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Rapgef2 Antibody - C-terminal region
Rabbit Polyclonal Antibody
Catalog # AI12149

Specification

Rapgef2 Antibody - C-terminal region - Product Information

Application	**WB**
Primary Accession	Q8CHG7
Reactivity	**Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Dog**
Predicted	**Human, Mouse, Rat, Rabbit, Pig, Horse, Bovine, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**164kDa KDa**

Rapgef2 Antibody - C-terminal region - Additional Information

Other Names
Rap guanine nucleotide exchange factor 2, Cyclic nucleotide ras GEF, CNrasGEF, Neural RAP guanine nucleotide exchange protein, nRap GEP, PDZ domain-containing guanine nucleotide exchange factor 1, PDZ-GEF1, RA-GEF-1, Ras/Rap1-associating GEF-1, Rapgef2, Kiaa0313, Pdzgef1

Format
Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage
Add 50 ul of distilled water. Final anti-Rapgef2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions
Rapgef2 Antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Rapgef2 Antibody - C-terminal region - Protein Information

Name Rapgef2

Synonyms Kiaa0313, Pdzgef1

Function
Functions as a guanine nucleotide exchange factor (GEF), which activates Rap and Ras family of small GTPases by exchanging bound GDP for free GTP in a cAMP-dependent manner. Serves as a link between cell surface receptors and Rap/Ras GTPases in intracellular signaling cascades. Acts also as an effector for Rap1 by direct association with Rap1-GTP thereby leading to the amplification of Rap1-mediated signaling. Shows weak activity on HRAS. It is controversial whether RAPGEF2 binds cAMP and cGMP or not. Its binding to ligand-activated beta-1 adrenergic receptor ADRB1 leads to the Ras activation through the G(s)-alpha signaling pathway. Involved in the

cAMP-induced Ras and Erk1/2 signaling pathway that leads to sustained inhibition of long term melanogenesis by reducing dendrite extension and melanin synthesis. Provides also inhibitory signals for cell proliferation of melanoma cells and promotes their apoptosis in a cAMP-independent nanner. Regulates cAMP-induced neuritogenesis by mediating the Rap1/B-Raf/ERK signaling through a pathway that is independent on both PKA and RAPGEF3/RAPGEF4. Involved in neuron migration and in the formation of the major forebrain fiber connections forming the corpus callosum, the anterior commissure and the hippocampal commissure during brain development. Involved in neuronal growth factor (NGF)-induced sustained activation of Rap1 at late endosomes and in brain-derived neurotrophic factor (BDNF)-induced axon outgrowth of hippocampal neurons. Plays a role in the regulation of embryonic blood vessel formation and in the establishment of basal junction integrity and endothelial barrier function. May be involved in the regulation of the vascular endothelial growth factor receptor KDR and cadherin CDH5 expression at allantois endothelial cell-cell junctions.

Cellular Location
Cytoplasm. Cytoplasm, perinuclear region. Cell membrane. Late endosome. Cell junction. Note=Associated with the synaptic plasma membrane. Localized diffusely in the cytoplasm before neuronal growth factor (NGF) stimulation. Recruited to late endosomes after NGF stimulation. Colocalized with the high affinity nerve growth factor receptor NTRK1 at late endosomes. Translocated to the perinuclear region in a RAP1A-dependent manner. Translocated to the cell membrane. Colocalized with CTNNB1 at cell-cell contacts (By similarity).

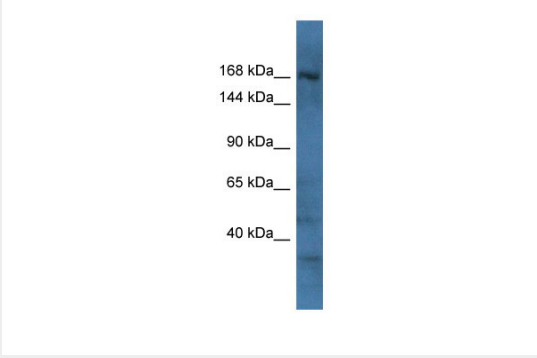
Tissue Location
Expressed in all layers of the cerebral cortex, hippocampus and cerebellum. Expressed in the cortical plate, cingulate cortex and the subventricular zone. Expressed in neurons and endocrine cells (at protein level). Expressed in melanoma cells

Rapgef2 Antibody - C-terminal region - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Rapgef2 Antibody - C-terminal region - Images



Host: Rabbit

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Target Name: Rapgef2
Sample Tissue: Mouse Brain lysates
Antibody Dilution: 1.0µg/ml