

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human DNMT3A in direct ELISAs. In direct ELISAs and Western blots, no cross-reactivity with recombinant human DNMT1 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 681615
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human DNMT3A Ala353-Lys486 Accession # Q9Y6K1
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

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