

# ARHGAP32 Rabbit pAb

Catalog # AP98483

## Product Information

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| <b>Application</b>                      | IHC-P, IHC-F, IF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Primary Accession</b>                | <a href="#">A7KAX9</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Other Accession</b>                  | <a href="#">A7KAX9</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Reactivity</b>                       | Rat, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Predicted</b>                        | Pig, Human, Dog, Horse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Host</b>                             | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Clonality</b>                        | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Calculated MW</b>                    | 230529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Physical State</b>                   | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Immunogen</b>                        | KLH conjugated synthetic peptide derived from human ARHGAP32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Epitope Specificity</b>              | 801-920/2078                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Isotype</b>                          | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Purity</b>                           | affinity purified by Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Buffer</b>                           | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SIMILARITY</b>                       | Belongs to the PX domain-containing GAP family. Contains 1 PX (phox homology) domain. Contains 1 Rho-GAP domain. Contains 1 SH3 domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>SUBUNIT</b>                          | Interacts with NTRK1 (via cytoplasmic domain); the interaction is independent of the phosphorylation state of NTRK1. Interacts with SHC3 (via SH2 domain). Interacts with RASA1 (via SH3 domain); the interaction is necessary for the Ras activation and cell transforming activities of ARHGAP32 (By similarity). Interacts with GAB1 and GAB2. Interacts with CRK and CRKL. Found in a complex with CRKL and BCAR1; upon EGF stimulation BCAR1 may be replaced by EGFR. Interacts with NCK1 (via SH3 domain); NCK1 recruits phosphorylated BCAR1 to the complex. Isoform 2 interacts with FYN; the interaction appears to be dependent on tyrosine phosphorylation of ARHGAP32. Interacts with EGFR; the interaction requires EGF stimulation and is increased by SHC3. Interacts with CDC42; the interaction requires constitutively active CDC42. Interacts with CTNNB1, DLG4, CDH2 and GRIN2B (By similarity). |
| <b>Post-translational modifications</b> | Isoform 2 is phosphorylated on multiple tyrosine residues by FYN. Phosphorylated tyrosine residues undergo dephosphorylation after stimulation of NMDA receptors (By similarity). Phosphorylated in vitro by CaMK2 in the presence of calmodulin and calcium; which inhibits GAP activity (By similarity).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Important Note</b>                   | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Background Descriptions</b>          | ARHGAP32 is a neuron-associated GTPase-activating protein that may regulate dendritic spine morphology and strength by modulating Rho GTPase.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Additional Information

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| <b>Gene ID</b>     | 9743                                                           |
| <b>Other Names</b> | GC-GAP; GRIT; PX-RICS; RICS; p200RhoGAP; p250GAP; RHG32_HUMAN; |

ARHGAP32; Brain-specific Rho GTPase-activating protein; GAB-associated Cdc42/Rac GTPase-activating protein; GTPase regulator interacting with TrkA; Rho-type GTPase-activating protein 32; Rho/Cdc42/Rac GTPase-activating protein RICS; RhoGAP involved in the beta-catenin-N-cadherin and NMDA receptor signaling; KIAA0712; Rho GTPase activating protein 32

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| <b>Dilution</b> | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=2ug/Test                                                                                                                                  |
| <b>Storage</b>  | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| <b>Name</b>              | ARHGAP32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Synonyms</b>          | GRIT, KIAA0712, RICS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Function</b>          | GTPase-activating protein (GAP) promoting GTP hydrolysis on RHOA, CDC42 and RAC1 small GTPases. May be involved in the differentiation of neuronal cells during the formation of neurite extensions. Involved in NMDA receptor activity-dependent actin reorganization in dendritic spines. May mediate cross-talks between Ras- and Rho-regulated signaling pathways in cell growth regulation. Isoform 2 has higher GAP activity (By similarity).                                                                                                                                                                                                                                                                                                                           |
| <b>Cellular Location</b> | Postsynaptic density {ECO:0000250 UniProtKB:Q811P8}. Cell projection, dendritic spine {ECO:0000250 UniProtKB:Q811P8}. Cytoplasm, cell cortex. Endosome membrane. Golgi apparatus membrane. Endoplasmic reticulum membrane {ECO:0000250 UniProtKB:Q811P8}. Membrane Note=Association to membrane via PX domain (PubMed:17663722) Associated with cortical actin in undifferentiated neuroblastoma cells, but localized to dendritic spine and postsynaptic density after differentiation (By similarity). Colocalizes with EGFR at the cell membrane upon EGF treatment (PubMed:12446789). Colocalizes with GAB2 at the cell membrane (PubMed:12819203). {ECO:0000250 UniProtKB:Q811P8, ECO:0000269 PubMed:12446789, ECO:0000269 PubMed:12819203, ECO:0000269 PubMed:17663722} |
| <b>Tissue Location</b>   | Isoform 1 and isoform 2 are highly expressed in brain and testis. Isoform 1 is also expressed in other tissues such as lung, liver and spleen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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