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#3331

Phospho-Jak1 (Tyr1034/1035) Antibody

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

Applications: W	Reactivity: H M	Sensitivity: Endogenous	MW (kDa): 130	Source/Isotype: Rabbit	UniProt ID: #P23458	Entrez-Gene Id: 3716
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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 and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-Jak1 (Tyr1034/1035) Antibody detects endogenous levels of Jak1 only when phosphorylated at tyrosines 1034/1035. Human Jak1 residues Tyr1034 and Tyr1035 historically have been referenced as Tyr1022 and Tyr1023. This antibody may cross-react with phospho-Jak2.

Species predicted to react based on 100% sequence homology

Rat, Bovine

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr1034/1035 of human Jak1. Antibodies are purified by protein A and peptide affinity chromatography.

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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Background References

- Leonard, W.J. and O'Shea, J.J. (1998) *Annu Rev Immunol* 16, 293-322.
- Darnell, J.E. (1997) *Science* 277, 1630-5.
- VanderKuur, J. et al. (1995) *J Biol Chem* 270, 7587-93.
- Argetsinger, L.S. et al. (1995) *J Biol Chem* 270, 14685-92.
- Zhu, T. et al. (1998) *J Biol Chem* 273, 10682-9.
- Gauzzi, M.C. et al. (1996) *J. Biol. Chem.* 271, 20494-20500.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse

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