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SET07 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP1191b

Specification

SET07 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q9NQR1

SET07 Antibody (C-term) Blocking Peptide - 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
The synthetic peptide sequence used to generate the antibody AP1191b was selected from the C-term region of human SET07. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SET07 Antibody (C-term) Blocking Peptide - 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:<a

href="http://www.uniprot.org/citations/27338793" target="_blank">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).

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SET07 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

SET07 Antibody (C-term) Blocking Peptide - Images

SET07 Antibody (C-term) Blocking Peptide - 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) Blocking Peptide - References

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