

Rapgef2 Antibody - C-terminal region

Rabbit Polyclonal Antibody

Catalog # AI12149

Product Information

Application	WB
Primary Accession	Q8CHG7
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Pig, Dog, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	166415

Additional Information

Gene ID	76089
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.

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. Also acts 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. Also provides inhibitory signals for cell proliferation of melanoma cells and promotes their apoptosis in a cAMP-independent manner. Regulates cAMP-induced neuriteogenesis 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.

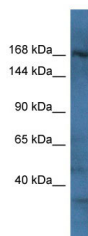
Cellular Location

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

Images



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.