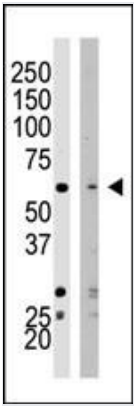
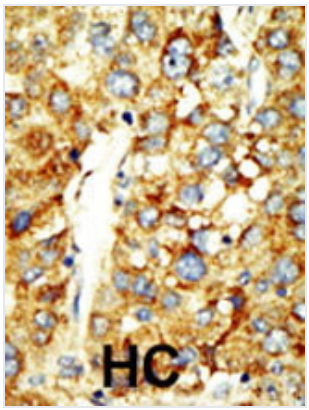
SET07 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	SET07, Polyclonal Antibody
Full Product Name	SET07, NT (Histone H4-K20 Methyltransferase, H4-K20-HMTase, SET Domain-containing Protein 8, PR/SET Domain-containing Protein 07, PR/SET07, PR-Set7, KMT5A, Histone-lysine N-methyltransferase SETD8, H4-K20-HMTase SETD8, Lysine N-methyltransferase 5A, PRSET
Product Gene Name	anti-SET07 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Biotin.
Purity/Purification	Purified by Protein G Affinity Chromatography.
Specificity	Recognizes human SET07. Species Crossreactivity: mouse.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	42.89
OMIM	607240
3D Structure	ModBase 3D Structure for Q9NQR1
Immunogen	Synthetic peptide selected from the N-terminal region of human SET07 (KLH).
Conjugate	Biotin
Note	Preservative Free
Product Categories/Family for anti-SET07 antibody	Antibodies; Enzymes; Methyltransferase
Applications Tested/Suitable for anti-SET07 antibody	Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB)
Application Notes for anti-SET07 antibody	IHC: 1:50-1:100 ELISA: 1:1,000 WB: 1:100-1:500 Applications are based on unconjugated antibody.
Related Product Information for anti-SET07 antibody	MBS6499189 is an antibody targeting SET07. Also known as SET07, NT (Histone H4-K20 Methyltransferase, H4-K20-HMTase, SET Domain-containing Protein 8, PR/SET Domain-containing Protein 07, PR/SET07, PR-Set7, KMT5A, Histone-lysine N-methyltransferase SETD8, H4-K20-HMTase SETD8, Lysine N-methyltransferase 5A, PRSET. Reactive in Human, Mouse. Host: Rabbit.
Product References and Citations for anti-SET07 antibody	1. Nishioka, K., et al., Mol. Cell 9(6):1201-1213 (2002). 2. Fang, J., et al., Curr. Biol. 12(13):1086-1099 (2002).
Other Notes	Small volumes of anti-SET07 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-SET07 antibody
Western blot analysis of SET07 polyclonal antibody in HeLa cell lysate (Lane 1) and NIH/3T3 cell lysate (Lane 2). SET07 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Immunohistochemistry (IHC) of anti-SET07 antibody
Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SET07. It may not necessarily be applicable to this product.

NCBI GI #	15029567
NCBI GeneID	387893
NCBI Accession #	AAF97812
UniProt Primary Accession #	Q9NQR1
UniProt Related Accession #	Q9NQR1
NCBI Official Full Name	PR/SET domain-containing protein 07
NCBI Official Synonym Full Names	lysine methyltransferase 5A
NCBI Official Symbol	KMT5A
NCBI Official Synonym Symbols	SET8; SET07; SETD8; PR-Set7; PR/SET07
UniProt Protein Name	N-lysine methyltransferase SETD8
UniProt Synonym Protein Names	H4-K20-HMTase SETD8; Histone-lysine N-methyltransferase SETD8 (EC:2.1.1.43); Lysine N-methyltransferase 5A; PR/SET domain-containing protein 07; PR-Set7; PR/SET07; SET domain-containing protein 8
Protein Family	N-lysine methyltransferase
UniProt Gene Name	SETD8
UniProt Synonym Gene Names	KMT5A; PRSET7; SET07; SET8; PR-Set7; PR/SET07
UniProt Entry Name	SETD8_HUMAN
NCBI Protein Information	N-lysine methyltransferase KMT5A
NCBI Summary for SET07	The protein encoded by this gene is a protein-lysine N-methyltransferase that can monomethylate Lys-20 of histone H4 to effect transcriptional repression of some genes. The encoded protein is required for cell proliferation and plays a role in chromatin condensation. [provided by RefSeq, May 2016]

UniProt Comments for SET07	SETD8: a protein-lysine N-methyltransferase that monomethylates both histones and non-histone proteins. Methylates K20 of histone H4 (H4K20me1), a specific tag for epigenetic transcriptional repression. SETD8 protein and H4K20me1 levels are cell cycle regulated, both increasing in S phase and peaking at G2/M phase. Interacts with the PCNA protein, associates with sites of active DNA synthesis and is required for DNA replication and genome stability during S phase. Inhibition of SET8 using shRNA results in arrest of replication forks, induction of double-stranded DNA breaks and a Chk1-mediated cell-cycle arrest in S and G2/M phases of the cell cycle. Mainly functions in euchromatin regions, thereby playing a central role in the silencing of euchromatic genes. Required for cell proliferation, probably by contributing to the maintenance of proper higher order structure of DNA during mitosis. Involved in chromosome condensation and proper cytokinesis. Inhibition of SET8 using shRNA results in arrest of replication forks, induction of double-stranded DNA breaks and a Chk1-mediated cell-cycle arrest in S and G2/M phases of the cell cycle. Nucleosomes are preferred as substrate compared to free histones. Methylates p53K382, leading to repression of the pro-apoptotic and checkpoint activation functions of p53. SET8 expression levels decrease in response to DNA damage, allowing p53 to activate checkpoints and/or apoptosis. Both the methylation of histone H4K20 and p53K382 appear to be important for the functions of SET8 in S phase. Belongs to the histone-lysine methyltransferase family. PR/SET subfamily. Two isoforms of the human protein are produced by alternative splicing. Protein type: Methyltransferase, protein lysine; Methyltransferase; EC 2.1.1.43; Amino Acid Metabolism - lysine degradation Chromosomal Location of Human Ortholog: 12q24.31 Cellular Component: nucleoplasm; nucleolus; chromosome; nucleus Molecular Function: protein binding; p53 binding; protein-lysine N-methyltransferase activity; transcription corepressor activity; histone-lysine N-methyltransferase activity Biological Process: mitosis; transcription, DNA-dependent; cell division; peptidyl-lysine mono-methylation; negative regulation of transcription from RNA polymerase II promoter; mitotic cell cycle; negative regulation of transcription, DNA-dependent; regulation of DNA damage response, signal transduction by p53 class mediator
Research Articles on SET07	**1.** These findings provide molecular insight on enzymatic catalysis and allosteric mechanisms of SETD8 via its detailed conformational landscape.
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