

Phospho-Jak2 (Tyr1008) (D4A8) Rabbit mAb



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:
W	H M	Endogenous	125	Rabbit IgG	#O60674	3717

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

Phospho-Jak2 (Tyr1008) (D4A8) Rabbit mAb recognizes endogenous levels of Jak2 protein only when phosphorylated at Tyr1008. This antibody also reacts with Jak2 when dually phosphorylated at Tyr1007 and Tyr1008. Cross-reactivity was not observed with other Jak family members by western blot.

Species predicted to react based on 100% sequence homology

Rat, Monkey, Xenopus, Bovine, Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Tyr1008 of human Jak2 protein.

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.

Jak2 signaling is associated with a number of cytokines, growth factors, and hormones including IL-3, IL-5, IL-6, granulocyte-macrophage colony-stimulating factor (GM-CSF), erythropoietin (EPO), thrombopoietin (TPO) growth hormone, prolactin, and leptin (6-13). The oncogenic potential of Jak2 has been realized through translocations and point mutations resulting in its enhanced, de-regulated kinase activity, making Jak2 a potential therapeutic target. Jak2 gene translocations resulting in fusions with the TEL (TEL-JAK2) and PCM1 (PCM1-JAK2) have been found in leukemia patients (14,15). An activating point mutation in Jak2 resulting in a valine to phenylalanine switch at position 617 (V617F) has been implicated in myeloproliferative disorders including polycythemia vera and essential thrombocythemia (16).

Background References

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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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