

Recombinant METTL1 / WDR4 complex



Catalog No: 81206, 81906

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Concentration: 0.25 µg/µl

Source: Human

Buffer Contents: Recombinant METTL1 / WDR4 Complex is supplied in 25 mM HEPESNaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP.

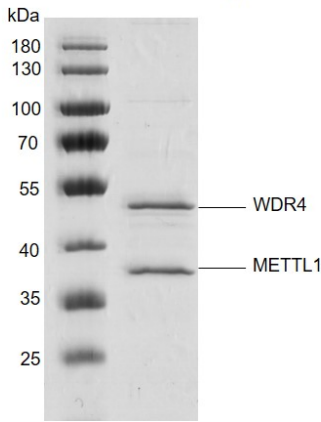
Background: WDR4 (WD Repeat-Containing Protein 4), also known as TRM82, is a member of the WD repeat protein family. WD repeats are minimally conserved regions of approximately 40 amino acids typically bracketed by gly-his and trp-aspartate (GH-WD), which may facilitate formation of heterotrimeric or multiprotein complexes. METTL1 (Methyltransferase-Like Protein 1), also known as TRM8, contains a conserved S-adenosylmethionine-binding motif and is inactivated by the protein kinase B (PKB) and ribosomal S6 kinase (RSK) under growth factor stimulation. WDR4 and METTL1 that form a complex are required for tRNA (guanine(46)-N(7))-methyltransferase activity. More than 90 different modified nucleosides have been identified in tRNA. Among the tRNA modifications, the 7-methylguanosine (m7G) modification is found widely in eubacteria, eukaryotes, and a few archaea. In most cases, the m7G modification occurs at position 46 in the variable region and is a product of tRNA (m7G46) methyltransferase. The m7G46 modification forms a tertiary base pair with C13-G22, and stabilizes the tRNA structure.

Protein Details: Recombinant METTL1 / WDR4 Complex that includes full length human WDR4 protein (accession number NP_061139.2) and full length human METTL1 protein (accession number NP_005362.3) with an N-terminal FLAG-Tag was expressed in a baculovirus expression system. The molecular weights of WDR4 and METTL1 are 45.5 kDa and 32.7 kDa, respectively.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data this product is shown.

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.

METTL1 / WDR4 Complex



Recombinant METTL1 / WDR4 Complex

10% SDS-PAGE with Coomassie blue staining

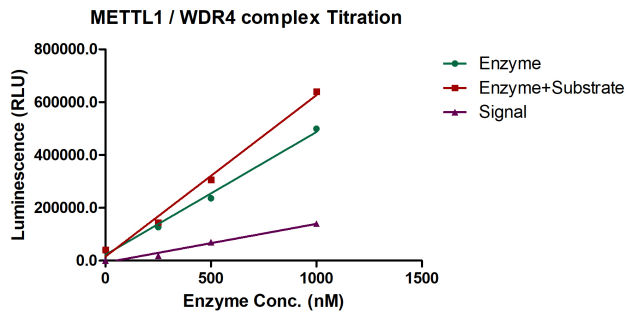
MW of WDR4: 45.5 kDa

MW of METTL1: 32.7 kDa

Purity: >92%

MTase-Glo assay for METTL1 / WDR4 Complex methyltransferase activity.

1 μ M Substrate RNA and 1 μ M SAM was incubated with different concentrations of METTL1 / WDR4 Complex in 8 μ l reaction system containing 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl₂, 1 mM TCEP at room temperature for 1 hour (0.2 U/ μ l RRI was added in this system). 5 \times MTase-Glo Reagent was added to the products and incubated for 30 min. Then MTase-Glo Detection was added, and luminescence read after another 30 min incubation.



MTase-Glo assay for METTL1 / WDR4 Complex methyltransferase activity.

1 μ M Substrate RNA and 1 μ M SAM was incubated with different concentrations of METTL1 / WDR4 Complex in 8 μ l reaction system containing 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl₂, 1 mM TCEP at room temperature for 1 hour (0.2 U/ μ l RRI was added in this system). 5 \times MTase-Glo Reagent was added to the products and incubated for 30 min. Then MTase-Glo Detection was added, and luminescence read after another 30 min incubation.

