For Research Use Only

# DNMT3A Recombinant monoclonal antibody

Catalog Number:81474-6-RR

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## Basic Information

Catalog Number:
81474-6-RR

Size:
100ul , Concentration: 1000 μg/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG15111

GenBank Accession Number:
BC043617

GeneID (NCBI):
1788

UNIPROT ID:
Q9Y6K1

Full Name:
DNA (cytosine-5-)-methyltransferase 3 alpha

Calculated MW:
912 aa, 102 kDa

Purification Method:
Protein A purification

CloneNo.:
242257A9

Recommended Dilutions:
IHC: 1:250-1:1000
IF/ICC: 1:200-1:800
FC (Intra): 0.25 ug per 10^6 cells in a 100 ul suspension

## Applications

Tested Applications:
IHC, IF/ICC, FC (Intra), ELISA

Species Specificity:
human

***Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0***

Positive Controls:

IHC : human placenta tissue,

IF/ICC : HeLa cells,

FC (Intra) : HepG2 cells,

## Background Information

DNA methylation in vertebrate animals is an epigenetic modification that is important for embryonic development, imprinting, and the inactivation of X chromosomes. DNA methylation is catalyzed by a family of DNA methyltransferases (DNMTs) that include the maintenance enzyme DNMT1 and de novo methyltransferases DNMT3a and DNMT3b. The overexpression of DNMT1, DNMT3a, and DNMT3b has been reported in various malignancies, including gastric, urothelial, and lung cancers, and may be related to tumorigenesis, tumor progression, and poor survival. Two isoforms of DNMT3a exist: the full-length DNMT3a, and the shorter form DNMT3a2 which lacks the N-terminal fragment. DNMT3a is expressed ubiquitously at low levels, while DNMT3a2 is specially expressed at high levels in embryonic stem cells and shows restricted expression in tissues known to undergo de novo methylation including testis and ovary. This antibody was raised against the N-terminal region of human DNMT3a.

## Storage

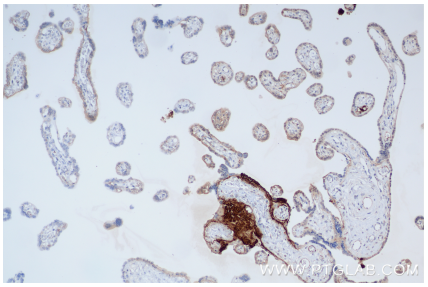
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

***** 20ul sizes contain 0.1% BSA**

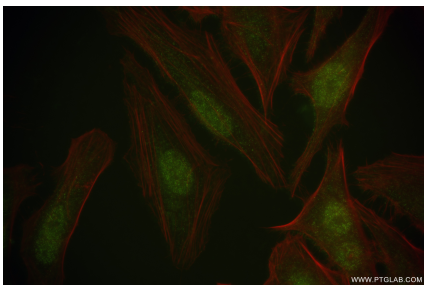
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

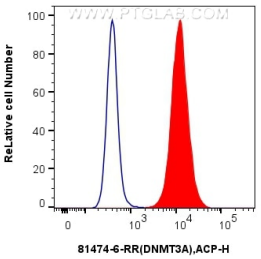
## Selected Validation Data



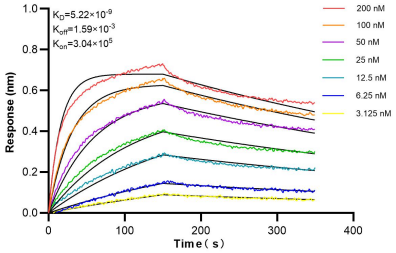
Immunohistochemical analysis of paraffin-embedded human placenta tissue slide using 81474-6-RR (DNMT3A antibody) at dilution of 1:500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using DNMT3A antibody (81474-6-RR, Clone: 242257A9 ) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2), CL594-Phalloidin (red).




1x10^6 HepG2 cells were intracellularly stained with 0.25 ug Dnmt3a Recombinant Antibody (81474-6-RR, Clone:242257A9) and APC-Conjugated Goat Anti-Rabbit IgG(H+L)(red), or 0.25 ug Rabbit IgG Isotype Control Recombinant Antibody (98136-1-RR, Clone: 240953C9) (blue). Cells were fixed and permeabilized with True-Nuclear Transcription Factor Buffer Set.




Biolayer interferometry (BLI) kinetic assays of 81474-6-RR against Human DNMT3A were performed. The affinity constant is 5.22 nM.