
Product Name: KD-Validated DNA Methyltransferase 1 Recombinant Rabbit Monoclonal Antibody**Catalog #: KVA00803**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 183.2kDa

Antigen Information

Gene Name	DNMT1
Alternative Names	DNMT1; DNA Methyltransferase 1; CXXC9; MCMT; DNMT; DNA (Cytosine-5)-Methyltransferase 1; DNA (Cytosine-5)-Methyltransferase 1; CXXC-Type Zinc Finger Protein 9; DNA Methyltransferase Hsa1; DNA MTase Hsa1; EC 2.1.1.37; M.Hsa1; AIM; ADCADN; HSN1E; Dnmt1
Gene ID	1786.0
SwissProt ID	P26358
Immunogen	A synthesized peptide derived from human Dnmt1

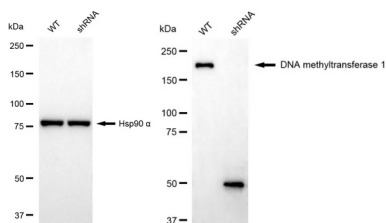
Background

This gene encodes an enzyme that transfers methyl groups to cytosine nucleotides of genomic DNA. This protein is the major enzyme responsible for maintaining methylation patterns following DNA replication and shows a preference for hemi-methylated DNA. Methylation of DNA is an important component of mammalian epigenetic gene regulation. Aberrant methylation patterns are found in human tumors and associated with developmental abnormalities. Variation in this gene has been associated with cerebellar ataxia, deafness, and narcolepsy, and neuropathy, hereditary sensory, type IE. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2016]

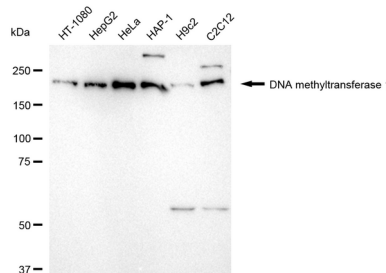
Research Area

Epigenetics and Nuclear Signaling

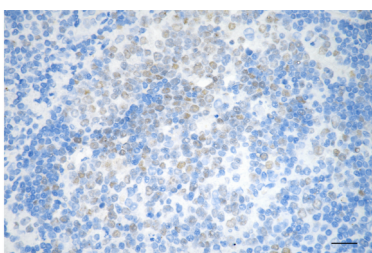
Image Data



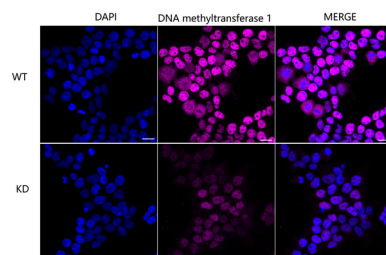
Western blotting analysis using DNA methyltransferase 1 antibody (KVA00803). DNA methyltransferase 1 expression in wild type (WT) and DNA methyltransferase 1 (DNMT1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with DNA methyltransferase 1 antibody (KVA00803, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



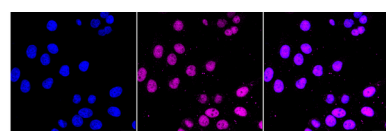
Western blotting analysis using DNA methyltransferase 1 antibody (KVA00803). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with DNA methyltransferase 1 antibody (KVA00803, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunohistochemistry was performed on paraffin-embedded human tonsillitis using DNA methyltransferase 1 antibody (KVA00803, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.

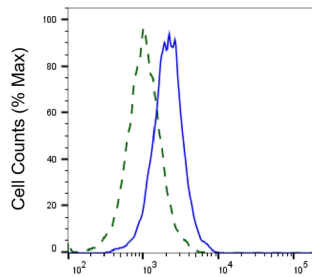


Immunocytochemical staining of HeLa cells using DNA methyltransferase 1 antibody (KVA00803, 1:1,000), Top panel: wild-type (WT); Bottom panel: DNA methyltransferase 1 shRNA knockdown (KD). Nuclei were stained blue with DAPI; DNA methyltransferase 1 was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm. Permeabilization: Triton.



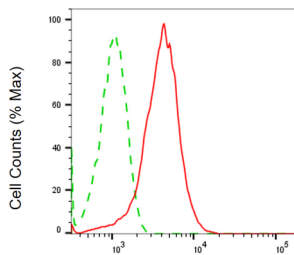
Immunocytochemical staining of HepG2 cells with DNA methyltransferase 1 antibody (KVA00803, 1:1,000). Nuclei were stained blue with DAPI; DNA methyltransferase 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain:

High. Scale bar: 20 μm .



DNA methyltransferase 1-Alexa Fluor® 647

Validation of DNA methyltransferase 1 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with DNA methyltransferase 1 antibody (KVA00803, 1:2,000) and analyzed using BD flow cytometer.



DNA methyltransferase 1-Alexa Fluor® 647

Flow cytometric analysis of DNA methyltransferase 1 expression in HepG2 cells using DNA methyltransferase 1 antibody (KVA00803, 1:2,000). Green, isotype control; red, DNA methyltransferase 1.