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SET07 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1191b

Product Information

Application	WB, E
Primary Accession	Q9NQR1
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	43AT890
Calculated MW	42890

Additional Information

Gene ID	387893
Other Names	N-lysine methyltransferase SETD8, 211-, H4-K20-HMTase SETD8, Histone-lysine N-methyltransferase SETD8, Lysine N-methyltransferase 5A, PR/SET domain-containing protein 07, PR-Set7, PR/SET07, SET domain-containing protein 8, SETD8, KMT5A, PRSET7, SET07, SET8
Target/Specificity	This SET07 antibody was raised using purified recombinant GST fusion protein encoding N-terminal of human SET07.
Dilution	WB~~1:500~1000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SET07 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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

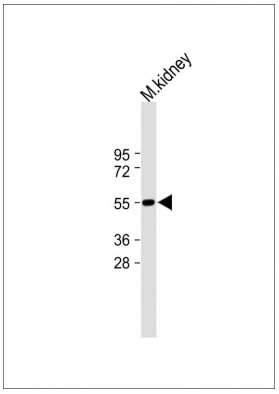
Nucleus. Chromosome. Note=Specifically localizes to mitotic chromosomes (PubMed:12208845). Colocalized with SIRT2 at mitotic foci (PubMed:23468428). Associates with chromosomes during mitosis; association is increased in a H(2)O(2)-induced oxidative stress- dependent manner (PubMed:23468428). Associates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

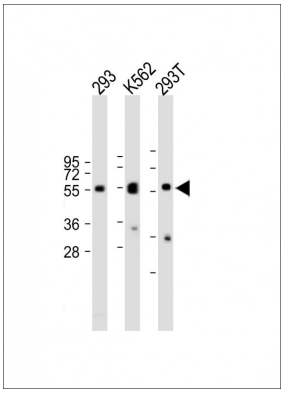
References

An miR-502-binding site single-nucleotide polymorphism in the 3'-untranslated region of the SET8 gene is associated with early age of breast cancer onset. Song F, et al. Clin Cancer Res, 2009 Oct 1. PMID 19789321.
Product specificity and mechanism of protein lysine methyltransferases: insights from the histone lysine methyltransferase SET8. Zhang X, et al. Biochemistry, 2008 Jun 24. PMID 18512960.
Catalytic function of the PR-Set7 histone H4 lysine 20 monomethyltransferase is essential for mitotic entry and genomic stability. Houston SI, et al. J Biol Chem, 2008 Jul 11. PMID 18480059.
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SET8 plays a role in controlling G1/S transition by blocking lysine acetylation in histone through binding to H4 N-terminal tail. Yin Y, et al. Cell Cycle, 2008 May 15. PMID 18418072.

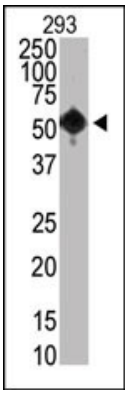
Images

All lanes : Anti-SET07 Antibody at 1:2000 dilution Lane 1: mouse kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG/A/M(H/L), Peroxidase conjugated at 1/2000 dilution. Observed band size : 55kDa Blocking/Dilution buffer: 5% NFDM/TBST.





All lanes : Anti-SET07 Antibody at 1:2000 dilution Lane 1: 293 whole cell lysate Lane 2: K562 whole cell lysate Lane 3: 293T whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Observed band size : 55 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



The anti-SET07 Mab (Cat. #AM1191b) is used in Western blot to detect SET07 in 293 cells.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.