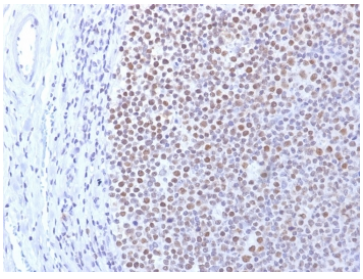
DNA Methyltransferase 1 Antibody / DNMT1 [clone DNMT1/2061] (V7716)

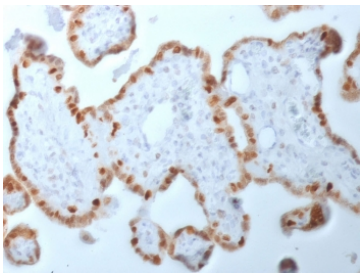
Catalog No.	Formulation	Size
V7716-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7716-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7716SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

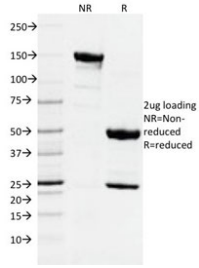
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	DNMT1/2061
Purity	Protein G affinity chromatography
UniProt	P26358
Localization	Nuclear
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This DNMT1 / DNA Methyltransferase 1 Antibody is available for research use only.



DNA Methyltransferase 1 Antibody Human Tonsil IHC. Immunohistochemistry staining of FFPE human tonsil using DNA Methyltransferase 1 antibody demonstrates strong nuclear staining throughout the lymphoid compartment, consistent with the expected localization of DNMT1 as a nuclear DNA methylation maintenance enzyme. DNMT1 functions to preserve genomic methylation patterns during DNA replication and plays a critical role in epigenetic regulation, chromatin organization, and transcriptional control. The prominent nuclear staining observed within proliferative tonsillar lymphocytes is consistent with the established role of DNMT1 in maintaining cellular identity and epigenetic stability in actively dividing cell populations. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



DNA Methyltransferase 1 Antibody Human Placenta IHC. Immunohistochemistry staining of FFPE human placenta using DNA Methyltransferase 1 antibody demonstrates prominent nuclear staining within trophoblastic epithelial cell populations lining placental villi, consistent with the expected nuclear localization of DNMT1. DNA Methyltransferase 1 is a DNA methylation maintenance enzyme responsible for preserving epigenetic patterns during cellular replication and plays a critical role in regulation of gene expression, chromatin organization, and developmental programming. The observed nuclear staining pattern is consistent with the importance of DNMT1-mediated epigenetic regulation in placental development and cellular differentiation. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free DNMT1 / DNA Methyltransferase 1 antibody as confirmation of integrity and purity.

Description

DNA Methyltransferase 1 Antibody is designed for the detection and study of DNA Methyltransferase 1 (DNMT1), a highly conserved enzyme responsible for maintaining genomic DNA methylation patterns during cellular replication. DNMT1 preferentially recognizes hemimethylated DNA generated following DNA synthesis and transfers methyl groups to newly synthesized daughter strands, ensuring faithful inheritance of epigenetic information. Through this critical function, DNMT1 helps preserve cellular identity, regulate gene expression programs, and maintain genome stability across successive cell generations.

DNA Methyltransferase 1 serves as the principal maintenance methyltransferase in mammalian cells and plays an essential role in embryonic development, cellular differentiation, chromatin organization, and long-term tissue homeostasis. DNA methylation is one of the most important epigenetic mechanisms controlling transcriptional activity, genomic imprinting, X-chromosome inactivation, and suppression of repetitive genetic elements. By preserving established DNA methylation patterns during cell division, DNMT1 helps ensure proper regulation of numerous biologic processes required for normal cellular function.

Alterations in DNMT1 expression and DNA methylation profiles have been implicated in a wide range of human diseases, particularly cancer, where abnormal methylation patterns contribute to dysregulated gene expression and inappropriate silencing of tumor suppressor genes. Consequently, DNMT1 remains a major focus of research involving oncology, stem cell biology, developmental biology, and chromatin-mediated gene regulation. Studies of DNA Methyltransferase 1 continue to provide important insight into mechanisms governing epigenetic inheritance and cellular identity.

Clone DNMT1/2061 recognizes DNA Methyltransferase 1 and is suitable for western blot-based investigation of DNA methylation pathways, chromatin regulation, and epigenetic control of gene expression. Researchers utilize DNA Methyltransferase 1 Antibody clone DNMT1/2061 to evaluate DNMT1 expression patterns and to study molecular pathways involved in genome maintenance, cellular differentiation, developmental regulation, and epigenetic stability.

This antibody can be compared with our DNMT1 Antibody for consistent detection of DNMT1 across DNA methylation and epigenetic regulation studies.

Application Notes

Optimal dilution of the DNMT1 / DNA Methyltransferase 1 antibody should be determined by the researcher.

Immunogen

Amino acids 767-912 from the human protein was used as the immunogen for the DNMT1 / DNA Methyltransferase 1 antibody.

Storage

Store the DNMT1 / DNA Methyltransferase 1 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

DNMT1 Antibody, DNA Methyltransferase 1 Antibody, DNA Cytosine-5 Methyltransferase 1 Antibody, Maintenance DNA Methyltransferase Antibody, CpG Methyltransferase Antibody, DNA Methylation Enzyme Antibody, Epigenetic Regulation Enzyme Antibody

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