

## Anti-PRMT1 Rabbit Monoclonal Antibody Catalog # ABO13775

### Specification

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#### Anti-PRMT1 Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IF, ICC
Primary Accession	<a href="#">Q99873</a>
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

#### Description

Anti-PRMT1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

#### Anti-PRMT1 Rabbit Monoclonal Antibody - Additional Information

**Gene ID** 3276

#### Other Names

Protein arginine N-methyltransferase 1, 2.1.1.319, Histone-arginine N-methyltransferase PRMT1, Interferon receptor 1-bound protein 4, PRMT1 ([http://www.genenames.org/cgi-bin/gene\\_symbol\\_report?hgnc\\_id=5187](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=5187))  
HGNC:5187

#### Calculated MW

41516 MW KDa

#### Application Details

WB 1:500-1:1000<br>IHC 1:50-1:200<br>ICC/IF 1:100-1:500

#### Subcellular Localization

Nucleus. Nucleus, nucleoplasm. Cytoplasm, cytosol. Mostly found in the cytoplasm. Colocalizes with CHTOP within the nucleus. Low levels detected also in the chromatin fraction (By similarity)..

#### Tissue Specificity

Widely expressed..

#### Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

#### Immunogen

A synthesized peptide derived from human PRMT1

#### Purification

Affinity-chromatography

Storage

Store at **-20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

## Anti-PRMT1 Rabbit Monoclonal Antibody - Protein Information

Name PRMT1 ([HGNC:5187](#))

### Function

Arginine methyltransferase that methylates (mono and asymmetric dimethylation) the guanidino nitrogens of arginyl residues present in proteins such as ESR1, histone H2, H3 and H4, FMR1, ILF3, HNRNPA1, HNRNPD, NFATC2IP, SUPT5H, TAF15, EWS, HABP4, SERBP1, RBM15, FOXO1, CHTOP, MAP3K5/ASK1, MICU1 and NPRL2 (PubMed: <a href="http://www.uniprot.org/citations/10749851" target="\_blank">10749851</a>, PubMed: <a href="http://www.uniprot.org/citations/15741314" target="\_blank">15741314</a>, PubMed: <a href="http://www.uniprot.org/citations/16879614" target="\_blank">16879614</a>, PubMed: <a href="http://www.uniprot.org/citations/18951090" target="\_blank">18951090</a>, PubMed: <a href="http://www.uniprot.org/citations/22095282" target="\_blank">22095282</a>, PubMed: <a href="http://www.uniprot.org/citations/25284789" target="\_blank">25284789</a>, PubMed: <a href="http://www.uniprot.org/citations/26575292" target="\_blank">26575292</a>, PubMed: <a href="http://www.uniprot.org/citations/26876602" target="\_blank">26876602</a>, PubMed: <a href="http://www.uniprot.org/citations/27642082" target="\_blank">27642082</a>, PubMed: <a href="http://www.uniprot.org/citations/30765518" target="\_blank">30765518</a>, PubMed: <a href="http://www.uniprot.org/citations/31257072" target="\_blank">31257072</a>, PubMed: <a href="http://www.uniprot.org/citations/38006878" target="\_blank">38006878</a>). Constitutes the main enzyme that mediates monomethylation and asymmetric dimethylation of histone H4 'Arg-4' (H4R3me1 and H4R3me2a, respectively), a specific tag for epigenetic transcriptional activation. May be involved in the regulation of TAF15 transcriptional activity, act as an activator of estrogen receptor (ER)-mediated transactivation, play a key role in neurite outgrowth and act as a negative regulator of megakaryocytic differentiation, by modulating p38 MAPK pathway. Methylates RBM15, promoting ubiquitination and degradation of RBM15 (PubMed: <a href="http://www.uniprot.org/citations/26575292" target="\_blank">26575292</a>). Methylates MRE11 and TP53BP1, promoting the DNA damage response (PubMed: <a href="http://www.uniprot.org/citations/15741314" target="\_blank">15741314</a>, PubMed: <a href="http://www.uniprot.org/citations/16294045" target="\_blank">16294045</a>, PubMed: <a href="http://www.uniprot.org/citations/29651020" target="\_blank">29651020</a>). Methylates FOXO1 and retains it in the nucleus increasing its transcriptional activity (PubMed: <a href="http://www.uniprot.org/citations/18951090" target="\_blank">18951090</a>). Methylates CHTOP and this methylation is critical for its 5-hydroxymethylcytosine (5hmC)-binding activity (PubMed: <a href="http://www.uniprot.org/citations/25284789" target="\_blank">25284789</a>). Methylates MAP3K5/ASK1 at 'Arg-78' and 'Arg-80' which promotes association of MAP3K5 with thioredoxin and negatively regulates MAP3K5 association with TRAF2, inhibiting MAP3K5 stimulation and MAP3K5-induced activation of JNK (PubMed: <a href="http://www.uniprot.org/citations/22095282" target="\_blank">22095282</a>). Methylates H4R3 in genes involved in glioblastomagenesis in a CHTOP- and/or TET1- dependent manner (PubMed: <a href="http://www.uniprot.org/citations/25284789" target="\_blank">25284789</a>). Plays a role in regulating alternative splicing in the heart (By similarity). Methylates NPRL2 at 'Arg-78' leading to inhibition of its GTPase activator activity and then the GATOR1 complex and consequently inducing timely mTORC1 activation under methionine-sufficient conditions (PubMed: <a href="http://www.uniprot.org/citations/38006878" target="\_blank">38006878</a>).

### Cellular Location

Nucleus. Nucleus, nucleoplasm {ECO:0000250|UniProtKB:Q9JIF0}. Cytoplasm. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q9JIF0}. Lysosome membrane. Note=Mostly found in the cytoplasm Colocalizes with CHTOP within the nucleus. Low levels detected also in the chromatin fraction (By

similarity). Upon methionine stimulation, localizes to the lysosome membrane in an NPRL2-dependent manner (PubMed:38006878). {ECO:0000250|UniProtKB:Q9JIF0, ECO:0000269|PubMed:38006878}

#### Tissue Location

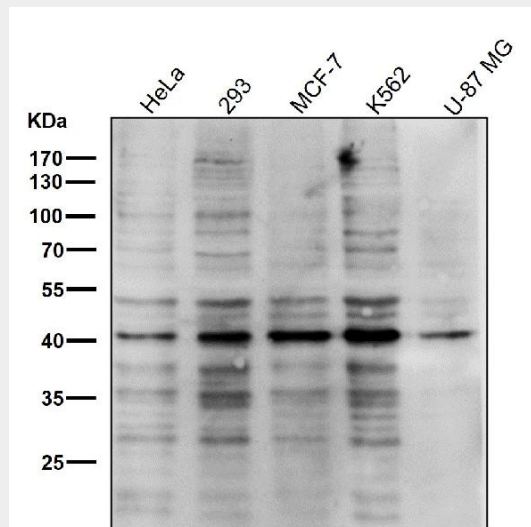
Widely expressed (PubMed:11097842). Expressed strongly in colorectal cancer cells (at protein level) (PubMed:28040436). Expressed strongly in colorectal cancer tissues compared to wild-type colon samples (at protein level) (PubMed:28040436). Expressed strongly in colorectal cancer tissues compared to wild-type colon samples (PubMed:28040436)

#### Anti-PRMT1 Rabbit Monoclonal Antibody - Protocols

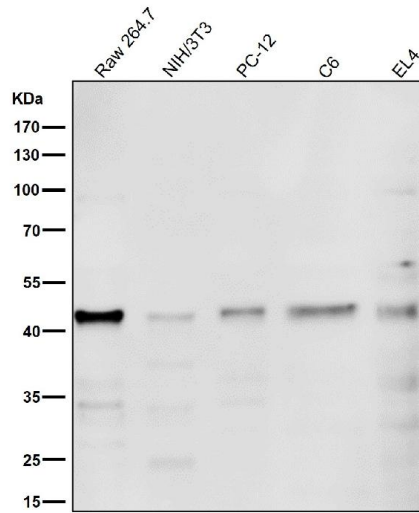
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

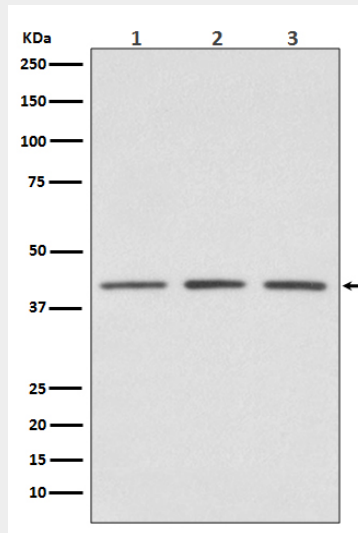
#### Anti-PRMT1 Rabbit Monoclonal Antibody - Images



All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.



All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.



Western blot analysis of PRMT1 expression in (1) HeLa cell lysate; (2) NIH/3T3 cell lysate; (3) PC-12 cell lysate.