

#5481 Store at -20°C

Jak3 (5H2) Mouse mAb



Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	115	Mouse IgG1	#P52333	3718

Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Jak3 (5H2) Mouse mAb detects endogenous levels of human Jak3 protein.	
Source / Purification	Monoclonal antibody was prepared from animals immunized with a purified recombinant fragment of human Jak3 expressed in <i>E. Coli</i> .	
Background	<p>Members of the Janus family of tyrosine kinases (Jak1, Jak2, Jak3, and Tyk2) are activated by ligands binding to a number of associated cytokine receptors (1). Upon cytokine receptor activation, Jak proteins become autophosphorylated and phosphorylate their associated receptors to provide multiple binding sites for signaling proteins. These associated signaling proteins, such as Stats (2), Shc (3), insulin receptor substrates (4), and focal adhesion kinase (FAK) (5), typically contain SH2 or other phospho-tyrosine-binding domains.</p> <p>Jak3 is primarily expressed in hematopoietic cells and is required for immune cell function and development (6-8). It binds to the common γ subunit (γc) and a shared receptor subunit also used by several cytokines including IL-2, IL-4, IL-7, IL-9, and IL-15 (9). IL-2 signaling and Stat5 activation is highly impaired by the loss of Jak3 (10,11). Jak3 is phosphorylated at multiple sites, including Tyr980 and 981 within its activation loop (12-14).</p>	
Background References	<ol style="list-style-type: none"> Leonard, W.J. and O'Shea, J.J. (1998) <i>Annu Rev Immunol</i> 16, 293-322. Darnell, J.E. (1997) <i>Science</i> 277, 1630-5. VanderKuur, J. et al. (1995) <i>J Biol Chem</i> 270, 7587-93. Argetsinger, L.S. et al. (1995) <i>J Biol Chem</i> 270, 14685-92. Zhu, T. et al. (1998) <i>J Biol Chem</i> 273, 10682-9. Thomis, D.C. et al. (1995) <i>Science</i> 270, 794-7. Nosaka, T. et al. (1995) <i>Science</i> 270, 800-2. Park, S.Y. et al. (1995) <i>Immunity</i> 3, 771-82. Russell, S.M. et al. (1994) <i>Science</i> 266, 1042-5. Johnston, J.A. et al. (1994) <i>Nature</i> 370, 151-3. Oakes, S.A. et al. (1996) <i>Immunity</i> 5, 605-15. Zhou, Y.J. et al. (1997) <i>Proc Natl Acad Sci U S A</i> 94, 13850-5. Cheng, H. et al. (2008) <i>Mol Cell Biol</i> 28, 2271-82. Rikova, K. et al. (2007) <i>Cell</i> 131, 1190-203. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	<p>H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster</p> <p>X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse</p> <p>GP: Guinea Pig Rab: rabbit All: all species expected</p>

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.