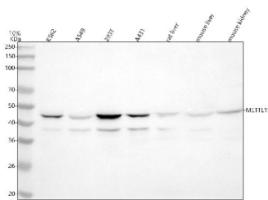


METTL15 Antibody / Methyltransferase like protein 15 (FY12057)

Catalog No.	Formulation	Size
FY12057	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, Mouse, Rat
Format	Lyophilized
Host	Rabbit
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 Na ₂ HPO ₄ .
UniProt	P0C7V9
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This METTL15 antibody is available for research use only.



Western blot analysis of METTL15 using anti-METTL15 antibody. Lane 1: human K562 whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human whole cell lysates, Lane 5: rat liver tissue lysates, Lane 6: mouse liver tissue lysates, Lane 7: mouse kidney tissue 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-METTL15 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. Expected molecular weight ~46â‰¤kDa (full-length METTL15). Additional band at ~38â‰¤kDa observed in some samples; may correspond to a splice variant or proteolytic fragment of METTL15, transcript variants of METTL15 are documented.

Description

METTL15 antibody detects Methyltransferase like protein 15, encoded by the METTL15 gene. Methyltransferase like

protein 15 is a mitochondrial RNA methyltransferase that catalyzes the m4C modification of mitochondrial 12S rRNA. METTL15 antibody provides researchers with a useful reagent for studying mitochondrial translation, RNA modification, and disease mechanisms associated with impaired mitochondrial gene expression.

Methyltransferase like protein 15 localizes to mitochondria and modifies 12S rRNA at position C839. Research using METTL15 antibody has shown that this modification is essential for proper folding and stability of the mitochondrial small ribosomal subunit. Without METTL15-mediated methylation, mitochondrial ribosomes are defective, impairing translation of essential respiratory chain subunits.

Studies with METTL15 antibody have demonstrated that loss of METTL15 function leads to mitochondrial dysfunction, reduced oxidative phosphorylation, and cellular energy deficiency. These defects contribute to neuromuscular and metabolic disorders. In model organisms, knockout of METTL15 causes developmental delay and reduced lifespan, emphasizing its essential role in mitochondrial biology.

Research using METTL15 antibody has also revealed links between RNA modification and disease. Impaired METTL15 activity contributes to mitochondrial disease phenotypes, while altered expression has been associated with certain cancers, where mitochondrial translation is reprogrammed to meet metabolic demands. These findings highlight the importance of RNA modifying enzymes in health and pathology.

METTL15 antibody is widely used in western blotting, immunofluorescence, and immunohistochemistry. Western blotting quantifies mitochondrial protein levels, immunofluorescence highlights colocalization with mitochondrial markers, and immunohistochemistry demonstrates expression in tissues with high energy demand. These applications make METTL15 antibody essential for mitochondrial RNA biology research.

By supplying validated METTL15 antibody reagents, NSJ Bioreagents supports studies into RNA methylation, mitochondrial translation, and disease. Detection of Methyltransferase like protein 15 provides researchers with insight into how RNA modifications regulate mitochondrial function and pathology.

Application Notes

Optimal dilution of the METTL15 antibody should be determined by the researcher.

Immunogen

E.coli-derived human METT5D1/METTL15 recombinant protein (Position: R200-L407) was used as the immunogen for the METTL15 antibody.

Storage

After reconstitution, the METTL15 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.