

Datasheet for ABIN952565
anti-GNAT3 antibody (Middle Region)

3 Images

[Go to Product page](#)

Overview

Quantity:	0.4 mL
Target:	GNAT3
Binding Specificity:	AA 85-113, Middle Region
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GNAT3 antibody is un-conjugated
Application:	Western Blotting (WB), Flow Cytometry (FACS), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Enzyme Immunoassay (EIA)

Product Details

Immunogen:	KLH conjugated synthetic peptide between 85-113 amino acids from the Central region of Human GNAT3
Isotype:	Ig Fraction
Specificity:	This antibody recognizes Human GNAT3 (Center).
Purification:	Protein A column, followed by peptide affinity purification

Target Details

Target:	GNAT3
Alternative Name:	GNAT3 (GNAT3 Products)

Target Details

Background:	<p>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 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. Synonyms: G protein G(t) subunit alpha-3, Guanine nucleotide-binding protein G(t) subunit alpha-3, Gustducin alpha-3 chain</p>
Molecular Weight:	40357 Da
Gene ID:	346562
NCBI Accession:	NP_001095856
Pathways:	Peptide Hormone Metabolism , G-protein mediated Events , Phototransduction

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

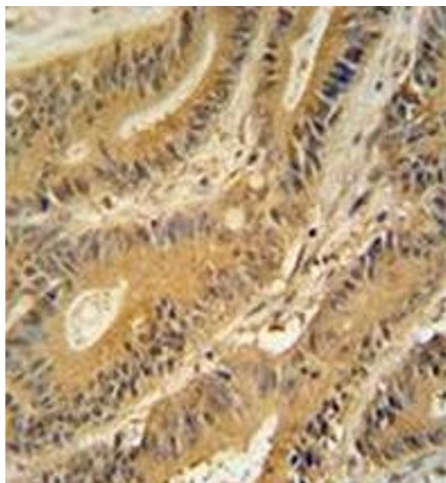
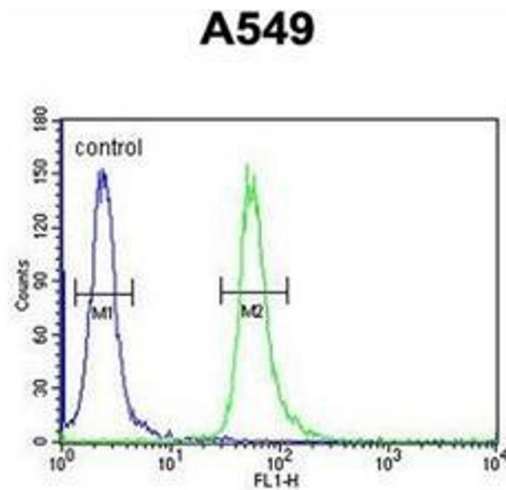
Handling

Format:	Liquid
Concentration:	0.25 mg/mL

Handling

Buffer:	PBS containing 0.09 % (W/V) Sodium Azide as preservative
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C/-20 °C
Storage Comment:	Store undiluted at 2-8 °C for one month or (in aliquots) at -20 °C for longer.

Images

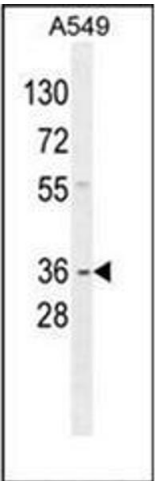


Flow Cytometry

Image 1. Flow cytometric analysis of A549 cells using GNAT3 Antibody (Center) Cat.-No AP51877PU-N (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Immunohistochemistry (Paraffin-embedded Sections)

Image 2. Immunohistochemistry analysis in formalin fixed and paraffin embedded human colon carcinoma reacted with GNAT3 Antibody (Center) followed which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.



Western Blotting

Image 3. Western blot analysis of GNAT3 Antibody (Center) in A549 cell line lysates (35ug/lane). This demonstrates the GNAT3 antibody detected the GNAT3 protein (arrow).