

#### DESCRIPTION

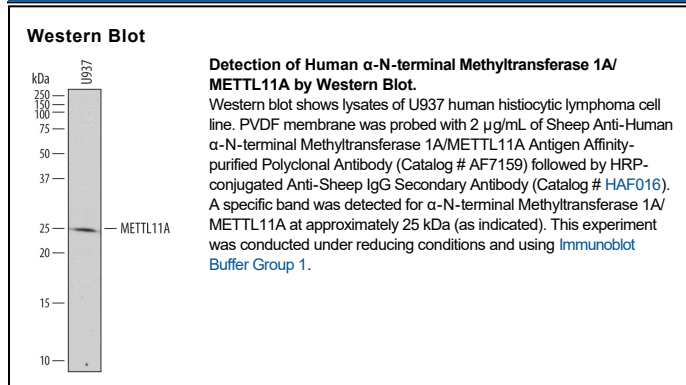
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human $\alpha$ -N-terminal Methyltransferase 1A/METTL11A in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human $\alpha$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

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	2 $\mu$ g/mL	See Below

#### DATA



#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	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 $^{\circ}$ C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 <math>^{\circ}</math>C as supplied.</li> <li>• 1 month, 2 to 8 <math>^{\circ}</math>C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 <math>^{\circ}</math>C under sterile conditions after reconstitution.</li> </ul>

#### 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.