

Phospho-Dnmt1(S1105) Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3780a

Specification

Phospho-Dnmt1(S1105) Antibody - Product Information

Application	DB,E
Primary Accession	P26358
Other Accession	O9Z330 , P13864 , NP_001370
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	183165

Phospho-Dnmt1(S1105) Antibody - Additional Information

Gene ID 1786

Other Names

DNA (cytosine-5)-methyltransferase 1, Dnmt1, CXXC-type zinc finger protein 9, DNA methyltransferase Hsa1, DNA MTase Hsa1, MHsa1, MCMT, DNMT1, AIM, CXXC9, DNMT

Target/Specificity

This Dnmt1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S1105 of human Dnmt1.

Dilution

DB~~1:500

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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

Phospho-Dnmt1(S1105) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-Dnmt1(S1105) Antibody - Protein Information

Name DNMT1

Synonyms AIM, CXXC9, DNMT

Function Methylates CpG residues. Preferentially methylates hemimethylated DNA. Associates with DNA replication sites in S phase maintaining the methylation pattern in the newly synthesized strand, that is essential for epigenetic inheritance. Associates with chromatin during G2 and M phases to maintain DNA methylation independently of replication. It is responsible for maintaining methylation patterns established in development. DNA methylation is coordinated with methylation of histones. Mediates transcriptional repression by direct binding to HDAC2. In association with DNMT3B and via the recruitment of CTCFL/BORIS, involved in activation of BAG1 gene expression by modulating dimethylation of promoter histone H3 at H3K4 and H3K9. Probably forms a corepressor complex required for activated KRAS- mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells (PubMed:[24623306](#)). Also required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:[24623306](#)). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed:[24623306](#)). Promotes tumor growth (PubMed:[24623306](#)).

Cellular Location

Nucleus. Note=Localized to the perinucleolar region.

Tissue Location

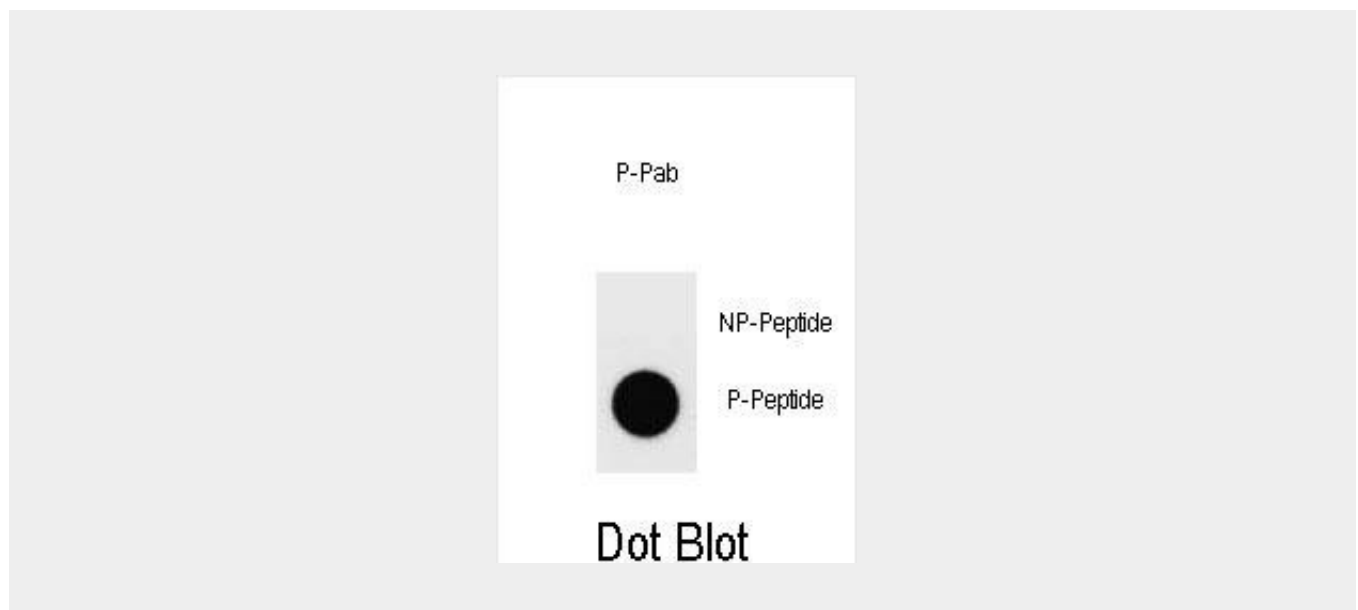
Ubiquitous; highly expressed in fetal tissues, heart, kidney, placenta, peripheral blood mononuclear cells, and expressed at lower levels in spleen, lung, brain, small intestine, colon, liver, and skeletal muscle. Isoform 2 is less expressed than isoform 1.

Phospho-Dnmt1(S1105) 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](#)

Phospho-Dnmt1(S1105) Antibody - Images



Dot blot analysis of Phospho-Dnmt1-S1105 Antibody Phospho-specific Pab (Cat. #AP3780a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.

Phospho-Dnmt1(S1105) Antibody - Background

DNA (cytosine-5-)-methyltransferase 1 has a role in the establishment and regulation of tissue-specific patterns of methylated cytosine residues. Aberrant methylation patterns are associated with certain human tumors and developmental abnormalities. Two transcript variants encoding different isoforms have been found for this gene.

Phospho-Dnmt1(S1105) Antibody - References

Lee, C.F., et al. J. Clin. Invest. 120(8):2920-2930(2010)
Lin, R.K., et al. Cancer Res. 70(14):5807-5817(2010)
Hervouet, E., et al. PLoS ONE 5 (6), E11333 (2010) :
Haggarty, P., et al. PLoS ONE 5 (6), E11329 (2010) :
Fujii, S., et al. Digestion 82(3):179-186(2010)