

Phospho-Dnmt1-pS714 Antibody Blocking Peptide
Synthetic peptide
Catalog # BP3525a**Specification**

Phospho-Dnmt1-pS714 Antibody Blocking Peptide - Product InformationPrimary Accession [P26358](#)**Phospho-Dnmt1-pS714 Antibody Blocking Peptide - 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

The synthetic peptide sequence used to generate the antibody [AP3525a](/product/products/AP3525a) was selected from the region of human Phospho-Dnmt1-pS714. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-Dnmt1-pS714 Antibody Blocking Peptide - 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-pS714 Antibody Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

Phospho-Dnmt1-pS714 Antibody Blocking Peptide - Images**Phospho-Dnmt1-pS714 Antibody Blocking Peptide - 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.

Phospho-Dnmt1-pS714 Antibody Blocking Peptide - References

Liao,X., Int. J. Cancer 123 (2), 296-302 (2008)Leng,S., (er) Carcinogenesis (2008) In pressDion,V., Hum. Mol. Genet. 17 (9), 1306-1317 (2008)