

KMT2A recombinant protein

Recombinant KMT2A (MLL1) complex

CATALOG #
AAA59674

HOST
E Coli

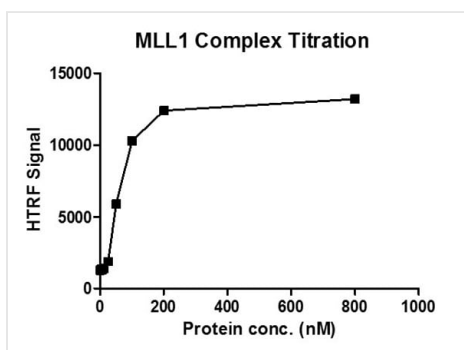
PRODUCT SYNONYMS

KMT2A; Recombinant KMT2A (MLL1) complex; KMT2A recombinant protein

PRODUCT SPECIFICATIONS

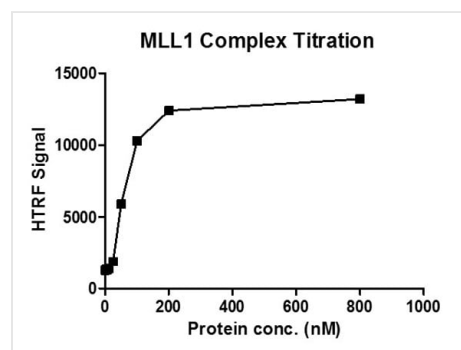
Host	E Coli
Purity/Purification	The recombinant protein is >95% pure by SDS-PAGE.
Form/Format	Full length Recombinant KMT2A (MLL1) complex is supplied in 25mM Tris pH8.0, 300mM NaCl, 5% Glycerol and 0.04% Triton X-100. Please refer to product insert upon arrival for lot-specific concentration.
Protein Species	Human
Tag	GST-Tag, His-Tag
Notes	Recombinant KMT2A (MLL1) complex is suitable for use in enzyme kinetics, inhibitor screening, and selectivity profiling. Specific Activity: H3K4 methyltransferase Catalytic Ability: ~300 turnovers/ enzyme molecule HMT Assay Conditions: 3.3uM H3K4me0 (1-21aa) peptide was incubated with different concentration of Recombinant KMT2A (MLL1) complex in reaction buffer containing 50mM TrisCl pH 8.6, 0.02% Triton X-100, 2mM MgCl2, 1mM TCEP, 100uM SAM for 3 hours at room temperature. Activity was detected by HTRF and MALDI-TOF.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



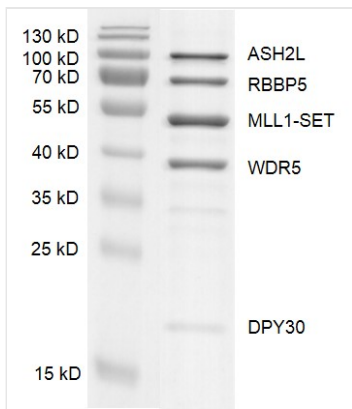
Application Data

Recombinant KMT2A (MLL1) complex activity assay. 3.3 μ M H3K4me0 (1-21aa) peptide was incubated with MLL1 complex in reaction buffer for 3 hour at room temperature. MLL1 complex was used in a HTRF assay to determine enzyme linearity. Methylated peptide (H3K4me2) was measured using H3K4me2-specific antibody.



Application Data

Recombinant KMT2A (MLL1) complex activity assay. 3.3 μ M H3K4me0 peptide was incubated with 10 nM MLL1 complex in reaction buffer for 3 hours at room temperature. The reaction product was detected by MALDI-TOF. Single 3.3 μ M H3K4me0 peptide was used as negative control.



SDS-PAGE

Recombinant KMT2A (MLL1) complex gel. Recombinant MLL1 complex was run on an 12% SDS-PAGE gel and stained with Coomassie blue.

ADDITIONAL INFORMATION

Related Product Information for KMT2A recombinant protein	Short Description: Recombinant KMT2A (MLL1) complex contains amino acids 3735-3973 of the human MLL1 protein (accession number NP_001184033.1) with N-terminal GST-Tag and MW = 53.7 kDa; full-length human WDR5 (accession number NM_017588), with N-terminal 6xHis-tag and MW = 35 kDa; full-length human ASH2L (accession number NM_001105214), N-terminal 6xHis-tag and MW = 61 kDa; full-length human RbBP5 (accession number NM_005057), N-terminal 6xHis-tag and MW = 60 kDa, and full-length human DPY30 (accession number NM_032574), N-terminal 6xHis-tag and MW = 12 kDa, all individually expressed in E Coli. The recombinant protein is >=95% pure by SDS-PAGE. It is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling. Background: Recombinant KMT2A (MLL1) complex (myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog 1, Drosophila)), also known as Histone-lysine N-methyltransferase HRX, is a histone methyltransferase that plays an essential role in early development and hematopoiesis. Catalytic subunit of the MLL1 /MLL complex, a multiprotein complex that mediates both methylation of 'Lys-4' of histone H3 (H3K4me) complex and acetylation of 'Lys-16' of histone H4 (H4K16ac). In the MLL1/MLL complex, it specifically mediates H3K4me, a specific tag for epigenetic transcriptional activation. Has weak methyltransferase activity by itself, and requires other component of the MLL1/MLL complex to obtain full methyltransferase activity. Has no activity toward histone H3 phosphorylated on 'Thr-3', less activity toward H3 dimethylated on 'Arg-8' or 'Lys-9', while it has higher activity toward H3 acetylated on 'Lys-9'. Required for transcriptional activation of HOXA9. Promotes PPP1R15A-induced apoptosis.
Product Categories/Family for KMT2A recombinant protein	Recombinant Proteins ; Histone Methyltransferase (HMT)

NCBI AND UNIPROT INFORMATION

NCBI GI #	308199413
NCBI GeneID	4297
NCBI Accession #	NP_001184033.1
NCBI GenBank Nucleotide #	NM_017588
UniProt Accession #	Q03164; Q13743; Q13744; Q14845; Q16364; Q59FF2; Q6UBD1; Q9HBJ3; Q9UD94; Q9UMA3; E9PQG7
Molecular Weight	431,764 Da
NCBI Official Full Name	histone-lysine N-methyltransferase 2A isoform 1
NCBI Official Synonym Full Names	lysine (K)-specific methyltransferase 2A
NCBI Official Symbol	KMT2A
NCBI Official Synonym Symbols	HRX; MLL; TRX1; ALL-1; CXXC7; HTRX1; MLL1A; WDSTS; MLL/GAS7; TET1-MLL

NCBI Protein Information	histone-lysine N-methyltransferase 2A; trithorax-like protein; CDK6/MLL fusion protein; MLL/GAS7 fusion protein; MLL/GMPS fusion protein; zinc finger protein HRX; MLL-AF4 der(11) fusion protein; CXXC-type zinc finger protein 7; myeloid/lymphoid or mixed-l
UniProt Protein Name	Histone-lysine N-methyltransferase 2A
UniProt Gene Name	KMT2A
UniProt Synonym Gene Names	ALL1; CXXC7; HRX; HTRX; MLL; MLL1; TRX1; Lysine N-methyltransferase 2A; p320; p180
UniProt Entry Name	KMT2A_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/kmt2a-recombinant-protein-e-coli/59674>