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GNAS Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21831a

Product Information

Application	WB, E
Primary Accession	P63092
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB54063
Calculated MW	45665

Additional Information

Gene ID	2778
Other Names	Guanine nucleotide-binding protein G(s) subunit alpha isoforms short, Adenylate cyclase-stimulating G alpha protein, GNAS, GNAS1, GSP
Target/Specificity	This GNAS antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 51-83 amino acids from human GNAS.
Dilution	WB~~1:8000 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	GNAS Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GNAS
Synonyms	GNAS1, GSP
Function	Guanine nucleotide-binding proteins (G proteins) function as transducers in numerous signaling pathways controlled by G protein- coupled receptors (GPCRs) (PubMed:12391161, PubMed:17110384, PubMed:21488135, PubMed:26206488, PubMed:8702665, PubMed:10200251). The alpha chain

contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state (PubMed:12391161, PubMed:17110384, PubMed:10200251). Signaling by an activated GPCR promotes GDP release and GTP binding (PubMed:12391161, PubMed:17110384, PubMed:10200251). The alpha subunit has a low GTPase activity that converts bound GTP to GDP, thereby terminating the signal (PubMed:12391161, PubMed:17110384, PubMed:10200251). Both GDP release and GTP hydrolysis are modulated by numerous regulatory proteins (PubMed:12391161, PubMed:17110384, PubMed:10200251). Signaling involves the activation of adenylyl cyclases, resulting in increased levels of the signaling molecule cAMP (PubMed:17110384, PubMed:26206488, PubMed:26206488, PubMed:8702665). Functions downstream of beta-adrenergic receptors (PubMed:21488135). Stimulates the Ras signaling pathway via RAPGEF2 (PubMed:12391161).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P63095}; Lipid-anchor {ECO:0000250|UniProtKB:P63094}. Cytoplasm {ECO:0000250|UniProtKB:P63095}. Note=Activated GNAS2 translocates reversibly from the plasma membrane to cytoplasm {ECO:0000250|UniProtKB:P63095}

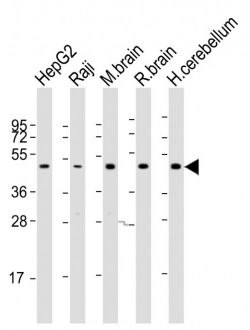
Background

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems. The G(s) protein is involved in hormonal regulation of adenylate cyclase: it activates the cyclase in response to beta-adrenergic stimuli. Stimulates the Ras signaling pathway via RAPGEF2.

References

Mattera R.,et al.FEBS Lett. 206:36-42(1986).
Harris B.A.,et al.Nucleic Acids Res. 16:3585-3585(1988).
Kozasa T.,et al.Proc. Natl. Acad. Sci. U.S.A. 85:2081-2085(1988).
Puhl H.L. III,et al.Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
Kalnine N.,et al.Submitted (AUG-2003) to the EMBL/GenBank/DDBJ databases.

Images



All lanes : Anti-GNAS Antibody (N-Term) at 1:8000 dilution Lane 1: HepG2 whole cell lysate Lane 2: Raji whole cell lysate Lane 3: mouse brain lysate Lane 4: rat brain lysate Lane 5: human cerebellum lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 46 kDa Blocking/Dilution buffer: 5% NFDM/TBST.