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GNAI3 Blocking Peptide

Synthetic peptide
Catalog # BP21247a

Specification

GNAI3 Blocking Peptide - Product Information

Primary Accession P08754

GNAI3 Blocking Peptide - Additional Information

Gene ID 2773

Other Names
Guanine nucleotide-binding protein G(k) subunit alpha, G(i) alpha-3, GNAI3

Target/Specificity
The synthetic peptide sequence is selected from aa 309-323 of HUMAN GNAI3

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GNAI3 Blocking Peptide - Protein Information

Name GNAI3

Function
Heterotrimeric 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 (By similarity). Both GDP release and GTP hydrolysis are modulated by numerous regulatory proteins (PubMed:18434541, PubMed:19478087, PubMed:8774883). Signaling is mediated via effector proteins, such as adenylate cyclase. Inhibits adenylate cyclase activity, leading to decreased intracellular cAMP levels (PubMed:19478087). Stimulates the activity of receptor-regulated K(+) channels (PubMed:2535845). The active GTP-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 (PubMed:17635935). The active GTP-bound form activates the calcium permeant TRPC5 ion channels (PubMed:37137991).

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

GNAI3 Blocking Peptide - Protocols

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

- Blocking Peptides

GNAI3 Blocking Peptide - Images

GNAI3 Blocking Peptide - Background

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems. G(k) is the stimulatory G protein of receptor- regulated K(+) channels. The active GTP-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.

GNAI3 Blocking Peptide - References

Didsbury J.R.,et al.FEBS Lett. 219:259-263(1987).
Beals C.R.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:7886-7890(1987).
Itoh H.,et al.J. Biol. Chem. 263:6656-6664(1988).
Codina J.,et al.J. Biol. Chem. 263:6746-6750(1988).
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