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Datasheet for ABIN350355  
**anti-GNAT3 antibody (Internal Region)**

### Overview

Quantity:	100 µL
Target:	GNAT3
Binding Specificity:	Internal Region
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Application:	Immunohistochemistry (IHC), Western Blotting (WB)

### Product Details

Immunogen:	A synthetic peptide from the internal region of mouse GNAT3 conjugated to blue carrier protein was used as the antigen. The antigen shares 87% identity with the rat sequence.
Specificity:	Specific for GNAT3.
Cross-Reactivity:	Mouse, Rat
Cross-Reactivity (Details):	Other species not yet tested.
Purification:	Whole serum

### Target Details

Target:	GNAT3
Alternative Name:	GNAT3 ( <a href="#">GNAT3 Products</a> )
Background:	Function: Guanine nucleotide-binding protein (G protein) alpha subunit playing a prominent role

## Target Details

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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<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. Subcellular location: cytoplasm Tissue specificity: Expressed in taste buds (sensory organs of clustered epithelial cells) of the circumvallate and fungiform papillae of the tongue as well as in palatal taste buds at protein level. Expressed in enteroendocrine cells of the gut, such as in subsets of enteroendocrine cells in the midjejunum and brush cells. Detected also in spermatozoa.,Taste Related,Gnat3, Guanine nucleotide-binding protein G(t) subunit alpha-3

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UniProt: [Q3V3I2](#)

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

## Application Details

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Application Notes: IHC, WB. A dilution of 1 : 1000 to 1 : 2000 is recommended. The optimal dilution should be determined by the end user. Not yet tested in other applications.

Restrictions: For Research Use only

## Handling

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Format: Lyophilized

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## Handling

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Reconstitution:	Reconstitute in 100 µL of sterile water. Centrifuge to remove any insoluble material.
Handling Advice:	Avoid freeze and thaw cycles.
Storage:	4 °C/-20 °C
Storage Comment:	Maintain the lyophilised/reconstituted antibodies frozen at -20°C for long term storage and refrigerated at 2-8°C for a shorter term. When reconstituting, glycerol (1:1) may be added for an additional stability. Avoid freeze and thaw cycles.
Expiry Date:	12 months