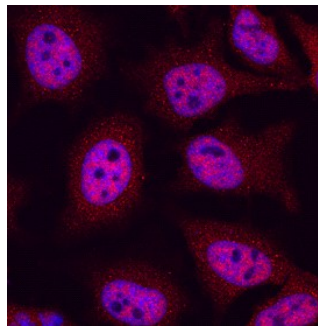
Detection of Jak1 in Jurkat Human Cell Line by Flow Cytometry. Jurkat human acute T cell leukemia cell line was stained with Rat Anti-Human/Mouse/Rat Jak1 Monoclonal Antibody (Catalog # MAB4260, filled histogram) or isotype control antibody (Catalog # MAB0061, open histogram), followed by Phycoerythrin-conjugated Anti-Rat IgG F(ab')₂ Secondary Antibody (Catalog # F0105B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

Immunohistochemistry



Jak1 in Human Epidermis. Jak1 was detected in immersion fixed paraffin-embedded sections of human epidermis using 25 µg/mL Rat Anti-Human/Mouse/Rat Jak1 Monoclonal Antibody (Catalog # MAB4260) overnight at 4 °C. Tissue was stained with the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunocytochemistry



Jak1 in HeLa Human Cell Line. Jak1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Rat Anti-Human/Mouse/Rat Jak1 Monoclonal Antibody (Catalog # MAB4260) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NLO13) and counterstained with DAPI (blue). Specific staining was localized to nuclei. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.5 mg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Janus Kinase 1 (Jak1) belongs to a family of protein tyrosine kinases that couple to cytokine receptors and are activated by ligand binding to these receptors. Activation of Jak1 occurs via phosphorylation at two adjacent tyrosine residues, Y1022 and Y1023, within the kinase domain. Jaks activate members of the STAT family of transcription factors by phosphorylating critical tyrosine regulatory sites. Jak1 is required for the activation of STAT1 and STAT2 in response to interferon α .

PRODUCT SPECIFIC NOTICES

This product is sold under license from Millipore Corporation under the following US or foreign patents: 5,821,069; 5,658,791; EP0560890. This product shall not be used to commercially screen drug molecules being developed as JAK1 or JAK2 inhibitors. Any such activity will be outside the scope of the research use only label license.