Datasheet for ABIN7154719

anti-GNAT3 antibody (AA 2-354)

2 Images

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Overview

Quantity:	100 µL
Target:	GNAT3
Binding Specificity:	AA 2-354
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GNAT3 antibody is un-conjugated
Application:	ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Immunogen:	Recombinant Human Guanine nucleotide-binding protein G(t) subunit alpha-3 protein (2-354AA)
Isotype:	IgG
Cross-Reactivity:	Human
Purification:	>95%, Protein G purified

Target Details

Target:	GNAT3
Alternative Name:	GNAT3 (GNAT3 Products)
Background:	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,

Target Details

	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. Aliases: GDCA antibody, Ggust antibody, Gnat 3 antibody, GNAT3 antibody, GNAT3_HUMAN antibody, Gtn antibody, Guanine nucleotide binding protein alpha transducing 3 antibody, Guanine nucleotide binding protein G(t) subunit alpha 3 antibody, Guanine nucleotide-binding protein G(t) subunit alpha-3 antibody, Gustducin alpha 3 antibody, Gustducin alpha 3 chain antibody, Gustducin alpha-3 chain antibody
UniProt:	A8MTJ3
Pathways:	Peptide Hormone Metabolism, G-protein mediated Events, Phototransduction

Application Details

Application Notes:	Recommended dilution: IHC:1:500-1:1000, IF:1:50-1:200,
Restrictions:	For Research Use only

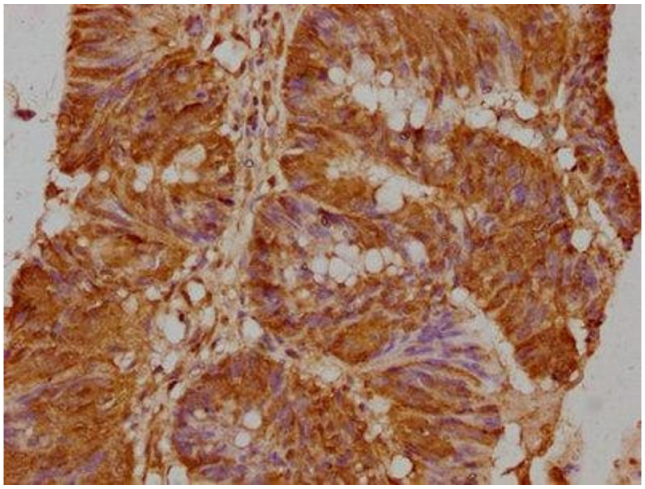
Handling

Format:	Liquid
Buffer:	Preservative: 0.03 % Proclin 300 Constituents: 50 % Glycerol, 0.01M PBS, pH 7.4

Handling

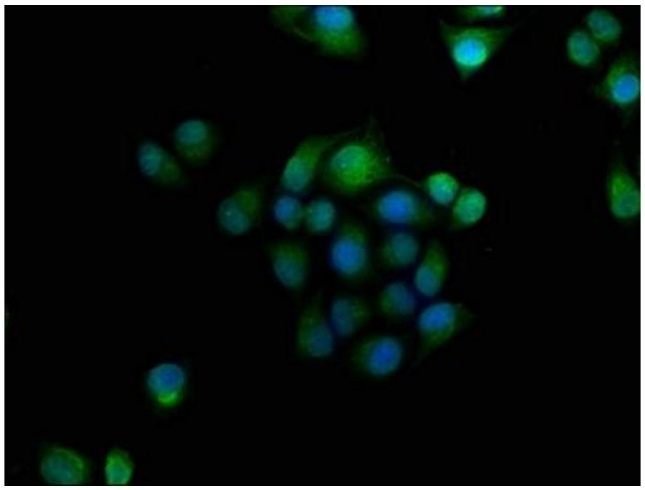
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

Images



Immunohistochemistry

Image 1. IHC image of ABIN7154719 diluted at 1:500 and staining in paraffin-embedded human colon cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10 % normal goat serum 30 min at RT. Then primary antibody (1 % BSA) was incubated at 4 °C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunofluorescence

Image 2. Immunofluorescence staining of Hela cells with ABIN7154719 at 1:166, counter-stained with DAPI. The cells were fixed in 4 % formaldehyde, permeabilized using 0.2 % Triton X-100 and blocked in 10 % normal Goat Serum. The cells were then incubated with the antibody overnight at 4 °C. The secondary antibody was Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG(H+L).