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RGS7 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12015b

Product Information

Application	WB, IHC-P, E
Primary Accession	P49802
Other Accession	NP_002915.3
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31661
Calculated MW	57668
Antigen Region	440-469

Additional Information

Gene ID	6000
Other Names	Regulator of G-protein signaling 7, RGS7, RGS7
Target/Specificity	This RGS7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 440-469 amino acids from the C-terminal region of human RGS7.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	RGS7 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RGS7
Function	GTPase activator component of the RGS7-GNB5 complex that regulates G protein-coupled receptor signaling cascades (PubMed:10521509, PubMed:10862767, PubMed:31189666). The RGS7-GNB5 complex acts as an inhibitor signal transduction by promoting the GTPase activity of G protein

alpha subunits, such as GNAO1, thereby driving them into their inactive GDP-bound form (PubMed:10521509, PubMed:10862767). May play a role in synaptic vesicle exocytosis (Probable) (PubMed:12659861). Glycine-dependent regulation of the RGS7- GNB5 complex by GPR158 affects mood and cognition via its ability to regulate neuronal excitability in L2/L3 pyramidal neurons of the prefrontal cortex (By similarity). Modulates the activity of potassium channels that are activated by GNAO1 in response to muscarinic acetylcholine receptor M2/CHRM2 signaling (PubMed:15897264).

Cellular Location

Cytoplasm, cytosol. Cytoplasm Cell membrane. Membrane; Peripheral membrane protein; Cytoplasmic side. Note=Interaction with PKD1 promotes location at the cell membrane (PubMed:10339594). Interaction with RGS7BP promotes location at the cell membrane (PubMed:15897264)

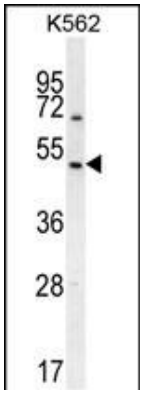
Background

RGS7 inhibits signal transduction by increasing the GTPase activity of G protein alpha subunits thereby driving them into their inactive GDP-bound form. Activity on G(o)-alpha is specifically enhanced by the RGS6/GNG5 dimer. May play a role in synaptic vesicle exocytosis. May play important role in the rapid regulation of neuronal excitability and the cellular responses to short-lived stimulations (By similarity).

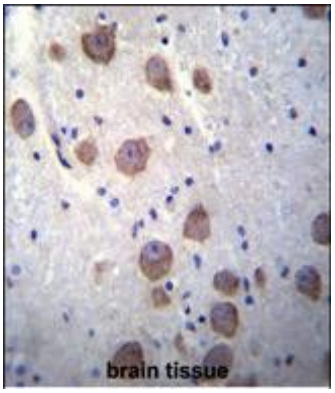
References

Bailey, S.D., et al. Diabetes Care (2010) In press :
Wang, J., et al. Carcinogenesis (2010) In press :
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)
McCauley, J.L., et al. Genes Immun. 10(7):624-630(2009)

Images



RGS7 Antibody (C-term) (Cat. #AP12015b) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the RGS7 antibody detected the RGS7 protein (arrow).



RGS7 Antibody (C-term) (Cat. #AP12015b)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 RGS7 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

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