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Anti-GNAI1 / Gi Antibody (N-Terminus)

Rabbit Anti Human Polyclonal Antibody
Catalog # ALS17464

Product Information

Application	WB, IHC-P
Primary Accession	P63096
Predicted	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40361
Concentration (mg/ml)	0.5 mg/ml

Additional Information

Gene ID	2770
Alias Symbol	GNAI1
Other Names	GNAI1, Gi1 protein alpha subunit, Gi
Target/Specificity	Endogenous levels of mouse and rat G alpha(i). It is predicted to react with human G alpha(i) according to sequence homology. Positive Control: Mouse and Rat brain.
Reconstitution & Storage	Lyophilized from PBS, pH 7.4, 0.02% sodium azide. Store lyophilized at -20°C. The reconstituted product can be stored for short term at 4 °C or long term at -20 °C or below. Avoid freeze/thaw cycles.
Precautions	Anti-GNAI1 / Gi Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GNAI1
Function	Guanine nucleotide-binding proteins (G proteins) function as transducers downstream of G protein-coupled receptors (GPCRs) in numerous signaling cascades (PubMed:18434541, PubMed:33762731, PubMed:34239069, PubMed:35610220, PubMed:37935376, PubMed:37935377, PubMed:37963465, PubMed:38552625, PubMed:8774883, PubMed:38918398, PubMed:40080544). The alpha chain contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state (PubMed:18434541, PubMed:8774883). Signaling by an activated GPCR promotes GDP release and GTP binding (PubMed:18434541, PubMed:8774883). The alpha subunit has a low GTPase activity that converts bound GTP to GDP, thereby terminating the signal (PubMed:18434541,

PubMed:8774883). Both GDP release and GTP hydrolysis are modulated by numerous regulatory proteins (PubMed:18434541, PubMed:8774883). Signaling is mediated via effector proteins, such as adenylate cyclase: inhibits adenylate cyclase activity of ADCY1, ADCY5 and ADCY6, leading to decreased intracellular cAMP levels (PubMed:8119955). The inactive GDP-bound form prevents the association of RGS14 with centrosomes and is required for the translocation of RGS14 from the cytoplasm to the plasma membrane. Required for normal cytokinesis during mitosis (PubMed:17635935). Required for cortical dynein-dynactin complex recruitment during metaphase (PubMed:22327364).

Cellular Location

Cell membrane; Peripheral membrane protein; Cytoplasmic side. Nucleus {ECO:0000250|UniProtKB:P10824} Cytoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cell cortex. Note=Associated to the plasma membrane via lipid-anchor (PubMed:20213681). Localizes in the centrosomes of interphase and mitotic cells, but not in centrosomes during cytokinesis. Detected at the cleavage furrow or the midbody (PubMed:17635935). Localized at the plasma membrane throughout mitosis (PubMed:17635935).

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