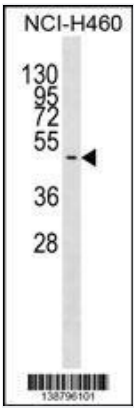
GNAS Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	GNAS, Polyclonal Antibody
Full Product Name	GNAS, CT (GNAS, GNAS1, Neuroendocrine secretory protein 55, LHAL tetrapeptide, GPIPIRRH peptide) (APC)
Product Gene Name	anti-GNAS antibody
Product Synonym Names	GNAS; GNAS1; Neuroendocrine secretory protein 55; LHAL tetrapeptide; GPIPIRRH peptide
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Allophycocyanin (APC).
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human GNAS.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: APC conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	28,029 Da
OMIM	603233
3D Structure	ModBase 3D Structure for O95467
Immunogen	Synthetic peptide between 216-244aa from the C-terminal region of human GNAS conjugated to KLH.
Conjugate	APC
Note	Preservative Free
Special Handling	Light sensitive
Product Categories/Family for anti-GNAS antibody	Antibodies; Neuroscience
Applications Tested/Suitable for anti-GNAS antibody	Western Blot (WB), ELISA (EIA)
Application Notes for anti-GNAS antibody	WB: 1:100-500 ELISA: 1:1,000 Applications are based on unconjugated antibody.

Related Product Information for anti-GNAS antibody	This locus has a highly complex imprinted expression pattern. It gives rise to maternally, paternally, and biallelically expressed transcripts that are derived from four alternative promoters and 5' exons. Some transcripts contains a differentially methylated region (DMR) at their 5' exons, and this DMR is commonly found in imprinted genes and correlates with transcript expression. An antisense transcript is produced from an overlapping locus on the opposite strand. One of the transcripts produced from this locus, and the antisense transcript, are paternally expressed noncoding RNAs, and may regulate imprinting in this region. In addition, one of the transcripts contains a second overlapping ORF, which encodes a structurally unrelated protein-Alex. Alternative splicing of downstream exons is also observed, which results in different forms of the stimulatory G-protein alpha subunit, a key element of the classical signal transduction pathway linking receptor-ligand interactions with the activation of adenylyl cyclase and a variety of cellular reponses. Multiple transcript variants encoding different isoforms have been found for this gene. Mutations in this gene result in pseudohypoparathyroidism type 1a, pseudohypoparathyroidism type 1b, Albright hereditary osteodystrophy, pseudopseudohypoparathyroidism, McCune-Albright syndrome, progressive osseus heteroplasia, polyostotic fibrous dysplasia of bone, and some pituitary tumors.
Product References and Citations for anti-GNAS antibody	1. Idziaszczyk, S., et al. (2010)Cancer Genet. Cytogenet. 202(1):67-69. 2. Bailey, S.D., et al. (2010)Diabetes Care 33(10):2250-2253. 3. Tominaga, E., et al. (2010)Gynecol. Oncol. 118(2):160-166. 4. Park, C.H., et al. (2010)Ann. Clin. Lab. Sci. 40(3):261-266. 5. Cross, D.S., et al. (2010). BMC Genet. 11, 51.
Other Notes	Small volumes of anti-GNAS antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for GNAS purchase	MBS6302931 is an antibody targeting GNAS. Also known as GNAS, CT (GNAS, GNAS1, Neuroendocrine secretory protein 55, LHAL tetrapeptide, GPIPIRRH peptide) (APC). Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-GNAS antibody
GNAS Antibody (C-term) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the GNAS antibody detected the GNAS protein (arrow).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GNAS. It may not necessarily be applicable to this product.

NCBI GI #	7706589
NCBI GeneID	2778
NCBI Accession #	NP_057676.1
UniProt Primary Accession #	O95467
UniProt Secondary Accession #	O95417; B2RB88; E1P5G2
UniProt Related Accession #	O95467; P63092; P84996; Q5JWF2
GenBank Nucleotide #	NM_016592.2
NCBI Official Full Name	protein NESP55 isoform NESP55
NCBI Official Synonym Full Names	GNAS complex locus
NCBI Official Symbol	GNAS

NCBI Official Synonym Symbols	AHO; GSA; GSP; POH; GPSA; NESP; GNAS1; PHP1A; PHP1B; PHP1C; C20orf45
UniProt Protein Name	Neuroendocrine secretory protein 55
Protein Family	Neuroendocrine secretory protein
UniProt Gene Name	GNAS
UniProt Synonym Gene Names	GNAS1; NESP55
UniProt Entry Name	GNAS3_HUMAN
NCBI Protein Information	protein ALEX; protein GNAS; protein NESP55; secretogranin VI; extra large alphas protein; neuroendocrine secretory protein; guanine nucleotide regulatory protein; alternative gene product encoded by XL-exon; adenylate cyclase-stimulating G alpha protein;
NCBI Summary for GNAS	This locus has a highly complex imprinted expression pattern. It gives rise to maternally, paternally, and biallelically expressed transcripts that are derived from four alternative promoters and 5' exons. Some transcripts contain a differentially methylated region (DMR) at their 5' exons, and this DMR is commonly found in imprinted genes and correlates with transcript expression. An antisense transcript is produced from an overlapping locus on the opposite strand. One of the transcripts produced from this locus, and the antisense transcript, are paternally expressed noncoding RNAs, and may regulate imprinting in this region. In addition, one of the transcripts contains a second overlapping ORF, which encodes a structurally unrelated protein - Alex. Alternative splicing of downstream exons is also observed, which results in different forms of the stimulatory G-protein alpha subunit, a key element of the classical signal transduction pathway linking receptor-ligand interactions with the activation of adenylyl cyclase and a variety of cellular reponses. Multiple transcript variants encoding different isoforms have been found for this gene. Mutations in this gene result in pseudohypoparathyroidism type 1a, pseudohypoparathyroidism type 1b, Albright hereditary osteodystrophy, pseudopseudohypoparathyroidism, McCune-Albright syndrome, progressive osseus heteroplasia, polyostotic fibrous dysplasia of bone, and some pituitary tumors. [provided by RefSeq, Aug 2012]
UniProt Comments for GNAS	G-alpha(s) iso7: a guanine nucleotide-binding protein of the G12 class of G-alpha proteins. Agonist binding to Gq-coupled receptors may block Akt activation via the release of active G-alpha(q) subunits that inhibit phosphatidylinositol 3-kinase. Heterotrimeric G proteins are composed of 3 units; alpha, beta and gamma. The alpha chain contains the guanine nucleotide binding site. Protein type: G protein, heterotrimeric alpha G(s); G protein, heterotrimeric; G protein; Membrane protein, peripheral; Oncoprotein; Vesicle Chromosomal Location of Human Ortholog: 20q13.3 Cellular Component: ruffle; transport vesicle; membrane; perinuclear region of cytoplasm; dendrite; cytoplasm; extracellular region; plasma membrane; heterotrimeric G-protein complex; trans-Golgi network membrane; intrinsic to membrane; nucleus; cytosol Molecular Function: GTPase activity; corticotropin-releasing hormone receptor 1 binding; insulin-like growth factor receptor binding; ionotropic glutamate receptor binding; signal transducer activity; protein binding; GTP binding; mu-type opioid receptor binding; metal ion binding; beta-2 adrenergic receptor binding; G-protein beta/gamma-subunit binding; D1 dopamine receptor binding; adenylate cyclase activity Biological Process: developmental growth; positive regulation of osteoclast differentiation; water transport; protein secretion; female pregnancy; G-protein signaling, adenylate cyclase activating pathway; embryonic hindlimb morphogenesis; intracellular transport; positive regulation of cAMP biosynthetic process; tissue homeostasis; DNA methylation; transmembrane transport; endochondral ossification; post-embryonic body morphogenesis; dopamine receptor, adenylate cyclase activating pathway; response to drug; sensory perception of chemical stimulus; negative regulation of multicellular organism growth; multicellular organism growth; sensory perception of smell; adenylate cyclase activation; embryonic cranial skeleton morphogenesis; positive regulation of osteoblast differentiation; cartilage development; energy reserve metabolic process; renal water homeostasis; cAMP biosynthetic process; cognition; blood coagulation; regulation of insulin secretion Disease: Osseous Heteroplasia, Progressive; Pseudopseudohypoparathyroidism; Pituitary Adenoma, Acth-secreting; Acth-independent Macronodular Adrenal Hyperplasia; Mccune-albright Syndrome; Pseudohypoparathyroidism, Type Ia; Pseudohypoparathyroidism, Type Ib; Pituitary Adenoma, Growth Hormone-secreting

Research Articles on GNAS	**1.** GNAS-mutated villous adenomas may not necessarily be direct precursors of associated adenocarcinomas. At the same time, our observations support the role of activating GNAS mutations in increased mucin production in colorectal neoplasms.
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