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SRGAP2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5574

Product Information

Application	WB
Primary Accession	O75044
Other Accession	Q91Z67, D4A208
Reactivity	Human, Mouse
Predicted	Dog, Chicken
Host	Rabbit
Clonality	Polyclonal
Calculated MW	120871
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	23380
Antigen Region	1040-1071
Other Names	SLIT-ROBO Rho GTPase-activating protein 2, srGAP2, Formin-binding protein 2, Rho GTPase-activating protein 34, SRGAP2, ARHGAP34, FNBP2, KIAA0456, SRGAP2A
Dilution	WB~~1:2000
Target/Specificity	This SRGAP2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1040-1071amino acids from the C-terminal region of human SRGAP2.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SRGAP2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SRGAP2 {ECO:0000303|PubMed:11672528, ECO:0000312|HGNC:HGNC:19751}

Function	Postsynaptic RAC1 GTPase activating protein (GAP) that plays a key role in neuronal morphogenesis and migration mainly during development of the cerebral cortex (PubMed:20810653, PubMed:27373832, PubMed:28333212). Regulates excitatory and inhibitory synapse maturation and density in cortical pyramidal neurons (PubMed:22559944, PubMed:27373832). SRGAP2/SRGAP2A limits excitatory and inhibitory synapse density through its RAC1-specific GTPase activating activity, while it promotes maturation of both excitatory and inhibitory synapses through its ability to bind to the postsynaptic scaffolding protein HOMER1 at excitatory synapses, and the postsynaptic protein GPHN at inhibitory synapses (By similarity). Mechanistically, acts by binding and deforming membranes, thereby regulating actin dynamics to regulate cell migration and differentiation (PubMed:27373832). Promotes cell repulsion and contact inhibition of locomotion: localizes to protrusions with curved edges and controls the duration of RAC1 activity in contact protrusions (By similarity). In non-neuronal cells, may also play a role in cell migration by regulating the formation of lamellipodia and filopodia (PubMed:20810653, PubMed:21148482).
Cellular Location	Cell membrane. Cell projection, dendritic spine. Postsynaptic density {ECO:0000250|UniProtKB:Q91Z67}. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q91Z67}. Cell projection, lamellipodium. Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:Q91Z67}. Nucleus {ECO:0000250|UniProtKB:D4A208} Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q91Z67}. Note=Recruited to actin-rich phagosomes during phagocytosis (By similarity). Translocates from nucleus to cytoplasm during development (By similarity) {ECO:0000250|UniProtKB:D4A208, ECO:0000250|UniProtKB:Q91Z67}

Background

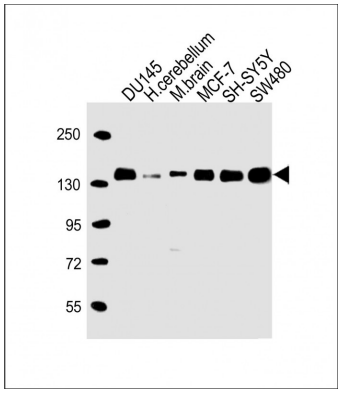
RAC1 GTPase activating protein (GAP) that binds and deforms membranes, and regulates actin dynamics to regulate cell migration and differentiation. Plays an important role in different aspects of neuronal morphogenesis and migration mainly during development of the cerebral cortex. This includes the biogenesis of neurites, where it is required for both axons and dendrites outgrowth, and the maturation of the dendritic spines. Also stimulates the branching of the leading process and negatively regulates neuron radial migration in the cerebral cortex. Its interaction and inhibition by SRGAP2C reduces the rate of spine maturation, alters dendritic spine morphology and density and indirectly increases neuronal migration. It may have implications for cognition, learning and memory. In non-neuronal cells, it may also play a role in cell migration by regulating the formation of lamellipodia and filopodia.

References

Seki N.,et al.DNA Res. 4:345-349(1997).
Wong K.,et al.Cell 107:209-221(2001).
Olsen J.V.,et al.Cell 127:635-648(2006).
Dephoure N.,et al.Proc. Natl. Acad. Sci. U.S.A. 105:10762-10767(2008).
Gauci S.,et al.Anal. Chem. 81:4493-4501(2009).

Images

All lanes : Anti-SRGAP2 Antibody (C-term) at 1:2000 dilution Lane 1: DU145 whole cell lysate Lane 2: human cerebellum lysate Lane 3: mouse brain lysate Lane 4: MCF-7 whole cell lysate Lane 5: SH-SY5Y whole cell lysate



Lane 6: SW480 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 121 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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