Revision 1

Store at -20C

#2326

Rap1B (36E1) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk B Pg	Endogenous	21	Rabbit IgG	#P61224	5908

Product Usage Information

Application	Dilution
Western Blotting	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

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

Source / Purification

Monoclonal antibody is produced by immunizing animals with synthetic peptides corresponding to the carboxy terminal half of human Rap1B.

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, RalGEF and phospholipases (PLCs) (1-4). Rap1 and Rap2 are not fuctionally 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).

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, 52497-503.
5. Taira, K. et al. (2004) *J. Biol. Chem.* 279, 49488-49496.
6. Choi, S. and Han, J. (2005) *EMBO J.* 24, 985-996.

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 **R:** Rat **Mk:** Monkey **B:** Bovine **Pg:** Pig

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Limited Uses

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