10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RAP1GDS1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11945c

Product Information

Application	IHC-P, WB, E
Primary Accession	P52306
Other Accession	NP_001093900.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31690
Calculated MW	66317
Antigen Region	217-244

Additional Information

Gene ID	5910
Other Names	Rap1 GTPase-GDP dissociation stimulator 1, Exchange factor smgGDS, SMG GDS protein, SMG P21 stimulatory GDP/GTP exchange protein, RAP1GDS1
Target/Specificity	This RAP1GDS1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 217-244 amino acids from the Central region of human RAP1GDS1.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
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	RAP1GDS1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RAP1GDS1 {ECO:0000303|Ref.3}
Synonyms	SMGGDS {ECO:0000303|Ref.3}
Function	Acts as a GEF (guanine nucleotide exchange factor) for the Rho family of

small GTP-binding proteins (G proteins) that stimulates the dissociation of GDP to enable subsequent binding of GTP (PubMed:11948427, PubMed:1549351, PubMed:20709748, PubMed:28630045, PubMed:30190425). Additionally, appears to chaperone the processing and/or trafficking of small GTPases containing a C-terminal polybasic region independently of GEF activity (PubMed:20709748, PubMed:21242305). Targets include RAP1A/RAP1B, RHOA, RHOB, RHOC, RAC1 and KRAS (PubMed:11948427, PubMed:1549351, PubMed:20709748, PubMed:24415755). Regulates mitochondrial dynamics by controlling RHOT function to promote mitochondrial fission during high calcium conditions (PubMed:27716788). Able to promote the Ca(2+) release from the endoplasmic reticulum via both inositol trisphosphate (Ins3P) and ryanodine sensitive receptors leading to a enhanced mitochondrial Ca(2+) uptake (PubMed:24349085).

Cellular Location

Cytoplasm, cytosol. Endoplasmic reticulum. Mitochondrion. Nucleus
Note=Nuclear import is dependent on complexing with a GTPase containing a C-terminal polybasic region.

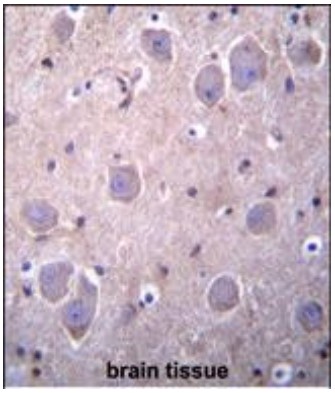
Background

The smg GDP dissociation stimulator (smgGDS) protein is a stimulatory GDP/GTP exchange protein with GTPase activity (Riess et al., 1993 [PubMed 8262526]).

References

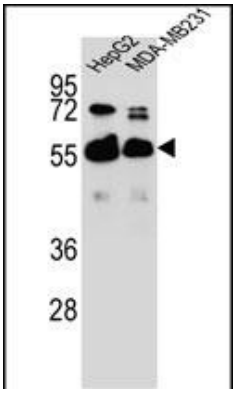
Schonherr, C., et al. Oncogene 29(19):2817-2830(2010)
Branham, M.T., et al. J. Biol. Chem. 284(37):24825-24839(2009)
Zemunik, T., et al. Croat. Med. J. 50(1):23-33(2009)
Tew, G.W., et al. J. Biol. Chem. 283(2):963-976(2008)
Tiwari, S., et al. Blood 103(7):2661-2667(2004)

Images



RAP1GDS1 Antibody (Center) (Cat. #AP11945c)immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of RAP1GDS1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

RAP1GDS1 Antibody (Center) (Cat. #AP11945c) western blot analysis in HepG2,MDA-MB231 cell line lysates (35ug/lane).This demonstrates the RAP1GDS1 antibody detected the RAP1GDS1 protein (arrow).



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