

DESCRIPTION

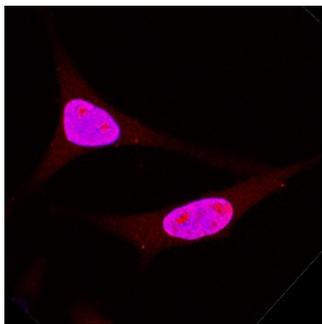
Species Reactivity	Human
Specificity	Detects human DNMT3A in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human DNMT1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human DNMT3A Ala353-Lys486 Accession # Q9Y6K1
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Immunocytochemistry	5-15 µg/mL	See Below

DATA

<p>Immunocytochemistry</p> 	<p>DNMT3A in HeLa Human Cell Line. DNMT3A was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Goat Anti-Human DNMT3A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6315) at 1.7 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to nuclei. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

DNMT3A (DNA [cytosine-5]-methyltransferase 3A) is a 130 kDa member of the C5-methyltransferase family of molecules. It is expressed both during development and in virtually all adult tissues except for small intestine. DNMT3A is a nuclear protein that is found associated with heterochromatin. It possesses DNA methyltransferase activity, and acts in a complex with DNMT3L in embryonic stem cells, forming a (3A)₂:(3L)₂ heterotetramer. It also interacts with SETDB1 to form a transcriptional repressor. Human DNMT3A is 912 amino acids (aa) in length. It contains one ProTrpTrpPro domain (aa 292-350) and one ADD-type zinc finger region (aa 494-586). There is one 100 kDa splice variant termed DNMT3a2 that contains an alternative start site at Met224, and preferentially interacts with euchromatin. Other potential splice variants show a 16 aa substitution for aa 151-912, and a 24 aa substitution for aa 1-213. Over aa 353-486, human DNMT3A shares 96% aa identity with mouse DNMT3A.