

Phospho-GNA12(S67) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3315a**Specification**

Phospho-GNA12(S67) Antibody Blocking peptide - Product InformationPrimary Accession [Q03113](#)**Phospho-GNA12(S67) Antibody Blocking peptide - Additional Information****Gene ID** 2768**Other Names**

Guanine nucleotide-binding protein subunit alpha-12, G alpha-12, G-protein subunit alpha-12, GNA12

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP3315a](/product/products/AP3315a) was selected from the region of human Phospho-GNA12-S67. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

Phospho-GNA12(S67) Antibody Blocking peptide - Protein Information**Name** GNA12**Function**

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems (PubMed: [22609986](http://www.uniprot.org/citations/22609986), PubMed: [15525651](http://www.uniprot.org/citations/15525651), PubMed: [15240885](http://www.uniprot.org/citations/15240885), PubMed: [17565996](http://www.uniprot.org/citations/17565996), PubMed: [12515866](http://www.uniprot.org/citations/12515866), PubMed: [16787920](http://www.uniprot.org/citations/16787920), PubMed: [16705036](http://www.uniprot.org/citations/16705036), PubMed: [23762476](http://www.uniprot.org/citations/23762476), PubMed: [27084452](http://www.uniprot.org/citations/27084452)). Activates

effector molecule RhoA by binding and activating RhoGEFs (ARHGEF12/LARG) (PubMed:15240885, PubMed:12515866, PubMed:16202387). GNA12-dependent Rho signaling subsequently regulates transcription factor AP-1 (activating protein-1) (By similarity). GNA12-dependent Rho signaling also regulates protein phosphatase 2A activation causing dephosphorylation of its target proteins (PubMed:15525651, PubMed:17565996). Promotes tumor cell invasion and metastasis by activating RhoA/ROCK signaling pathway and up-regulating pro-inflammatory cytokine production (PubMed:23762476, PubMed:16787920, PubMed:16705036, PubMed:27084452). Inhibits CDH1-mediated cell adhesion in process independent from Rho activation (PubMed:11976333, PubMed:16787920). Together with NAPA promotes CDH5 localization to plasma membrane (PubMed:15980433). May play a role in the control of cell migration through the TOR signaling cascade (PubMed:22609986).

Cellular Location

Cell membrane; Lipid-anchor {ECO:0000250|UniProtKB:Q63210}. Lateral cell membrane; Lipid-anchor {ECO:0000250|UniProtKB:Q63210}. Cytoplasm. Note=CDH1 enhances cell membrane localization.

Phospho-GNA12(S67) Antibody Blocking peptide - Protocols

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

- [Blocking Peptides](#)

Phospho-GNA12(S67) Antibody Blocking peptide - Images

Phospho-GNA12(S67) Antibody Blocking peptide - Background

Guanine nucleotide-binding proteins (G proteins) are modulators or transducers in various transmembrane signaling systems. G proteins are composed of 3 subunits; alpha, beta and gamma. The alpha chain contains the guanine nucleotide binding site.

Phospho-GNA12(S67) Antibody Blocking peptide - References

Krakstad, B.F., et al., Proc. Natl. Acad. Sci. U.S.A. 101(28):10314-10319 (2004). Hillier, L.W., et al., Nature 424(6945):157-164 (2003). Scherer, S.W., et al., Science 300(5620):767-772 (2003). Suzuki, N., et al., Proc. Natl. Acad. Sci. U.S.A. 100(2):733-738 (2003). Yamaguchi, Y., et al., J. Biol. Chem. 278(17):14936-14939 (2003).