

## Recombinant METTL11A (NTMT1) protein

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**Catalog No:** 81029, 81729

**Lot No:** 23717001

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Concentration:** 0.2 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant METTL11A / NTMT1 protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100 and 0.5 mM TCEP.

**Background:** METTL11A (Methyltransferase-Like Protein 11A) / NTMT1 (N-Terminal Xaa-Pro-Lys N-Methyltransferase 1), also known as NRMT1 or NTM1A, is a distributive alpha-N-methyltransferase that methylates the N-terminus of target proteins containing the N-terminal motif [Ala/Gly/Pro/Ser]-Pro-Lys when the initiator Met is cleaved. It specifically catalyzes mono-, di- or tri-methylation of the exposed alpha-amino group of the Ala, Gly or Ser residue in the [Ala/Gly/Ser]-Pro-Lys motif and mono- or di-methylation of Pro in the Pro-Pro-Lys motif. Some of the substrates may be primed by METTL11B-mediated monomethylation. METTL11A catalyzes the trimethylation of the N-terminal Gly in CENPA (after removal of Met- 1). It is also responsible for the N-terminal methylation of KLHL31, MYL2, MYL3, RB1, RCC1, RPL23A and SET. And it is required during mitosis for normal bipolar spindle formation and chromosome segregation via its action on RCC1.

**Protein Details:** Recombinant METTL11A / NTMT1 protein was expressed in a baculovirus expression system as the full length protein (accession number NP\_054783.2) with an N-terminal FLAG tag. The molecular weight of the protein is 27 kDa.

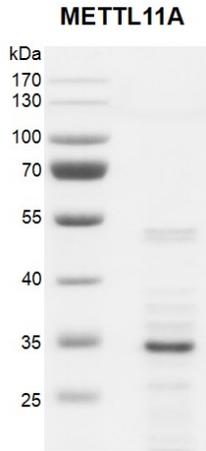
**Application Notes:** This protein is suitable for use in binding assays, inhibitor screening, and selectivity profiling.

N-terminal Methylation Assay Conditions: 3 µM CENP-A peptide (GPRRRSRKPEAPRRR) was incubated with 50 nM METTL11A protein in reaction buffer including 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl<sub>2</sub>, 1 mM TCEP, 50 µM SAM for 2 hours at room temperature. Activity was detected by MALDI-TOF.

\* represents an uncertainty peak.

Capacity ability: 60 turnovers / enzyme molecule

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

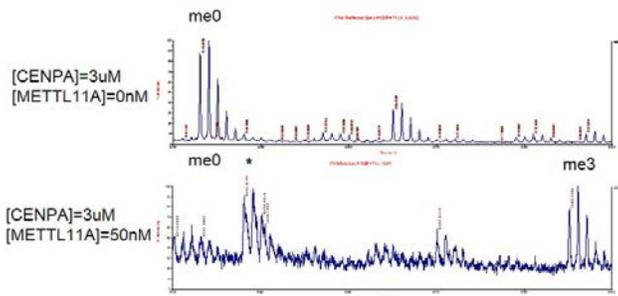


**Recombinant METTL11A / NTMT1 protein gel**

10% SDS-PAGE Coomassie staining

MW: 27 kDa

Purity: >80%



**MALDI-TOF assay for METTL11A protein activity**

CENP-A peptide was incubated with METTL11A protein in reaction buffer for 2 hours at room temperature. Activity was detected by MALDI-TOF.

\* represents an uncertainty peak. Capacity ability: 60 turnovers / enzyme molecule