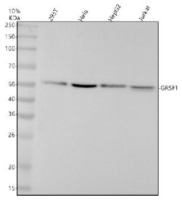
GRSF1 Antibody / G-rich RNA sequence-binding factor 1 [clone 30G49] (FY12309)

Catalog No.	Formulation	Size
FY12309	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	30G49
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q12849
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200 Immunocytochemistry/Immunofluorescence : 1:50-1:200 Flow Cytometry : 1:50
Limitations	This GRSF1 antibody is available for research use only.



Western blot analysis of GRSF1 using anti-GRSF1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human 293T whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human Jurkat whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GRSF1 antibody at 1:500 overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. The expected molecular weight of GRSF1 is ~53 kDa.

Description

GRSF1 antibody is designed to detect G-rich RNA sequence-binding factor 1, a multifunctional RNA-binding protein localized primarily to the mitochondria and nucleolus. GRSF1 plays a critical role in RNA metabolism, including RNA stabilization, processing, and translation. It is particularly important for mitochondrial RNA handling, where it binds G-rich elements and supports the maturation of mitochondrial transcripts required for oxidative phosphorylation. As a result, GRSF1 is an essential factor for maintaining mitochondrial protein synthesis and energy production.

GRSF1 antibody is widely employed in studies of RNA biology, mitochondrial function, and stress responses. Disruption of GRSF1 has been associated with impaired mitochondrial gene expression and respiratory chain defects, leading to compromised energy metabolism. Researchers use GRSF1 antibody to track changes in expression and localization under different cellular conditions, including oxidative stress and disease models that affect mitochondrial integrity.

Applications of GRSF1 antibody include western blotting, immunohistochemistry, and immunofluorescence. In western blot assays, the antibody specifically recognizes GRSF1 protein bands, allowing for accurate comparisons of expression levels across experimental conditions. Immunohistochemistry provides tissue-level localization, while immunofluorescence highlights its mitochondrial distribution patterns in cultured cells. These techniques allow researchers to connect RNA-binding activity with mitochondrial homeostasis and gene expression.

GRSF1 also functions in the nucleolus, where it contributes to ribosomal RNA processing. This dual localization underscores its multifunctional role in RNA biology, linking mitochondrial gene expression with nuclear RNA processing pathways. By using GRSF1 antibody, researchers gain a powerful tool for exploring these interconnected processes.

In disease contexts, GRSF1 expression has been implicated in cancer and neurodegeneration. Altered RNA-binding activity may disrupt translation and contribute to disease pathology. Additionally, its role in mitochondrial maintenance makes it highly relevant for disorders involving energy metabolism and oxidative stress. Monitoring GRSF1 with specific antibodies allows for mechanistic studies that explore how RNA-binding proteins influence disease pathways.

GRSF1 antibody from NSJ Bioreagents offers reliable detection across multiple experimental methods, ensuring accurate analysis of this essential RNA-binding factor. Its proven specificity supports detailed investigations of RNA processing, mitochondrial function, and cellular stress adaptation.

Application Notes

Optimal dilution of the GRSF1 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human GRSF1 was used as the immunogen for the GRSF1 antibody.

Storage

Store the GRSF1 antibody at -20oC.