10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-GNAI2 Rabbit Monoclonal Antibody

Catalog # ABO16401

Product Information

Application	WB, IHC
Primary Accession	P04899
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-GNAI2 Rabbit Monoclonal Antibody . Tested in WB, IHC applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	2771
Other Names	Guanine nucleotide-binding protein G(i) subunit alpha-2, Adenylate cyclase-inhibiting G alpha protein, GNAI2, GNAI2B
Calculated MW	40451
Application Details	WB 1:500-1:2000 IHC 1:50-1:200
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 29G37
Immunogen	A synthesized peptide derived from human GNAI2
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	GNAI2
Synonyms	GNAI2B
Function	Guanine nucleotide-binding proteins (G proteins) function as transducers downstream of G protein-coupled receptors (GPCRs) in numerous signaling

cascades (PubMed:38505600, PubMed:29925945, PubMed:35637350, PubMed:35365641). The alpha chain contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state (PubMed:12359238). Signaling by an activated GPCR promotes GDP release and GTP binding (PubMed:29925945). Examples of interacting GPCRs include the adenosine A1 receptor/ADORA1, CNR1, and FPR2 (PubMed:29925945, PubMed:35637350, PubMed:35365641). The alpha subunit has a low GTPase activity that converts bound GTP to GDP, thereby terminating the signal. Both GDP release and GTP hydrolysis are modulated by numerous regulatory proteins (PubMed:12359238). 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. Plays an important role in the activation of the transcription factor NFAT in endothelial cells to promote angiogenesis (PubMed:38505600). The G(i) proteins are involved in hormonal regulation of adenylate cyclase: they inhibit the cyclase in response to beta-adrenergic stimuli. Plays an essential role for neutrophil recruitment in the context of acute inflammation suggesting a linked function of both GNAI2 in neutrophils and endothelial cells for polymorphonuclear neutrophils transmigration (By similarity).

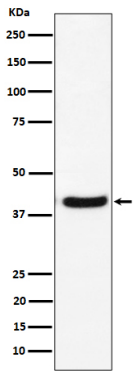
Cellular Location

Cytoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cell membrane. Membrane; Lipid-anchor. Note=Localizes in the centrosomes of interphase and mitotic cells. Detected at the cleavage furrow and/or the midbody

Tissue Location

Highly expressed in endothelial cells.

Images



Western blot analysis of GNAI2 expression in U-87 MG cell lysate.

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