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#29261

Jak1 (E3A6M) Rabbit mAb

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New 05/18

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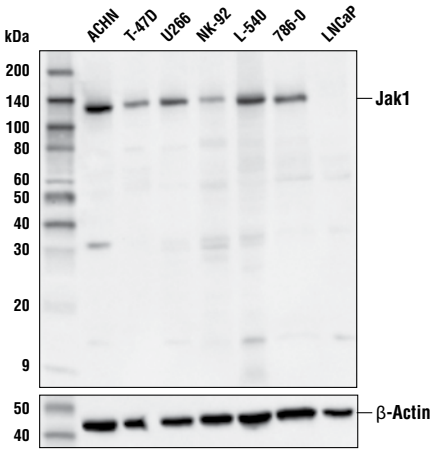
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H	130 kDa	Rabbit IgG**

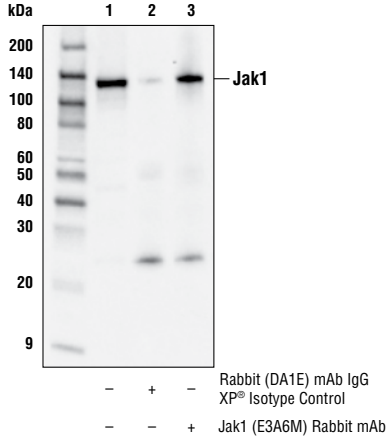
Background: Members of the Janus family of tyrosine kinases (Jak1, Jak2, Jak3, and Tyk2) are activated by ligands binding to a number of associated cytokine receptors (1). Upon cytokine receptor activation, Jak proteins become autophosphorylated and phosphorylate their associated receptors to provide 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 phosphotyrosine-binding domains.Activation of Jak kinases upon cytokine receptor binding is associated with tyrosine phosphorylation within their activation loops, including Tyr1034/1035 of Jak1, Tyr1007/1008 of Jak2, Tyr980/981 of Jak3, and Tyr1054/1055 of Tyk2. Many studies have indicated that various cytokine receptors have clear preferences that utilize distinct Jak family members. Aberrant regulation of Jak signaling is associated with a number of diseases, including myeloproliferative neoplasms, leukemia, and inflammatory disease (6).

Specificity/Sensitivity: Jak1 (E3A6M) Rabbit mAb recognizes endogenous levels of total Jak1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human Jak1 protein.



Western blot analysis of extracts from various cell lines using Jak1 (E3A6M) Rabbit mAb (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower).



Immunoprecipitation of Jak1 from ACHN cell extacts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is Jak1 (E3A6M) Rabbit mAb. Western blot was performed Jak1 (D1T6W) Mouse mAb #50996. Anti-mouse IgG, HRP-linked Antibody #7076 was used as a secondary antibody.

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.*

***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
Immunoprecipitation	1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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, 1630-5.

(3) VanderKuur, J. et al. (1995) *J Biol Chem* 270, 7587-93.

(4) Argetsinger, L.S. et al. (1995) *J Biol Chem* 270, 14685-92.

(5) Zhu, T. et al. (1998) *J Biol Chem* 273, 10682-9.

(6) Babon, J.J. et al. (2014) *Biochem J* 462, 1-13.

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.

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Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **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.