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GNAI2 Rabbit mAb

Catalog # AP76515

Product Information

Application	WB, IHC-P, FC
Primary Accession	P04899
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	40451

Additional Information

Gene ID	2771
Other Names	GNAI2
Dilution	WB~~1:1000 IHC-P~~N/A FC~~1:10~50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid 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.

Background

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems.

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