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

Anti-SETMAR Antibody

Catalog # AP53938

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q53H47
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	78034

Additional Information

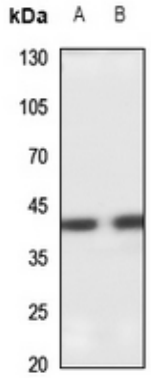
Gene ID	6419
Other Names	Histone-lysine N-methyltransferase SETMAR; SET domain and mariner transposase fusion gene-containing protein; HsMar1; Metnase
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human SETMAR. The exact sequence is proprietary.
Dilution	WB~~1/500 - 1/2000 IHC~~1/50 - 1/200 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

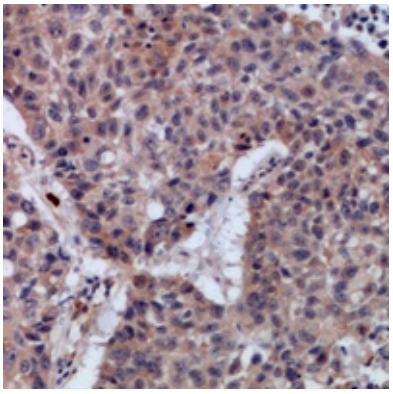
Name	SETMAR (HGNC:10762)
Function	Protein derived from the fusion of a methylase with the transposase of an Hsmar1 transposon that plays a role in DNA double- strand break repair, stalled replication fork restart and DNA integration. DNA-binding protein, it is indirectly recruited to sites of DNA damage 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

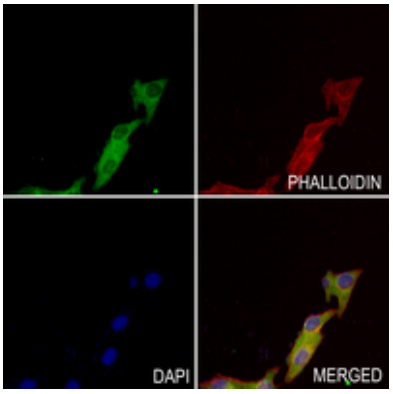
Images



Western blot analysis of SETMAR expression in Hela (A), H446 (B) whole cell lysates. (Predicted band size: 78 kD; Observed band size: 41 kD)

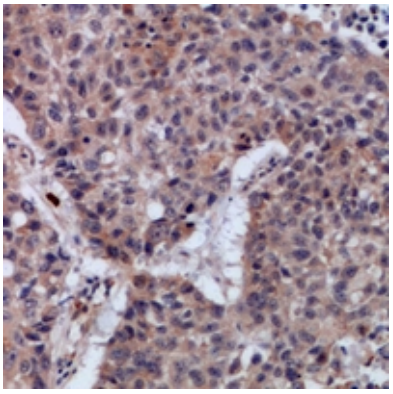


Immunohistochemical analysis of SETMAR staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of SETMAR staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Immunohistochemical analysis of SETMAR staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the



chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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