

**Anti-MLL1 Antibody**  
**Rabbit polyclonal antibody to MLL1**  
**Catalog # AP61295****Specification**

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**Anti-MLL1 Antibody - Product Information**

|                   |  |
|-------------------|--|
| Application       | <b>WB</b>  |
| Primary Accession | <a href="#">O03164</a>                             |
| Other Accession   | <a href="#">P55200</a>                             |
| Reactivity        | <b>Human, Mouse, Rat, Monkey, Pig, Bovine, Dog</b> |
| Host              | <b>Rabbit</b>                                      |
| Clonality         | <b>Polyclonal</b>                                  |
| Calculated MW     | <b>431764</b>                                      |

**Anti-MLL1 Antibody - Additional Information****Gene ID** 4297**Other Names**

ALL1; CXXC7; HRX; HTRX; MLL; MLL1; TRX1; Histone-lysine N-methyltransferase 2A; Lysine N-methyltransferase 2A; ALL-1; CXXC-type zinc finger protein 7; Myeloid/lymphoid or mixed-lineage leukemia; Myeloid/lymphoid or mixed-lineage leukemia protein 1; Trithorax-like protein; Zinc finger protein HRX

**Target/Specificity**

Recognizes endogenous levels of MLL1 protein.

**Dilution**

WB~~WB (1/500 - 1/1000)

**Format**

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**Anti-MLL1 Antibody - Protein Information****Name** KMT2A**Synonyms** ALL1, CXXC7, HRX, HTRX, MLL, MLL1, TRX1**Function**

Histone methyltransferase that plays an essential role in early development and hematopoiesis (PubMed: [12453419](http://www.uniprot.org/citations/12453419)), PubMed: [15960975](http://www.uniprot.org/citations/15960975)),

PubMed:<a href="http://www.uniprot.org/citations/19187761" target="\_blank">19187761</a>, PubMed:<a href="http://www.uniprot.org/citations/19556245" target="\_blank">19556245</a>, PubMed:<a href="http://www.uniprot.org/citations/20677832" target="\_blank">20677832</a>, PubMed:<a href="http://www.uniprot.org/citations/21220120" target="\_blank">21220120</a>, PubMed:<a href="http://www.uniprot.org/citations/26886794" target="\_blank">26886794</a>). 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) (PubMed:<a href="http://www.uniprot.org/citations/12453419" target="\_blank">12453419</a>, PubMed:<a href="http://www.uniprot.org/citations/15960975" target="\_blank">15960975</a>, PubMed:<a href="http://www.uniprot.org/citations/19187761" target="\_blank">19187761</a>, PubMed:<a href="http://www.uniprot.org/citations/19556245" target="\_blank">19556245</a>, PubMed:<a href="http://www.uniprot.org/citations/20677832" target="\_blank">20677832</a>, PubMed:<a href="http://www.uniprot.org/citations/21220120" target="\_blank">21220120</a>, PubMed:<a href="http://www.uniprot.org/citations/24235145" target="\_blank">24235145</a>, PubMed:<a href="http://www.uniprot.org/citations/26886794" target="\_blank">26886794</a>). Catalyzes methyl group transfer from S-adenosyl-L- methionine to the epsilon-amino group of 'Lys-4' of histone H3 (H3K4) via a non-processive mechanism. Part of chromatin remodeling machinery predominantly forms H3K4me1 and H3K4me2 methylation marks at active chromatin sites where transcription and DNA repair take place (PubMed:<a href="http://www.uniprot.org/citations/12453419" target="\_blank">12453419</a>, PubMed:<a href="http://www.uniprot.org/citations/15960975" target="\_blank">15960975</a>, PubMed:<a href="http://www.uniprot.org/citations/19187761" target="\_blank">19187761</a>, PubMed:<a href="http://www.uniprot.org/citations/19556245" target="\_blank">19556245</a>, PubMed:<a href="http://www.uniprot.org/citations/20677832" target="\_blank">20677832</a>, PubMed:<a href="http://www.uniprot.org/citations/21220120" target="\_blank">21220120</a>, PubMed:<a href="http://www.uniprot.org/citations/25561738" target="\_blank">25561738</a>, PubMed:<a href="http://www.uniprot.org/citations/26886794" target="\_blank">26886794</a>). Has weak methyltransferase activity by itself, and requires other component of the MLL1/MLL complex to obtain full methyltransferase activity (PubMed:<a href="http://www.uniprot.org/citations/19187761" target="\_blank">19187761</a>, PubMed:<a href="http://www.uniprot.org/citations/26886794" target="\_blank">26886794</a>). 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' (PubMed:<a href="http://www.uniprot.org/citations/19187761" target="\_blank">19187761</a>). Binds to unmethylated CpG elements in the promoter of target genes and helps maintain them in the nonmethylated state (PubMed:<a href="http://www.uniprot.org/citations/20010842" target="\_blank">20010842</a>). Required for transcriptional activation of HOXA9 (PubMed:<a href="http://www.uniprot.org/citations/12453419" target="\_blank">12453419</a>, PubMed:<a href="http://www.uniprot.org/citations/20010842" target="\_blank">20010842</a>, PubMed:<a href="http://www.uniprot.org/citations/20677832" target="\_blank">20677832</a>). Promotes PPP1R15A-induced apoptosis (PubMed:<a href="http://www.uniprot.org/citations/10490642" target="\_blank">10490642</a>). Plays a critical role in the control of circadian gene expression and is essential for the transcriptional activation mediated by the CLOCK-BMAL1 heterodimer (By similarity). Establishes a permissive chromatin state for circadian transcription by mediating a rhythmic methylation of 'Lys-4' of histone H3 (H3K4me) and this histone modification directs the circadian acetylation at H3K9 and H3K14 allowing the recruitment of CLOCK-BMAL1 to chromatin (By similarity). Also has auto-methylation activity on Cys-3882 in absence of histone H3 substrate (PubMed:<a href="http://www.uniprot.org/citations/24235145" target="\_blank">24235145</a>).

### Cellular Location

Nucleus [MLL cleavage product C180]: Nucleus. Note=Localizes to a diffuse nuclear pattern when not associated with MLL cleavage product N320

### Tissue Location

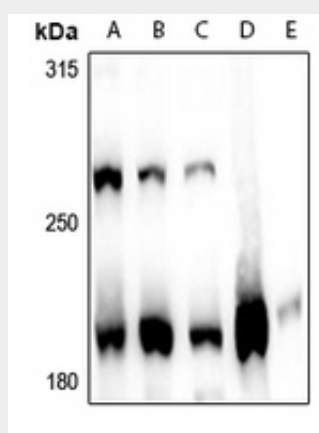
Heart, lung, brain and T- and B-lymphocytes.

## Anti-MLL1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-MLL1 Antibody - Images



Western blot analysis of MLL1 expression in K562 (A), A375 (B), U87MG (C), mouse brain (D), rat spleen (E) whole cell lysates.

## Anti-MLL1 Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human MLL1. The exact sequence is proprietary.