

GNAI1 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51999**Specification**

GNAI1 Antibody - Product Information

Application	WB, E
Primary Accession	P63096
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41 KDa

GNAI1 Antibody - Additional Information**Gene ID** 2770**Other Names**

Guanine nucleotide-binding protein G(i) subunit alpha-1, Adenylate cyclase-inhibiting G alpha protein, GNAI1

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

GNAI1 Antibody - 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. The alpha chain contains the guanine nucleotide binding site and alternates between an active, GTP-bound state and an inactive, GDP-bound state. Signaling by an activated GPCR promotes GDP release and GTP binding. 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: [8774883](http://www.uniprot.org/citations/8774883), PubMed: [18434541](http://www.uniprot.org/citations/18434541)). Signaling is mediated via effector proteins, such as adenylate cyclase. Inhibits adenylate cyclase activity, leading to decreased intracellular cAMP levels (By similarity). 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](http://www.uniprot.org/citations/17635935)). Required for cortical dynein-dynactin complex recruitment during metaphase (PubMed: [22327364](http://www.uniprot.org/citations/22327364)).

Cellular Location

Nucleus {ECO:0000250|UniProtKB:P10824}. Cytoplasm. Cell membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:P10824}; Cytoplasmic side {ECO:0000250|UniProtKB:P10824}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cell cortex. Membrane {ECO:0000250|UniProtKB:P10824}; Lipid-anchor Note=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. Colocalizes with RIC8A and RGS14 at the plasma membrane. {ECO:0000250|UniProtKB:P10824, ECO:0000269|PubMed:17635935}

GNAI1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GNAI1 Antibody - Images**GNAI1 Antibody - Background**

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems. The G(i) proteins are involved in hormonal regulation of adenylate cyclase: they inhibit the cyclase in response to beta-adrenergic stimuli. 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. May play a role in cell division.

GNAI1 Antibody - References

Puhl H.L. III, et al. Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
Yu W., et al. Submitted (MAR-1998) to the EMBL/GenBank/DDBJ databases.
Wiemann S., et al. Genome Res. 11:422-435(2001).
Kalnina N., et al. Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
Ota T., et al. Nat. Genet. 36:40-45(2004).