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# RAP1GDS1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11945c

## Product Information

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

## Additional Information

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| **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

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| **Name** | RAP1GDS1 {ECO:0000303\|Ref.3} |
| **Synonyms** | SMGGDS {ECO:0000303\|Ref.3} |

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| **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. |

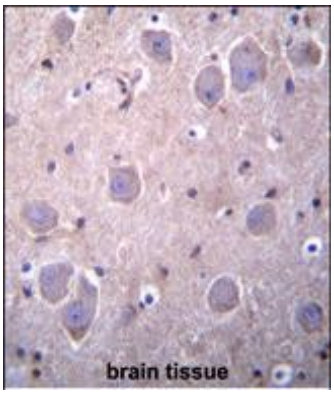
## Background

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

## References

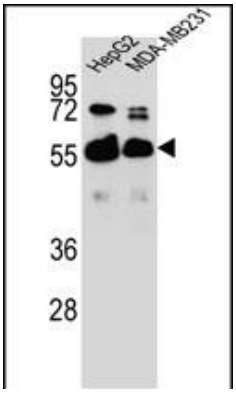

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## Images




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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