Human α-N-terminal Methyltransferase 1A/ METTL11A Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7159

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human α-N-terminal Methyltransferase 1A/METTL11A in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human α-N-terminal Methyltransferase 1A/METTL11A Thr2-Arg223 Accession # Q9BV86
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

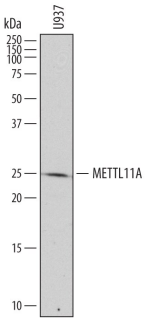
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below

DATA

Western Blot



Detection of Human α-N-terminal Methyltransferase 1A/ METTL11A by Western Blot.
Western blot shows lysates of U937 human histiocytic lymphoma cell line. PVDF membrane was probed with 2 µg/mL of Sheep Anti-Human α-N-terminal Methyltransferase 1A/METTL11A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7159) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for α-N-terminal Methyltransferase 1A/ METTL11A at approximately 25 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

METTL11A, also named N-terminal RCC1 methyltransferase (NRMT), is an alpha-N-methyltransferase that methylates the N-terminal amino group of target proteins containing the N-terminal motif [Ala/Pro/Ser]-Pro-Lys when the initiator Met is cleaved (1). It is responsible for N-terminal methylation of RCC1, KLHL31, MYL2, MYL3, RB1, RPL23A and SET. NRMT lacks a SET domain but possesses a Rossman-like a/b fold. The residues Asn169, Asp178, Asp181, and Ser183 of NRMT are important for substrate binding (2). RCC1 (Ran guanine nucleotide-exchange factor) is the first protein for which any biological function of alpha-N-methylation by NRMT has been identified (3, 4). The multi-spindle phenotype associated with either NRMT knockdown or methylation-defective RCC1 mutants demonstrated the importance of alpha-N-methylation of RCC1 for normal bipolar spindle formation and chromosome aggregation (2). NRMT is robustly overexpressed in gastrointestinal cancers.

References:

1. Webb, K. J. *et al.* (2010) Biochemistry **49**:5225.
2. Christine, S. E. *et al.* (2010) Nature **466**:1125.
3. Chen, T. *et al.* (2007) Nature Cell Biol. **9**:596.
4. Hao, Y. *et al.* (2008) J. Cell. Biol. **182**:827.

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