

#24633 Store at -20°C

Puma (D7L9L) 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

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Applications: WB, IP, IF-IC	Reactivity: M R	Sensitivity: Endogenous	MW (kDa): 23-25	Source/Isotype: Rabbit IgG	UniProt ID: #Q99ML1	Entrez-Gene Id: 170770
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Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:200
1:800

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

Puma (D7L9L) Rabbit mAb recognizes endogenous levels of total Puma protein in mouse and rat.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg84 of mouse Puma protein.

Background

Puma (p53 upregulated modulator of apoptosis) is a "BH3-only" Bcl-2 family member originally identified in differential gene expression studies as a p53-inducible gene (1,2). The "BH3-only" family members include Bad, Bid, Bik, Hrk, Bim, and Noxa, all of which contain a BH3 domain but lack other conserved domains, BH1 and BH2, and generally promote apoptosis by binding to and antagonizing anti-apoptotic Bcl-2 family members through BH3 domain interactions (3). Two BH3-containing proteins are produced from the *puma* gene, Puma-α and Puma-β, both of which are induced by p53, bind Bcl-2 and Bcl-xL, localize to the mitochondria, and promote cytochrome c release and apoptosis (1,2). Puma plays a critical role in the p53 tumor suppressor pathway. Targeted disruption of the *puma* gene impairs p53-mediated apoptosis and tumor suppression (4-7). Puma knockout mice show defects from multiple apoptotic stimuli, including ionizing irradiation, deregulated c-Myc expression, and cytokine withdrawal (4).

Background References

1. Yu, J. et al. (2001) *Mol Cell* 7, 673-82.
2. Nakano, K. and Voutsden, K.H. (2001) *Mol Cell* 7, 683-94.
3. Bouillet, P. and Strasser, A. (2002) *J Cell Sci* 115, 1567-74.
4. Jeffers, J.R. et al. (2003) *Cancer Cell* 4, 321-8.
5. Hemann, M.T. et al. (2004) *Proc Natl Acad Sci U S A* 101, 9333-8.
6. Yu, J. et al. (2003) *Proc Natl Acad Sci U S A* 100, 1931-6.
7. Villunger, A. et al. (2003) *Science* 302, 1036-8.

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

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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