

MLL (R3864) polyclonal antibody

Catalog: BCP01103

Host: Rabbit

Reactivity: Human,Mouse,Rat

BackGround:

The Set1 histone methyltransferase protein was first identified in yeast as part of the Set1/COMPASS histone methyltransferase complex, which methylates histone H3 at Lys4 and functions as a transcriptional co-activator. While yeast contain only one known Set1 protein, mammals contain six Set1-related proteins: SET1A, SET1B, MLL1, MLL2, MLL3, and MLL4, all of which assemble into COMPASS-like complexes and methylate histone H3 at Lys4. These Set1-related proteins are each found in distinct protein complexes, all of which share the common subunits WDR5, RBBP5, ASH2L, CXXC1 and DPY30, which are required for proper complex assembly and modulation of histone methyltransferase activity. MLL1 and MLL2 complexes contain the additional protein subunit, menin. MLL1 functions as a master regulator of both embryogenesis and hematopoiesis, and is required for proper expression of Hox genes. MLL1 is a large, approximately 4000 amino acid, protein that is cleaved by the caspase 1 threonine endopeptidase to form N-terminal (MLL1-N) and C-terminal MLL1 (MLL1-C) fragments, both of which are subunits of the functional MLL1/COMPASS complex. MLL1-N, MLL1-C, WDR5, RBBP5 and ASH2L define the core catalytic component of the MLL1/COMPASS complex, which is recruited to target genes and methylates histone H3 lysine 4 to regulate transcriptional initiation. At least 60 different MLL1 translocation partners have been molecularly characterized and associated with various hematological malignancies. The most common translocation partners include AF4, AF9, ENL, AF10, ELL and AF6. With the exception of AF6, all of these partners are nuclear proteins that function to positively regulate transcriptional elongation. AF4, AF9 and ENL are all components of the super elongation complex (SEC), while AF4, AF9, AF10 and ENL all interact with the histone H3 lysine 79 methyltransferase DOT1L. Many MLL1 target genes are normally regulated by promoter-proximal pausing, with the release of RNA polymerase and transcriptional elongation occurring in response to proper stimuli. The association of MLL1

translocation partners with SEC and DOT1L suggest that MLL1-fusion proteins may function to sustain specific gene expression programs by constitutively activating transcriptional elongation.

Product:

Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2

Molecular Weight:

~ 180 kDa

Swiss-Prot:

Q03164

Purification&Purity:

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

Applications:

WB: 1:500~1:1000

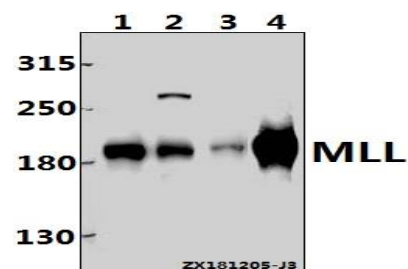
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

MLL (R3864) polyclonal antibody detects endogenous levels of MLL protein.

DATA:



Western blot (WB) analysis of MLL (R3864) polyclonal antibody at 1:500 dilution

Lane1:A549 whole cell lysate(40ug)

Lane2:HuT78 whole cell lysate(40ug)

Lane3:The Heart tissue lysate of Mouse(40ug)

Lane4:The Brain tissue lysate of Rat(40ug)

Note:

For research use only, not for use in diagnostic procedure.

