

GNAL Rabbit pAb

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Catalog # AP54704

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P38405
Predicted	Rat, Pig, Human, Mouse, Rabbit, Chicken, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44308
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GNAL
Epitope Specificity	21-130/381
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors (1). Each of a very broad range of receptors specifically detects an extracellular stimulus (a photon, pheromone, odorant, hormone or neurotransmitter) while the effectors (e.g., adenylyl cyclase), which act to generate one or more intracellular messengers, are less numerous. In mammals, G protein alpha, beta and gamma polypeptides are encoded by at least 16, 4 and 7 genes, respectively (2-5). Most interest in G proteins has been focused on their alpha subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. More recent evidence, however, has established an important regulatory role for the beta gamma subunits (6-8). The Gs subfamily of G alpha subunits includes two closely related proteins, Ga s and Ga olf, which respectively stimulate adenylyl cyclase and mediate response to olfactory stimuli (9).

Additional Information

Gene ID	2774
Other Names	Guanine nucleotide-binding protein G(olf) subunit alpha, 3.6.5.-, Adenylyl cyclase-stimulating G alpha protein, olfactory type, GNAL {ECO:0000303 PubMed:23222958, ECO:0000312 HGNC:HGNC:4388}
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	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

Name	GNAL {ECO:0000303 PubMed:23222958, ECO:0000312 HGNC:HGNC:4388}
Function	Guanine nucleotide-binding protein (G protein) involved as transducer in olfactory signal transduction controlled by G protein- coupled receptors (GPCRs) (By similarity). Contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state (By similarity). Signaling by an activated GPCR promotes GDP release and GTP binding (By similarity). The alpha subunit has a low GTPase activity that converts bound GTP to GDP, thereby terminating the signal (By similarity). Both GDP release and GTP hydrolysis are modulated by numerous regulatory proteins (By similarity). GNAL/G(olf) alpha specifically mediates olfactory signal transduction within the olfactory neuroepithelium and the basal ganglia following GPCRs activation (By similarity). Acts by promoting the specific activation of adenylyl cyclase ADCY3, resulting in increased levels of the signaling molecule cAMP (By similarity).
Cellular Location	Cell membrane {ECO:0000250 UniProtKB:Q8CGK7}; Peripheral membrane protein {ECO:0000250 UniProtKB:Q8CGK7}; Cytoplasmic side {ECO:0000250 UniProtKB:Q8CGK7}. Note=Associated to the plasma membrane via lipid-anchor. {ECO:0000250 UniProtKB:P04896}
Tissue Location	Detected in olfactory neuroepithelium, brain, testis, and to a lower extent in retina, lung alveoli, spleen (PubMed:8243272). Trace amounts where seen in kidney, adrenal gland and liver (PubMed:8243272). Found to be expressed in all the insulinomas examined (PubMed:8243272).

Background

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