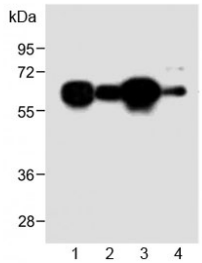
METTL14 Antibody / Methyltransferase-like protein 14 / N-Terminal Region (F54217)

Catalog No.	Formulation	Size
F54217-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54217-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse
Predicted Reactivity	Bovine
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Purity	Peptide affinity purified
UniProt	Q9HCE5
Applications	Western Blot: 1:2000
Limitations	This METTL14 antibody is available for research use only.



Western blot testing of human 1) HL60, 2) A431, 3) Jurkat and 4) mouse NIH3T3 cell lysate with METTL14 antibody at 1:2000. Expected molecular weight: 52-65 kDa.

Description

METTL14 antibody detects Methyltransferase-like protein 14, a key component of the RNA N6-methyladenosine (m6A) methyltransferase complex that regulates RNA stability, splicing, and translation. The UniProt recommended name is Methyltransferase-like protein 14 (METTL14). This nuclear enzyme acts as a catalytic cofactor alongside METTL3, forming the core of the m6A writer complex that modifies mRNA and noncoding RNA transcripts.

Functionally, METTL14 antibody identifies a 456-amino-acid protein that forms a heterodimer with METTL3, positioning RNA substrates for efficient methyl group transfer. Although METTL14 itself has limited catalytic activity, it provides structural support and substrate recognition for METTL3, ensuring proper deposition of m6A marks. These modifications fine-tune RNA metabolism by controlling mRNA export, degradation, and translation efficiency. METTL14 also influences RNA-binding protein recruitment and alternative splicing events linked to cell differentiation and stress response.

The METTL14 gene is located on chromosome 4q26 and is ubiquitously expressed in proliferating and differentiating tissues, with elevated levels in liver, brain, and hematopoietic cells. Its expression is dynamically regulated during development and by signaling pathways that control epitranscriptomic remodeling. METTL14 localizes to nuclear speckles, where it associates with WTAP, VIRMA, and RBM15 within the m6A methyltransferase complex.

Pathologically, dysregulation of METTL14 expression contributes to cancer progression, metabolic disorders, and developmental abnormalities. Overexpression enhances tumor cell proliferation and metastasis by stabilizing oncogenic mRNAs, while loss of METTL14 activity can impair stem cell differentiation and promote inflammatory signaling. Variants in METTL14 are also linked to cardiac and neurodevelopmental diseases through altered m6A-dependent gene regulation. Research using METTL14 antibody supports studies in RNA epigenetics, transcriptional control, and cellular stress adaptation.

METTL14 antibody is validated for use in relevant research applications to study RNA methylation and m6A-dependent gene regulation. NSJ Bioreagents provides METTL14 antibody reagents optimized for investigations in epitranscriptomic regulation, mRNA metabolism, and transcriptional control mechanisms.

Application Notes

The stated application concentrations are suggested starting points. Titration of the METTL14 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 2-36 from the N-terminal region of the human protein was used as the immunogen for the METTL14 antibody.

Storage

Aliquot the METTL14 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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