

GNAT3 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP10484c**Specification**

GNAT3 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession
Other Accession[A8MTJ3](#)
[NP_001095856.1](#)**GNAT3 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 346562**Other Names**

Guanine nucleotide-binding protein G(t) subunit alpha-3, Gustducin alpha-3 chain, GNAT3

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.

GNAT3 Antibody (Center) Blocking Peptide - Protein Information**Name** GNAT3**Function**

Guanine nucleotide-binding protein (G protein) alpha subunit playing a prominent role in bitter and sweet taste transduction as well as in umami (monosodium glutamate, monopotassium glutamate, and inosine monophosphate) taste transduction. Transduction by this alpha subunit involves coupling of specific cell-surface receptors with a cGMP- phosphodiesterase; Activation of phosphodiesterase lowers intracellular levels of cAMP and cGMP which may open a cyclic nucleotide-suppressible cation channel leading to influx of calcium, ultimately leading to release of neurotransmitter. Indeed, denatonium and strychnine induce transient reduction in cAMP and cGMP in taste tissue, whereas this decrease is inhibited by GNAT3 antibody. Gustducin heterotrimer transduces response to bitter and sweet compounds via regulation of phosphodiesterase for alpha subunit, as well as via activation of phospholipase C for beta and gamma subunits, with ultimate increase inositol trisphosphate and increase of intracellular Calcium. GNAT3 can functionally couple to taste receptors to transmit intracellular signal: receptor heterodimer TAS1R2/TAS1R3 senses sweetness and TAS1R1/TAS1R3 transduces umami taste, whereas the T2R family GPCRs act as bitter sensors. Functions also as luminal sugar sensors in the gut to control the expression of the Na⁺-glucose transporter SGLT1 in response to dietary sugar, as well as the secretion of Glucagon-like peptide-1, GLP-1 and glucose-dependent insulinotropic polypeptide, GIP. Thus, may modulate the gut capacity to absorb sugars, with

implications in malabsorption syndromes and diet-related disorders including diabetes and obesity.

Cellular Location

Cytoplasm. Note=Dual distribution pattern; plasmalemmal pattern with apical region localization and cytosolic pattern with localization throughout the cytoplasm

Tissue Location

Expressed in taste buds (sensory organs of clustered epithelial cells) of the circumvallate and foliate papillae of the tongue at protein level. Expressed in enteroendocrine L cells of the gut. Detected also in spermatozoa.

GNAT3 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

GNAT3 Antibody (Center) Blocking Peptide - Images**GNAT3 Antibody (Center) Blocking Peptide - Background**

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GNAT3 Antibody (Center) Blocking Peptide - References

Fushan, A.A., et al. Chem. Senses 35(7):579-592(2010) Luttrell, L.M. Mol. Biotechnol. 39(3):239-264(2008) Margolskee, R.F., et al. Proc. Natl. Acad. Sci. U.S.A. 104(38):15075-15080(2007) Jang, H.J., et al. Proc. Natl. Acad. Sci. U.S.A. 104(38):15069-15074(2007) Fehr, J., et al. J. Comp. Physiol. A Neuroethol. Sens. Neural. Behav. Physiol. 193(1):21-34(2007)