

#2399 Store at -20C

Rap1A/Rap1B (26B4) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk B	Endogenous	21	Rabbit IgG	#P62834, #P61224	5906, 5908

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	Rap1 (26B4) Rabbit mAb detects endogenous levels of total Rap1A and Rap1B protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with synthetic peptides corresponding to the carboxy-terminal half of human Rap1A/RAP1B.	
Background	<p>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 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).</p>	
Background References	<ol style="list-style-type: none"> 1. Bos, J. et al. (2001) <i>Nat. Rev. Mol. Cell Biol.</i> 2, 369-377. 2. Caron, E. (2003) <i>J. Cell Sci.</i> 116, 435-440. 3. Song, C. et al. (2002) <i>Oncogene</i> 21, 8105-8113. 4. Rong, R. et al. (2003) <i>J Biol Chem</i> 278, 52497-503. 5. Taira, K. et al. (2004) <i>J. Biol. Chem.</i> 279, 49488-49496. 6. Choi, S. and Han, J. (2005) <i>EMBO J.</i> 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	WB: Western Blotting
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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