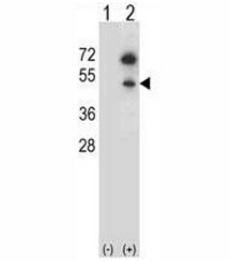
GNAS Antibody / G Protein Subunit Alpha S (F40026)

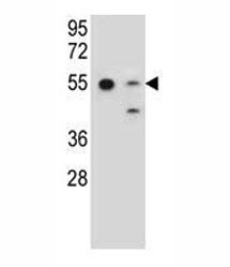
Catalog No.	Formulation	Size
F40026-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F40026-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

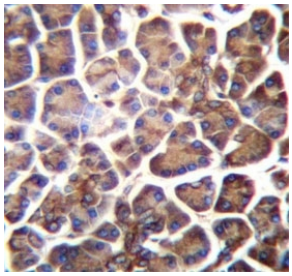
Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat, Bovine, Pig, Hamster
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	Q5FWY2
Applications	Western blot: 1:1000 IHC (Paraffin): 1:10-1:50 Immunofluorescence: 1:10-1:50 Flow Cytometry: 1:10-1:50
Limitations	This GNAS antibody is available for research use only.



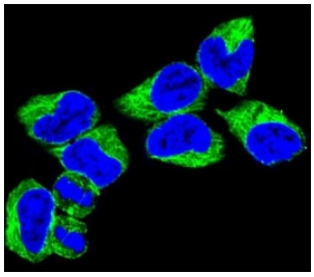
Western blot analysis of GNAS antibody and 293 cell lysate (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (2) with the GNAS gene. Predicted molecular weight ~46 kDa.



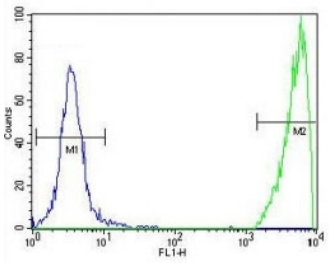
GNAS antibody western blot analysis in 293, NCI-H292 lysate. Predicted molecular weight ~46 kDa.



GNAS antibody immunohistochemistry analysis in formalin fixed and paraffin embedded human pancreas tissue.



Confocal immunofluorescent analysis of GNAS antibody with 293 cells followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used as a nuclear counterstain (blue).



GNAS antibody flow cytometric analysis of 293 cells (green) compared to a negative control cell (blue). FITC-conjugated goat-anti-rabbit secondary Ab was used for the analysis.

Description

GNAS antibody targets G Protein Subunit Alpha S, a signaling protein encoded by the GNAS gene and commonly referred to as Gs alpha and Guanine nucleotide binding protein alpha S. G Protein Subunit Alpha S is a cytoplasmic, membrane-associated GTP-binding protein that couples activated G protein-coupled receptors to downstream effector enzymes. GNAS is broadly expressed across tissues and cell types, reflecting its fundamental role in transducing extracellular signals into intracellular second messenger responses.

Functionally, G Protein Subunit Alpha S activates adenylate cyclase upon receptor stimulation, leading to increased intracellular cyclic AMP levels. A short functional summary is that GNAS converts GPCR activation into cAMP signaling, regulating diverse cellular processes including metabolism, hormone responsiveness, and gene transcription. Through this pathway, Gs alpha influences signaling cascades controlled by protein kinase A and other cAMP-responsive effectors.

At the molecular level, GNAS cycles between inactive GDP-bound and active GTP-bound states, with intrinsic GTPase activity terminating the signal. G Protein Subunit Alpha S interacts with beta and gamma subunits in its inactive state and dissociates upon activation to engage adenylate cyclase. GNAS antibody reagents are widely used to study GPCR signaling dynamics, cAMP pathway regulation, and heterotrimeric G protein function in cellular systems.

From a biological and disease relevance perspective, alterations in GNAS signaling have been implicated in endocrine disorders, metabolic disease, and cancer. Activating mutations of GNAS are well documented in certain tumors and hormone-producing lesions, while dysregulated Gs alpha signaling can disrupt normal cellular responsiveness. GNAS antibody tools are therefore valuable in studies of signal transduction, endocrine biology, and disease-associated GPCR pathways.

Developmentally, GNAS signaling is essential for normal tissue growth and hormonal regulation. Its widespread expression underscores its role as a central signaling hub. GNAS antibodies from NSJ Bioreagents are supplied for research use to support investigations in cell signaling, endocrinology, and translational research.

Application Notes

Titration of the GNAS antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 287-315 from the human protein was used as the immunogen for this GNAS antibody.

Storage

Aliquot the GNAS antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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