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GNAT3 / Gustducin Antibody (Internal)
Goat Polyclonal Antibody
Catalog # ALS13706

Specification

GNAT3 / Gustducin Antibody (Internal) - Product Information

Application	**IHC**
Primary Accession	A8MTJ3
Reactivity	**Human, Mouse, Rat, Rabbit, Hamster, Monkey, Pig, Horse, Bovine, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**40kDa KDa**

GNAT3 / Gustducin Antibody (Internal) - Additional Information

Gene ID 346562

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

Target/Specificity
Human GNAT3.

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

Precautions
GNAT3 / Gustducin Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

GNAT3 / Gustducin Antibody (Internal) - 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 lumenal sugar sensors in the gut to control the expression of the Na+-glucose transporter SGLT1 in response to dietaty 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

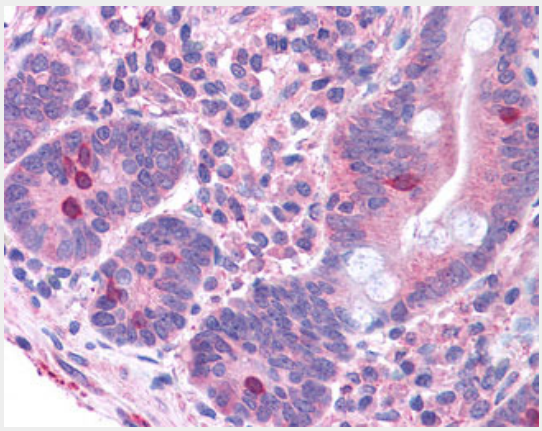
Tissue Location
Expressed in taste buds (sensory organs of clustered epithelial cells) of the circumvallate and foliate papillae of the tongue at protein level. Expressed in enteroendocrine L cells of the gut. Detected also in spermatozoa.

GNAT3 / Gustducin Antibody (Internal) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GNAT3 / Gustducin Antibody (Internal) - Images



Anti-GNAT3 antibody IHC of human small intestine.

GNAT3 / Gustducin Antibody (Internal) - Background

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GNAT3 / Gustducin Antibody (Internal) - References

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