Rap1 Polyclonal Antibody

Product Specifications

Catalog Number:	KAP-GP125
Source:	Rabbit
Species Reactivity:	Human, mouse, rat, bovine, canine, chicken, guinea pig, hamster, monkey, pig, rabbit, sheep, *Xenopus* Other species not tested.
Applications:	**WB:** 1:1000 (ECL) Other applications not tested. *The optimal dilution for a specific application must be determined by the investigator*
Predicted M.W.:	~ 25 kDa
Concentration:	See product label
Purification:	Peptide Affinity
Format:	PBS, pH 7.2, 0.09% azide
Storage:	Store at -20˚C *Shipping conditions may differ from the recommended storage temperature*
Immunogen:	Synthetic peptide derived from the N-terminus of human Rap1

Related Products:

NEW!	KAP-GP120	Rap1 Polyclonal Antibody
	LYC-HL100	HeLa Cell Lysate
	LYT-RB100	Rat Brain Tissue Extract
	SAB-300	Goat anti-Rabbit IgG HRP Conjugate
	KAP-GP003	Rab3A Polyclonal Antibody
	KAP-GP005	Rab4 Polyclonal Antibody

Background:

Rap1/Krev1 is a member of the ras family of low molecular weight GTP-binding proteins[1]. Ras-like GTPases are ubiquitously expressed, evolutionarily conserved molecular switches that couple extracellular signals to various cellular responses[2]. Rap1 is primarily found at the cytosolic side of intracellular membranes [2] and has two isoforms: Rap1a and 1b. Both isoforms have a molecular mass of 21 kDa [3] and are isoprenylated at the carboxyl-terminal and phosphorylated by the cAMP-dependent protein kinase A (PKA). Rap1 cycles between a GTP-bound active form and a GDP-bound inactive form that is mediated by GTPase activating protein (GAP) and GDP dissociation stimulator (GDS)[4,5]. Activation occurs by a variety of extracellular stimuli through several conserved guanine nucleotide exchange factors (GEFs) and GTPase activating proteins (GAPs). Rap1 is proposed to regulate Ras-mediated signalling and may also be involved in the regulation of integrin-mediated cell adhesion although the mechanism of regulation is not known[2]. Overexpression of Rap reverses the transformed phenotype induced by ras, possibly by competing with ras for interaction with ras-GAP. Rap has been shown to participate in MAP kinase cascade activated by growth factor and maintaining human T cell anergic state by blocking IL-2 expression[4,5].

References:

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3. Pizon, V.Chardin, P., Lerosey, I., Olofsson, B., and Tavitian, A. (1988) *Oncogene* **3**: 201-204.
4. York, R.D., Yao, H., Dillon, T., Ellig, C.L., Eckert, S.P., McCleskey, E.W., and Stork, P.J. (1998) *Nature* **392**: 622-626.
5. Boussiotis, V.A., Freeman, G.J., Berezovskaya, A., Barber, D.L., and Nadler, L.M. (1997) *Science* **278**: 124-128.

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