

Datasheet for ABIN654441  
**anti-GNAT3 antibody (AA 78-105)**

## 3 Images

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## Overview

Quantity:	400 µL
Target:	GNAT3
Binding Specificity:	AA 78-105
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))

## Product Details

Immunogen:	This GNAT3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 78-105 amino acids from the Central region of human GNAT3.
Clone:	RB24621
Isotype:	Ig Fraction
Purification:	This antibody is purified through a protein A column, followed by peptide affinity purification.

## Target Details

Target:	GNAT3
Alternative Name:	GNAT3 ( <a href="#">GNAT3 Products</a> )

## Target Details

**Background:** 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<sup>+</sup>-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.

**Molecular Weight:** 40357

**Gene ID:** 346562

**NCBI Accession:** [NP\\_001095856](#)

**UniProt:** [A8MTJ3](#)

**Pathways:** [Peptide Hormone Metabolism](#), [G-protein mediated Events](#), [Phototransduction](#)

## Application Details

**Application Notes:** WB: 1:1000. IHC-P: 1:50~100. FC: 1:10~50

**Restrictions:** For Research Use only

## Handling

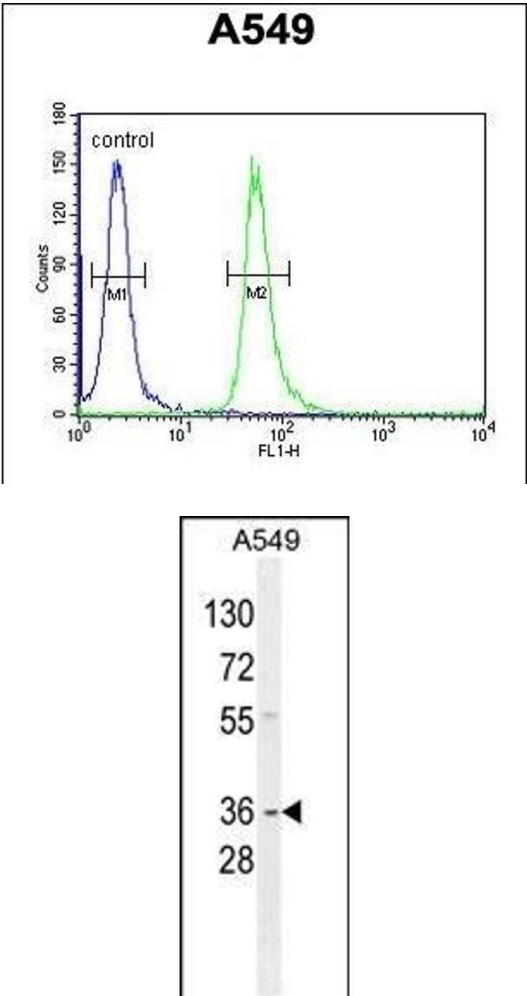
**Format:** Liquid

**Buffer:** Purified polyclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.

Handling

Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Maintain refrigerated at 2-8 °C for up to 6 months. For long term storage store at -20 °C in small aliquots to prevent freeze-thaw cycles.
Expiry Date:	6 months

Images

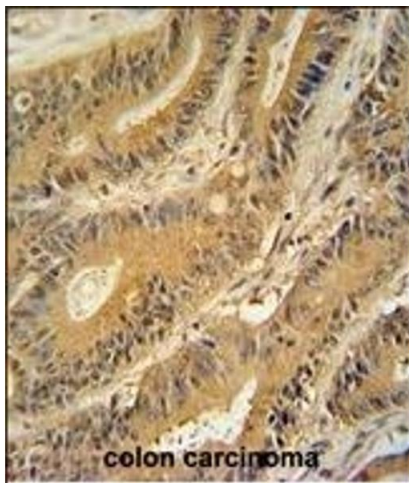


Flow Cytometry

**Image 1.** GNAT3 Antibody (Center) (ABIN654441 and ABIN2844175) flow cytometric analysis of A549 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Western Blotting

**Image 2.** GNAT3 Antibody (Center) (ABIN654441 and ABIN2844175) western blot analysis in A549 cell line lysates (35 µg/lane).This demonstrates the GNAT3 antibody detected the GNAT3 protein (arrow).



#### Immunohistochemistry (Paraffin-embedded Sections)

**Image 3.** GNAT3 antibody (Center) (ABIN654441 and ABIN2844175) immunohistochemistry analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the GNAT3 antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.