

Rabbit KMT2A/MLL Polyclonal Antibody | anti-KMT2A antibody

KMT2A/MLL Antibody

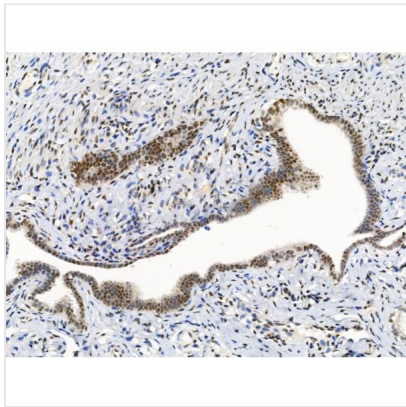
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31234	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig(88%), Bovine(88%), Horse(100%), Dog(100%), Chicken(88%)	ELISA

PRODUCT SYNONYMS

KMT2A/MLL; Polyclonal Antibody; KMT2A/MLL Antibody; ALL-1; ALL1; C-terminal cleavage product of 180 kDa; CXXC-type zinc finger protein 7; CXXC7; HRX; HTRX1; KMT2A; Lysine N-methyltransferase 2A; Mll; MLL cleavage product C180; MLL1; MLL1_HUMAN; MLL1A; N-terminal cleavage product of 320 kDa; p180; p320; Trithorax-like protein; TRX1; Zinc finger protein HRX; anti-KMT2A antibody

PRODUCT SPECIFICATIONS

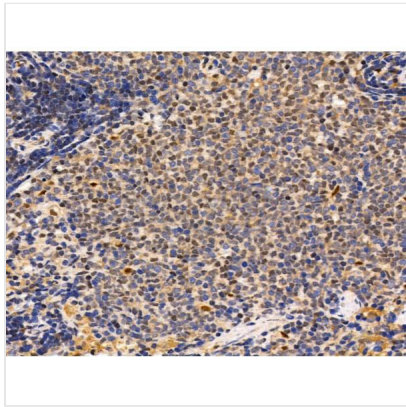
Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig(88%), Bovine(88%), Horse(100%), Dog(100%), Chicken(88%)
Clonality	Polyclonal
Isotype	IgG
Specificity	KMT2A / MLL Antibody detects endogenous levels of total KMT2A / MLL.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific).
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol
Concentration	1mg/ml (varies by lot)
Sequence Length	3969
Applicable Applications for anti-KMT2A antibody	ELISA
Application Notes	WB: 1:500-1:2000 IHC: 1:50-1:200 ELISA(peptide): 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human KMT2A / MLL, corresponding to a region within the internal amino acids.
Fragment	Fab fragment
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



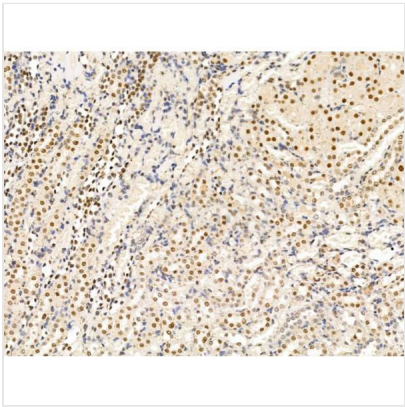
IHC (Immunohistochemistry-Paraffin)
AAA31234 at 1/100 staining Human kidney cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



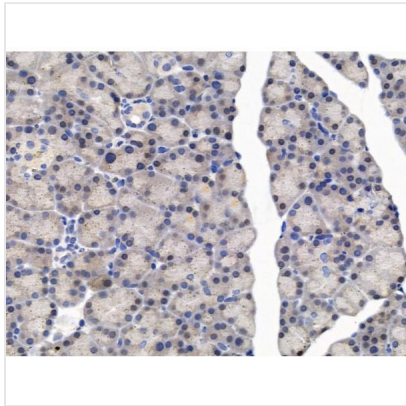
IHC (Immunohistochemistry-Paraffin)
AAA31234 at 1/100 staining Mouse brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



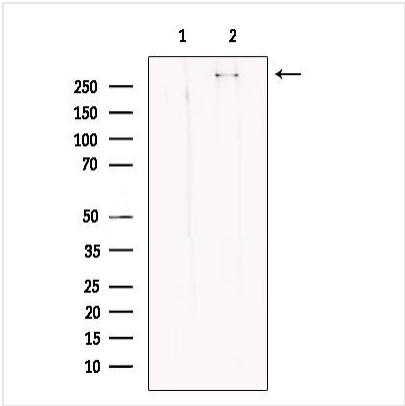
IHC (Immunohistochemistry-Paraffin)
AAA31234 at 1/100 staining Rat spleen tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry-Paraffin)
AAA31234 at 1/100 staining Rat brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry-Paraffin)
AAA31234 at 1/100 staining Rat stomach tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4Â°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of extracts from K562, using KMT2A / MLL Antibody. The lane on the left was treated with blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-KMT2A antibody	Function: 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 (PubMed:12453419, PubMed:20677832, PubMed:26886794). Has weak methyltransferase activity by itself, and requires other component of the MLL1/MLL complex to obtain full methyltransferase activity (PubMed:19187761, PubMed:26886794). 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'. Binds to unmethylated CpG elements in the promoter of target genes and helps maintain them in the nonmethylated state (PubMed:20010842). Required for transcriptional activation of HOXA9 (PubMed:12453419, PubMed:20677832, PubMed:20010842). Promotes PPP1R15A-induced apoptosis. Plays a critical role in the control of circadian gene expression and is essential for the transcriptional activation mediated by the CLOCK-ARNTL/BMAL1 heterodimer. 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-ARNTL/BMAL1 to chromatin (By similarity). Post Translational Modifications: Proteolytic cleavage by TASP1 generates MLL cleavage product N320 and MLL cleavage product C180, which reassemble through a non-covalent association. 2 cleavage sites exist, cleavage site 1 (CS1) and cleavage site 2 (CS2), to generate MLL cleavage products N320 and C180. CS2 is the major site. Phosphorylation increases its interaction with PSIP1. Subcellular Location: Nucleus. Nucleus. Nucleus. Note: Localizes to a diffuse nuclear pattern when not associated with MLL cleavage product N320. Tissue Specificity: Heart, lung, brain and T- and B-lymphocytes. Subunit Structure: MLL cleavage product N320 heterodimerizes with MLL cleavage product C180 (via SET and FYRC domains). Component of some MLL1/MLL complex, at least composed of the core components KMT2A/MLL1, ASH2L, HCFC1/HCF1, HCFC2, WDR5, DPY30 and RBBP5, as well as the facultative components BAP18, CHD8, E2F6, HSP70, INO80C, KANSL1, LAS1L, MAX, MCRC1, MEN1, MGA, KAT8/MOF, PELP1, PHF20, PRP31, RING2, RUVB1/TIP49A, RUVB2/TIP49B, SENP3, TAF1, TAF4, TAF6, TAF7, TAF9 and TEX10 (PubMed:15199122, PubMed:15960975, PubMed:17500065, PubMed:19556245, PubMed:19187761, PubMed:26886794). Interacts (via WIN motif) with WDR5; the interaction is direct (PubMed:19556245, PubMed:18829459, PubMed:22665483, PubMed:18840606). Interaction with WDR5 is required for stable interaction with ASH2L and RBBP5, and thereby also for optimal histone methyltransferase activity (PubMed:26886794). Interacts with KAT8/MOF; the interaction is direct (PubMed:15960975). Interacts with SBF1 and PPP1R15A (PubMed:9537414, PubMed:10490642). Interacts with ZNF335 (PubMed:23178126). Interacts with CLOCK and ARNTL/BMAL1 in a circadian manner (By similarity). Interacts with PPIE; this results in decreased histone H3 methyltransferase activity (PubMed:20677832, PubMed:20541251). Interacts with CREBBP (PubMed:16253272). Interacts with the WRAD complex composed of WDR5, RBBP5, ASH2L and DPY30 (PubMed:22665483). Interacts (via MBM motif) with MEN1 (PubMed:22936661, PubMed:22327296, PubMed:25305204). Interacts (via IBM motifs) with PSIP1 (via IBD domain) with moderate affinity whereas the KMT2A-MEN1 complex interacts with a greater affinity; MEN1 enhances interaction of KMT2A with PSIP1 (PubMed:22327296, PubMed:25305204, PubMed:25082813, PubMed:29997176). Phosphorylation increases its affinity for PSIP1 (PubMed:29997176). Forms a complex with CREBBP and CREB1 (PubMed:23651431). Similarity: The 9aaTAD motif is a transactivation domain present in a large number of yeast and animal transcription factors. The SET domain structure is atypical and is not in an optimal position to have methyltransferase activity. It requires other components of the MLL1/MLL complex, such as ASH2L or RBBP5, to order the active site and obtain optimal histone methyltransferase activity. The CXXC-type zinc finger binds to DNA sequence elements containing unmethylated CpG dinucleotides. The third PHD-type zinc-finger binds both trimethylated histone H3K4me3 and PPIE; histone and PPIE bind to distinct surfaces (PubMed:20677832, PubMed:20541251). Nevertheless, PPIE binding and histone binding are mutually inhibitory (PubMed:20677832). Isomerization of a peptidylproline bond in the linker between the third PHD-type zinc-finger and the bromo domain disrupts the interaction between the bromo domain and the third PHD-type zinc-finger, and thereby facilitates interaction with PPIE (PubMed:20541251). Belongs to the class V-like SAM-binding methyltransferase superfamily. Histone-lysine methyltransferase family. TRX/MLL subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	146345435
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NCBI GeneID	4297
UniProt Accession #	Q03164
Molecular Weight	Observed Molecular Weight: (Observed)431kD. Predicted Molecular Weight: (Calculated)432kDa.
NCBI Official Full Name	Histone-lysine N-methyltransferase 2A
NCBI Official Synonym Full Names	lysine methyltransferase 2A
NCBI Official Symbol	KMT2A
NCBI Official Synonym Symbols	HRX; MLL; MLL1; TRX1; ALL-1; CXXC7; HTRX1; MLL1A; WDSTS
NCBI Protein Information	histone-lysine N-methyltransferase 2A
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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/kmt2a-ml-antibody-elisa/31234>