

SET07 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1191b

Specification

SET07 Antibody - Product Information

Application	WB,E
Primary Accession	O9NQR1
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	42890

SET07 Antibody - 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

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.

SET07 Antibody - 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 H₂O₂-induced oxidative stress- dependent manner (PubMed:23468428). Associates with silent chromatin on euchromatic arms (PubMed:12086618). Not associated with constitutive heterochromatin (PubMed:12086618).

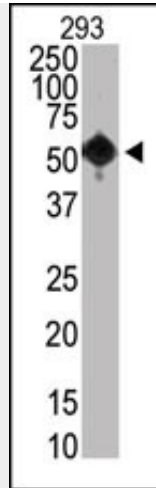
SET07 Antibody - Protocols

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](#)

SET07 Antibody - Images





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

SET07 Antibody - 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.

PR-Set7 establishes a repressive trans-tail histone code that regulates differentiation. Sims JK, et al. *Mol Cell Biol*, 2008 Jul. PMID 18474616.

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.