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KMT5A / SETD8 / Pr-SET7 Antibody

Rabbit mAb
Catalog # AP91599

Product Information

Application	WB, FC
Primary Accession	Q9NQR1
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	KMT5A;PR-Set7;SET07;SET8;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	42890

Additional Information

Dilution	WB 1:1000~1:5000 FC 1:100
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human KMT5A / SETD8 / Pr-SET7
Description	Protein-lysine N-methyltransferase that monomethylates both histones and non-histone proteins. Specifically monomethylates 'Lys-20' of histone H4 (H4K20me1). H4K20me1 is enriched during mitosis and represents a specific tag for epigenetic transcriptional repression. Mainly functions in euchromatin regions, thereby playing a central role in the silencing of euchromatic genes.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

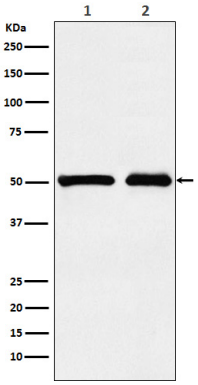
Name	KMT5A (HGNC:29489)
Function	Protein-lysine N-methyltransferase that monomethylates both histones and non-histone proteins (PubMed:12086618, PubMed:12121615, PubMed:15964846, PubMed:17707234, PubMed:27338793). Specifically monomethylates 'Lys-20' of histone H4 (H4K20me1) (PubMed:12086618, PubMed:12121615, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:15964846, PubMed:16517599, PubMed:27338793). H4K20me1 is enriched during mitosis and represents a specific tag for epigenetic transcriptional repression (PubMed:12086618, PubMed:12121615, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:15964846, PubMed:16517599). Mainly functions in euchromatin regions, thereby playing a central role in the silencing of euchromatic genes (PubMed:12086618, PubMed:12121615, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:15964846, PubMed:16517599). Required for cell proliferation,

probably by contributing to the maintenance of proper higher-order structure of DNA during mitosis (PubMed:12086618, PubMed:12121615, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:15964846, PubMed:16517599). Involved in chromosome condensation and proper cytokinesis (PubMed:12086618, PubMed:12121615, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:15964846, PubMed:16517599). Nucleosomes are preferred as substrate compared to free histones (PubMed:12086618, PubMed:12121615, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:15964846, PubMed:16517599). Mediates monomethylation of p53/TP53 at 'Lys-382', leading to repress p53/TP53-target genes (PubMed:17707234). Plays a negative role in TGF- beta response regulation and a positive role in cell migration (PubMed:23478445).

Cellular Location

Nucleus. Chromosome. Note=Specifically localizes to mitotic chromosomes (PubMed:12208845). Colocalized with SIRT2 at mitotic foci (PubMed:23468428). Associates with chromosomes during mitosis; association is increased in a H(2)O(2)-induced oxidative stress- dependent manner (PubMed:23468428). Associates with silent chromatin on euchromatic arms (PubMed:12086618). Not associated with constitutive heterochromatin (PubMed:12086618).

Images



Western blot analysis of KMT5A / SETD8 / Pr-SET7 expression in (1) 293T cell lysate; (2) NIH/3T3 cell lysate.

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