

Recombinant KMT2B (MLL4)-SET protein

Catalog No: 31422, 31822**Lot No:** 14915002**Expressed In:** *E. coli***Quantity:** 50 µg**Concentration:** 1 µg/µl**Source:** Human

Buffer Contents: 20 µg of recombinant KMT2B (MLL4)-SET protein expressed in *E. coli* and supplied in 25 mM Tris pH 8.0, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100.

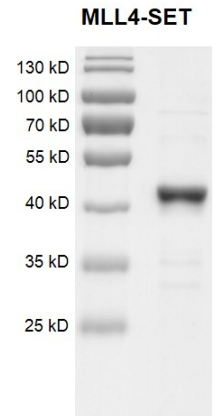
Background: KMT2B (MLL4, Myeloid/lymphoid or mixed-lineage leukemia)-SET is a Trithorax-group protein that function collectively to promote gene expression. KMT2B (MLL4)-SET is a histone methyltransferase that methylates the Lysine 4 position of histone H3. In particular, the **SET** domain is a conserved C-terminal domain that characterizes proteins of the MLL (mixed-lineage leukemia) family. The SET domain is responsible for its histone methyltransferase activity which mediates chromatin modifications associated with epigenetic transcriptional activation. H3K4 methylation represents a specific epigenetic tag for transcriptional activation. KMT2B (MLL4)-SET plays a central role in β-globin locus transcription regulation by being recruited by Nfe2. KMT2B (MLL4)-SET is also required during the transcriptionally active period of oocyte growth for the establishment and/or maintenance of bulk H3K4 trimethylation (H3K4me3), global transcriptional silencing that precedes resumption of meiosis, oocyte survival and normal zygotic genome activation. KMT2B (MLL4)-SET may also be involved in human cancer as its expression has been shown to be upregulated in solid tumor cell lines.

Protein Details: The peptide corresponding to amino acids 2551 - 2715 of the KMT2B (MLL4)-SET protein (accession number NP_055542.1) was expressed in *E. coli*. The peptide contains the SET domain of MLL4 that is responsible for methyltransferase activity. Recombinant KMT2B (MLL4)-SET contains an N-terminal GST-Tag with a molecular weight of 45.2 kDa.

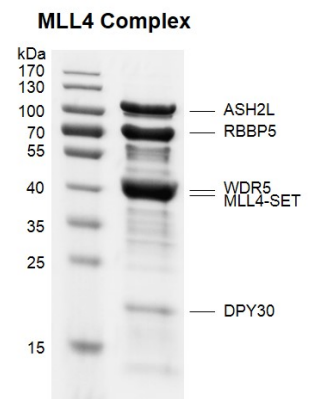
Application Notes: Recombinant KMT2B (MLL4)-SET is suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

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 guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

**Recombinant KMT2B (MLL4)-SET protein gel.**

KMT2B (MLL4)-SET protein was run on a 10% SDS-PAGE gel and stained with Coomassie Blue.

**Recombinant KMT2B (MLL4)-SET protein gel.**

KMT2B (MLL4)-SET was incubated 4 equimolar components of the MLL4 complex (ASH2L, RBBP5, WDR5 and DPY30) for 2 hours at 4°C. All the components were pulled down by GST beads. The sample was run on a 10% SDS-PAGE gel and stained with Coomassie Blue.