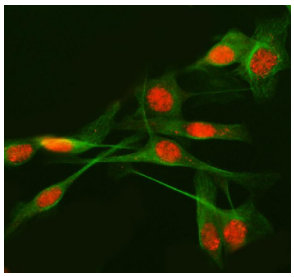
METTL17 Antibody / Methyltransferase-like protein 17 (FY12454)

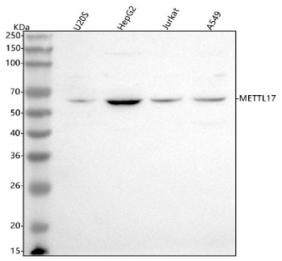
Catalog No.	Formulation	Size
FY12454	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9H7H0
Localization	Nuclear
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This METTL17 antibody is available for research use only.



Immunofluorescent staining of METTL17 using anti-METTL17 antibody (red) and anti-Beta Tubulin antibody (green). METTL17 was detected in immunocytochemical section of HELA cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-METTL17 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG and DyLight 488 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of METTL17 using anti-METTL17 antibody. Lane 1: human U20S whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: 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-METTL17 antibody at 0.5 ug/ml 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 enhanced chemiluminescent. METTL17 (~51 kDa predicted) was detected at ~68-70 kDa, consistent with slower electrophoretic migration due to its mitochondrial targeting sequence and compact methyltransferase domain.

Description

METTL17 antibody detects Methyltransferase-like protein 17, a mitochondrial RNA methyltransferase that contributes to the biogenesis and function of mitochondrial ribosomes. METTL17 catalyzes methylation of specific rRNA nucleotides, a process essential for proper ribosomal assembly and translational fidelity within mitochondria. This enzyme is part of the large family of S-adenosylmethionine-dependent methyltransferases, many of which regulate gene expression and RNA stability. The METTL17 antibody is widely used to study mitochondrial gene expression, translation, and the broader methyltransferase network involved in RNA modification and energy metabolism.

METTL17 is encoded by the METTL17 gene located on human chromosome 11q24.2. The protein localizes primarily to the mitochondrial matrix, where it associates with mitochondrial ribosomal subunits. Structurally, METTL17 contains a conserved Rossmann-like fold typical of class I methyltransferases, which facilitates binding to S-adenosyl-L-methionine (SAM), the universal methyl donor. Loss of METTL17 function impairs mitochondrial translation, leading to reduced oxidative phosphorylation and energy production.

The METTL17 antibody is useful in identifying both endogenous and overexpressed protein in cell lysates. Western blot typically reveals a single band around 44Ã¯Â¿Â½46 kDa corresponding to full-length METTL17. Immunofluorescence analysis demonstrates mitochondrial localization with co-staining of mitochondrial markers such as TOM20 or COX IV. Functional studies have shown that METTL17 interacts with mitochondrial ribosomal RNA and components of the large ribosomal subunit, supporting its role in rRNA modification and mitoribosome assembly.

Defects in METTL17-mediated methylation have been linked to disrupted mitochondrial respiration and altered cellular energy metabolism. In addition to its mitochondrial functions, METTL17 expression has been observed in proliferating cells and certain cancer tissues, suggesting potential links between RNA methylation and tumor metabolism. NSJ Bioreagents provides a validated METTL17 antibody for western blot, immunofluorescence, and immunoprecipitation applications, enabling detailed characterization of mitochondrial RNA processing and the effects of METTL17 on bioenergetics and translation regulation.

Application Notes

Optimal dilution of the METTL17 antibody should be determined by the researcher.

Immunogen

E.coli-derived human METTL17 recombinant protein (Position: K129-R429) was used as the immunogen for the METTL17 antibody.

Storage

After reconstitution, the METTL17 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.