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

Anti-SETMAR Antibody

Catalog # ABV11932

Product Information

Application	WB, IHC
Primary Accession	Q53H47
Reactivity	Human, Mouse, Rat
Host	Rabbit
Isotype	Rabbit IgG
Calculated MW	78034

Additional Information

Gene ID	6419
Positive Control	WB: NIH3T3, PC12; IHC: lung cancer tissue
Application & Usage	WB; 1:500 – 1:2000, IHC; 1:50 – 1:200
Other Names	Histone-lysine N-methyltransferase SETMAR; SET domain and mariner transposase fusion gene-containing protein; HsMar1; Metnase
Target/Specificity	SETMAR
Antibody Form	Liquid
Appearance	Colorless liquid
Handling	The antibody solution should be gently mixed before use
Reconstitution & Storage	-20°C
Background Descriptions	
Precautions	Anti-SETMAR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SETMAR (HGNC:10762)
Function	Protein derived from the fusion of a methylase with the transposase of an Hsmar1 transposon that plays a role in DNA double- strand break repair, stalled replication fork restart and DNA integration. DNA-binding protein, it is indirectly recruited to sites of DNA damage through protein-protein interactions. Also has kept a sequence-specific DNA-binding activity recognizing the 19-mer core of the 5'-terminal inverted repeats (TIRs) of the Hsmar1 element and displays a DNA nicking and end joining activity (PubMed:16332963, PubMed:16672366, PubMed:17403897, PubMed:17877369, PubMed:18263876, PubMed:20521842,

PubMed:22231448, PubMed:24573677). In parallel, has a histone methyltransferase activity and methylates 'Lys-4' and 'Lys-36' of histone H3. Specifically mediates dimethylation of H3 'Lys-36' at sites of DNA double-strand break and may recruit proteins required for efficient DSB repair through non-homologous end-joining (PubMed:16332963, PubMed:21187428, PubMed:22231448). Also regulates replication fork processing, promoting replication fork restart and regulating DNA decatenation through stimulation of the topoisomerase activity of TOP2A (PubMed:18790802, PubMed:20457750).

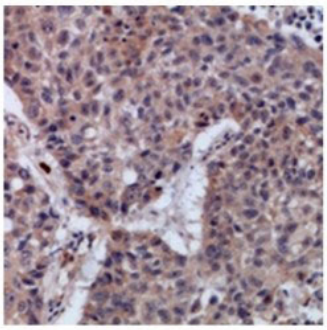
Cellular Location

Nucleus. Chromosome Note=Recruited on damaged DNA at sites of double-strand breaks

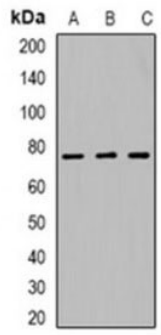
Tissue Location

Widely expressed, with highest expression in placenta and ovary and lowest expression in skeletal muscle

Images



Immunohistochemical analysis of SETMAR staining in human lung cancer formalin fixed paraffin embedded tissue section.



WB analysis of SETMAR expression in HEK293T (A); NIH3T3 (B); PC12 (C) whole cell lysates

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