

Rap1B (36E1) Rabbit mAb

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #5908
Swiss-Prot Acc. #P61224

Applications	Species Cross-Reactivity*	Molecular Wt.	Source	Isotype
W Endogenous	H, M, R, Mk, B	21 kDa	Rabbit**	IgG

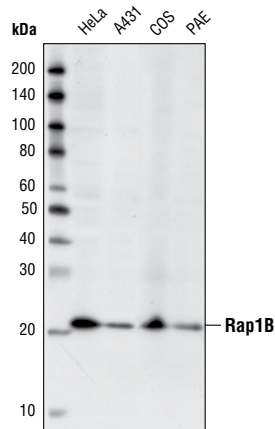
Background: Rap1 and Rap2 belong to the Ras subfamily of small GTPases and are activated by a wide variety of stimuli through integrins, receptor tyrosine kinases (RTKs), G-protein coupled receptors (GPCR), death domain associated receptors (DD-R) and ion channels (1,2). Like other small GTPases, Rap activity is stimulated by guanine nucleotide exchange factors (GEF) and inactivated by GTPase activating proteins (GAP). A wide variety of Rap GEFs have been identified: C3G connects Rap1 with RTKs through adaptor proteins such as Crk, Epacs (or cAMP-GEFs) transmit signals from cAMP, and CD-GEFs (or CalDAG-GEFs) convey signals from either or both Ca²⁺ and DAG (1). Rap1 primarily regulates multiple integrin-dependent processes such as morphogenesis, cell-cell adhesion, hematopoiesis, leukocyte migration and tumor invasion (1,2). Rap1 may also regulate proliferation, differentiation and survival through downstream effectors including B-Raf, PI3K, RasGEF and phospholipases (PLCs) (1-4). Rap1 and Rap2 are not functionally redundant as they perform overlapping but distinct functions (5). Recent research indicates that Rap2 regulates Dsh subcellular localization and is required for Wnt signaling in early development (6).

Specificity/Sensitivity: Rap1B (36E1) Rabbit mAb detects endogenous levels of total Rap1B protein. It does not cross-react with Rap1A.

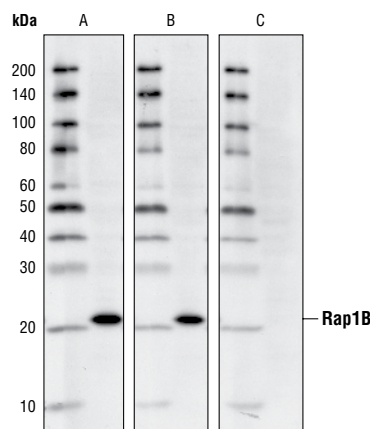
Source/Purification: Monoclonal antibodies are produced by immunizing animals with synthetic peptides (KLH-coupled) corresponding to the carboxy-terminal half of human Rap1B.

Background References:

- (1) Bos, J. et al. (2001) *Nat. Rev. Mol. Cell Biol.* 2, 369-377.
- (2) Caron, E. (2003) *J. Cell Sci.* 116, 435-440.
- (3) Song, C. et al. (2002) *Oncogene* 21, 8105-8113.
- (4) Rong, R. et al. (2003) *J. Biol. Chem.* 278, 52497-52503.
- (5) Taira, K. et al. (2004) *J. Biol. Chem.* 279, 49488-49496.
- (6) Choi, S. and Han, J. (2005) *EMBO J.* 24, 985-996.



Western blot analysis of cell extracts from various cell lines, using Rap1B (36E1) Rabbit mAb.



Western blot analysis of HeLa cell lysates using Rap1B (36E1) Rabbit mAb without pre-incubation (A), or pre-incubated with Rab1A (B) and Rap1B (C) carboxy-terminal peptides respectively. The result showed that only Rap1B peptide specifically blocks the antibody binding in Western blot.

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

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.

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.