10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KMT4 / Dot1L Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1198b

Specification

KMT4 / Dot1L Antibody (C-Term) - Product Information

Application	**IHC-P,E**
Primary Accession	Q8TEK3
Other Accession	NP_115871
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**1390-1420**

KMT4 / Dot1L Antibody (C-Term) - Additional Information

Gene ID 84444

Other Names
Histone-lysine N-methyltransferase, H3 lysine-79 specific, DOT1-like protein, Histone H3-K79 methyltransferase, H3-K79-HMTase, Lysine N-methyltransferase 4, DOT1L, KIAA1814, KMT4

Target/Specificity
This KMT4 / Dot1L antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1390~1420 amino acids from the C-terminal region of human DOT1L.

Dilution
IHC-P~~1:50~100
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
KMT4 / Dot1L Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

KMT4 / Dot1L Antibody (C-Term) - Protein Information

Name DOT1L (HGNC:24948)

Synonyms KIAA1814, KMT4

Function Histone methyltransferase. Methylates 'Lys-79' of histone H3. Nucleosomes are preferred as substrate compared to free histones (PubMed:12123582). Binds to DNA (PubMed:12628190).

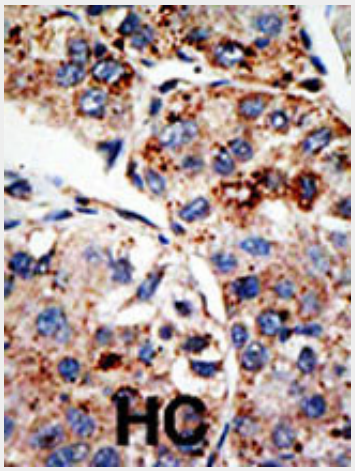
Cellular Location
Nucleus.

KMT4 / Dot1L Antibody (C-Term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KMT4 / Dot1L Antibody (C-Term) - Images



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

KMT4 / Dot1L Antibody (C-Term) - Background

Similar to acetylation and phosphorylation, histone methylation at the N-terminal tail has emerged as an important role in regulating chromatin dynamics and gene activity. Histone methylation occurs on arginine and lysine residues and is catalyzed by two families of proteins, the protein arginine methyltransferase family and the SET-domain-containing methyltransferase family. Five members have been identified in the arginine methyltransferase family. About 27 are grouped into the SET-domain family, and another 17 make up the PR domain family that is related to the SET domain family. The retinoblastoma protein-interacting zinc finger geneRIZ1 is a tumor suppressor gene and a FOUNDING member of the PR domain family. RIZ1 inactivation is commonly found in many types of human cancers and occurs through loss of mRNA expression, frame shift mutation, chromosomal deletion, and missense mutation. RIZ1 is also a tumor susceptibility gene in mice. The

loss of RIZ1 mRNA in human cancers was shown to associate with DNA methylation of its promoter CpG island. Methylation of the RIZ1 promoter strongly correlated with lost or decreased RIZ1 mRNA expression in breast, liver, colon, and lung cancer cell lines as well as in liver cancer tissues.

KMT4 / Dot1L Antibody (C-Term) - References

Feng, Q., et al., Curr. Biol. 12(12):1052-1058 (2002).

KMT4 / Dot1L Antibody (C-Term) - Citations

- DOT1L regulates dystrophin expression and is critical for cardiac function.