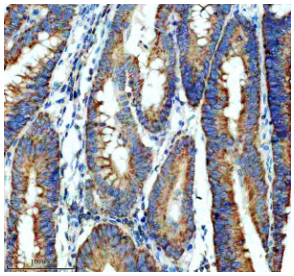
MRPS31 Antibody 29M40 / Mitochondrial Ribosomal Protein S31 Antibody [clone 29M40] (RQ8751)

Catalog No.	Formulation	Size
RQ8751	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

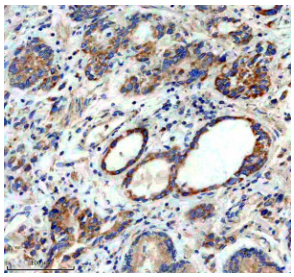
Recombinant RABBIT MONOCLONAL

Bulk quote request

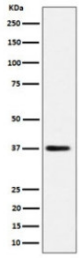
Availability	1-3 days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	29M40
Purity	Affinity chromatography
UniProt	Q92665
Applications	Western blot: 1:500 Immunohistochemistry (FFPE): 1:50
Limitations	This MRPS31 Antibody 29M40 / Mitochondrial Ribosomal Protein S31 Antibody is available for research use only.



MRPS31 Antibody 29M40 in Human Colon Cancer IHC. Immunohistochemistry staining of FFPE human colon cancer tissue with MRPS31 Antibody 29M40 / Mitochondrial Ribosomal Protein S31 Antibody, clone 29M40, at 1:50 overnight at 4oC. HIER was performed using EDTA buffer, pH 8.0, followed by blocking with 10% goat serum. HRP/DAB detection demonstrates MRPS31 staining in human colon cancer tissue.



MRPS31 Antibody 29M40 in Human Stomach Cancer IHC. Immunohistochemistry staining of FFPE human stomach cancer tissue with MRPS31 Antibody 29M40 / Mitochondrial Ribosomal Protein S31 Antibody, clone 29M40, at 1:50 overnight at 4oC. HIER was performed using EDTA buffer, pH 8.0, followed by blocking with 10% goat serum. HRP/DAB detection demonstrates MRPS31 staining in human stomach cancer tissue.



MRPS31 Antibody 29M40 in Human HepG2 Liver Cancer Cells WB. Western blot testing of human HepG2 hepatocellular carcinoma cell lysate with MRPS31 Antibody 29M40 / Mitochondrial Ribosomal Protein S31 Antibody, clone 29M40. A specific band is observed at approximately 38 kDa. The predicted molecular weight of MRPS31 is approximately 45 kDa.

Description

MRPS31 Antibody 29M40 / Mitochondrial Ribosomal Protein S31 Antibody detects MRPS31, a component of the small subunit of the mitochondrial ribosome. Mammalian mitochondrial ribosomes, or mitoribosomes, are specialized ribonucleoprotein complexes responsible for translating proteins encoded by mitochondrial DNA. MRPS31 contributes to the protein-rich 28S small mitoribosomal subunit and is therefore associated with the machinery required for mitochondrial protein synthesis.

Mitochondrial translation produces a small but essential group of proteins that form core components of oxidative phosphorylation complexes. These mitochondrially encoded proteins function together with numerous nuclear-encoded proteins to support respiratory chain activity and ATP production. Because MRPS31 participates in the mitoribosome responsible for this translation, it connects mitochondrial gene expression with cellular energy metabolism and respiratory function.

MRPS31 is encoded by the nuclear genome and synthesized in the cytoplasm before being targeted to mitochondria. Within mitochondria, it becomes incorporated into the small ribosomal subunit along with other mitochondrial ribosomal proteins and mitochondrial ribosomal RNA. Mitoribosome assembly requires coordinated expression and import of numerous nuclear-encoded components, making mitochondrial ribosomal proteins useful targets for studying mitochondrial biogenesis, translation and organelle homeostasis.

Disruption of mitochondrial protein synthesis can impair oxidative phosphorylation and influence cellular metabolism, stress responses and viability. Mitochondrial ribosomal proteins are consequently studied in areas ranging from mitochondrial disease and metabolic regulation to cancer and cellular adaptation to energetic stress. MRPS31 has also been referred to historically as Imogen 38, MRP-S31 and S31mt, reflecting earlier characterization and mitochondrial ribosomal nomenclature.

Clone 29M40 is a recombinant rabbit monoclonal antibody generated against a synthetic peptide specific to human small ribosomal subunit protein mS31. It has been evaluated for detection of MRPS31 protein in research applications. NSJ Bioreagents supplies antibodies for mitochondrial, metabolic and cell biology research. An MRPS31 Antibody can be used to investigate mitochondrial ribosomes, mitochondrial protein synthesis, oxidative phosphorylation and cellular energy metabolism.

For additional antibodies targeting proteins involved in mitochondrial structure, function and energy metabolism, explore our Mitochondria Marker Antibody page.

Application Notes

Optimal dilution of the MRPS31 Antibody 29M40 / Mitochondrial Ribosomal Protein S31 Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Small ribosomal subunit protein mS31 was used as the immunogen for the MRPS31 antibody.

Storage

Store the MRPS31 antibody at -20oC.

Alternate Names

MRPS31 antibody, Mitochondrial Ribosomal Protein S31 antibody, Small Ribosomal Subunit Protein mS31 antibody, 28S Ribosomal Protein S31 Mitochondrial antibody, MRP-S31 antibody, Imogen 38 antibody

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