

**GTP-Binding Protein Fragment, G alpha**  
**Synthetic Peptide**  
**Catalog # SP3558a****Specification**

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**GTP-Binding Protein Fragment, G alpha - Product Information**

Primary Accession [P27045](#)  
Other Accession [P38407](#), [P11488](#), [P04695](#), [Q28300](#), [P20612](#)  
Sequence **NH2-CGAGESGKSTIVKQMK-COOH**

**GTP-Binding Protein Fragment, G alpha - Additional Information****Other Names**

Guanine nucleotide-binding protein G(k) subunit alpha, G(i) alpha-3, gnaï3

**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.

**GTP-Binding Protein Fragment, G alpha - Protein Information**

**Name** gnaï3

**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 (By similarity). Signaling is mediated via effector proteins, such as adenylate cyclase. Inhibits adenylate cyclase activity, leading to decreased intracellular cAMP levels (By similarity). Stimulates the activity of receptor-regulated K(+) channels (By similarity). 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 (By similarity). The active GTP-bound form activates the calcium permeant TRPC5 ion channels (By similarity).

**Cellular Location**

Cytoplasm {ECO:0000250|UniProtKB:P08754}. Cell membrane {ECO:0000250|UniProtKB:P08754}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome {ECO:0000250|UniProtKB:P08754}. Membrane {ECO:0000250|UniProtKB:P08754}; Lipid-anchor

{ECO:0000250|UniProtKB:P08754}. Note=Localizes in the centrosomes of interphase and mitotic cells. Detected at the cleavage furrow and/or the midbody. {ECO:0000250|UniProtKB:P08754}

### **GTP-Binding Protein Fragment, G alpha - Images**