

Phospho-Jak1 (Tyr1022/1023) Antibody



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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, (R, B)	130 kDa	Rabbit**

Background: 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.

The tyrosine residues 1022/1023 of Jak1 in the putative activation loop are the homologous tyrosine residues 1054/1055 in Tyk2, which are important in the regulation of Tyk2 kinase activity (6).

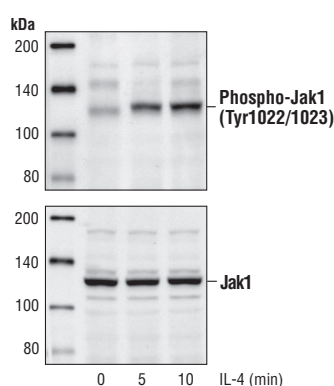
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Specificity/Sensitivity: Phospho-Jak1 (Tyr1022/1023) Antibody detects endogenous levels of Jak1 only when phosphorylated at tyrosines 1022/1023. Human Jak1 residues Tyr1034 and Tyr1035 historically have been referenced as Tyr1022 and Tyr1023. This antibody may cross-react with phospho-Jak2.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr1022/1023 of human Jak1. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Leonard, W.J. and O'Shea, J.J. (1998) *Annu. Rev. Immunol.* 16, 293–322.
- (2) Darnell, J.E. (1997) *Science* 277, 1630–1635.
- (3) VanderKuur, J. et al. (1995) *J. Biol. Chem.* 270, 7587–7593.
- (4) Argetsinger, L.S. et al. (1995) *J. Biol. Chem.* 270, 14685–14692.
- (5) Zhu, T. et al. (1998) *J. Biol. Chem.* 273, 10682–10689.
- (6) Gauzzi, M. C. et al. (1996) *J. Biol. Chem.* 271, 20494–20500.



Western blot analysis of extracts from HT-29 cells treated with IL-4 (100 ng/ml) for the indicated times, using Phospho-Jak1 (Tyr1022/1023) Antibody (upper) or Jak1 Antibody (lower).

Entrez-Gene ID #3716
Swiss-Prot Acc. #Q4LDX3

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western Blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.