10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SET07 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1191b

Specification

SET07 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	Q9NQR1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**42890**
Antigen Region	**362-393**

SET07 Antibody (C-term) - 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 is generated from rabbits immunized with a KLH conjugated synthetic peptide between 362-393 amino acids from the C-terminal region of human SET07.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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 (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

SET07 Antibody (C-term) - 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:15964846, PubMed:27338793, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:16517599). H4K20me1 is enriched during mitosis and represents a specific tag for epigenetic transcriptional repression (PubMed:12086618, PubMed:12121615, PubMed:15964846, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:16517599). Mainly functions in euchromatin regions, thereby playing a central role in the silencing of euchromatic genes (PubMed:12086618, PubMed:12121615, PubMed:15964846, PubMed:15200950, PubMed:15933069, PubMed:15933070, 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:15964846, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:16517599). Involved in chromosome condensation and proper cytokinesis (PubMed:12086618, PubMed:12121615, PubMed:15964846, PubMed:15200950, PubMed:15933069, PubMed:15933070, PubMed:16517599). Nucleosomes are preferred as substrate compared to free histones (PubMed:12086618, PubMed:12121615, PubMed:15964846, PubMed:15200950, PubMed:15933069, PubMed:15933070, 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).

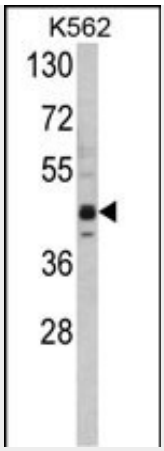
SET07 Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SET07 Antibody (C-term) - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Western blot analysis of SET07 Antibody (C-term) (Cat. #AP1191b) in K562 cell line lysates (35ug/lane). SET07 (arrow) was detected using the purified Pab.

SET07 Antibody (C-term) - Background

SET07 is a histone methyltransferase that methylates Lys-20 of histone H4. H4 Lys-20 methylation represents a specific tag for epigenetic transcriptional repression. The nuclear SET07 protein, which associates with silent chromatin on euchromatic arms but shows no association with constitutive heterochromatin, prefers nucleosomes as substrate compared to free histones. It appears that SET07 may play a role in maintaining silent chromatin by preventing neighboring acetylation of H4 tail. Although the SET domain contains the active site of enzymatic activity, both sequences upstream and downstream of the SET domain are required for methyltransferase activity.

SET07 Antibody (C-term) - References

Nishioka, K., et al., Mol. Cell 9(6):1201-1213 (2002).
Fang, J., et al., Curr. Biol. 12(13):1086-1099 (2002).