

Goat Anti-SETMAR Antibody
Peptide-affinity purified goat antibody
Catalog # AF1982a**Specification**

Goat Anti-SETMAR Antibody - Product Information

Application	WB
Primary Accession	Q53H47
Other Accession	NP_006506 , 6419
Reactivity	Human
Predicted	Cow
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	78034

Goat Anti-SETMAR Antibody - Additional Information**Gene ID** 6419**Other Names**

Histone-lysine N-methyltransferase SETMAR, SET domain and mariner transposase fusion protein, Metnase, Histone-lysine N-methyltransferase, 2.1.1.43, Transposon Hsmar1 transposase, 3.1.-., SETMAR ([HGNC:10762](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=10762))

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-SETMAR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-SETMAR Antibody - 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. Has also kept a sequence-specific DNA-binding activity recognizing the 19-mer core of the 5'-terminal inverted repeats (TIRs) of the Hsma1 element and displays a DNA nicking and end joining activity (PubMed:16332963, PubMed:16672366, PubMed:17877369, PubMed:17403897, PubMed:18263876, PubMed:22231448, PubMed:24573677, PubMed:20521842). 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

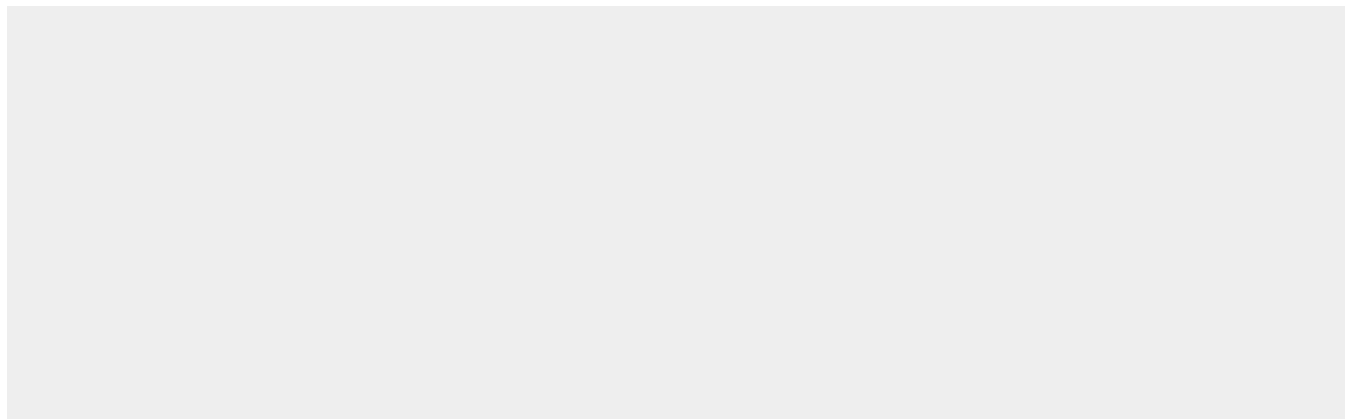
Widely expressed, with highest expression in placenta and ovary and lowest expression in skeletal muscle

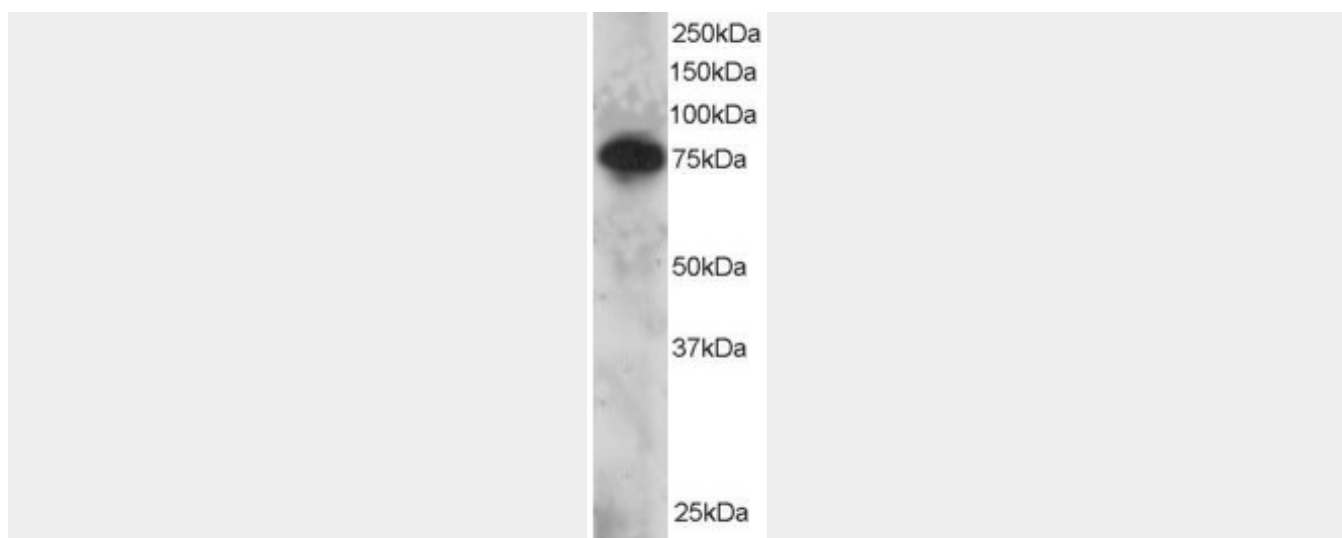
Goat Anti-SETMAR Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Goat Anti-SETMAR Antibody - Images





AF1982a staining (2 µg/ml) of Daudi lysate (RIPA buffer, 30 µg total protein per lane). Primary incubated for 12 hour. Detected by western blot using chemiluminescence.

Goat Anti-SETMAR Antibody - References

Regulation of Metnase's TIR binding activity by its binding partner, Pso4. Beck BD, et al. Arch Biochem Biophys, 2010 Jun 15. PMID 20416268.

Metnase mediates chromosome decatenation in acute leukemia cells. Wray J, et al. Blood, 2009 Aug 27. PMID 19458360.

The SET and transposase domain protein Metnase enhances chromosome decatenation: regulation by automethylation. Williamson EA, et al. Nucleic Acids Res, 2008 Oct. PMID 18790802.

Human Pso4 is a metnase (SETMAR)-binding partner that regulates metnase function in DNA repair. Beck BD, et al. J Biol Chem, 2008 Apr 4. PMID 18263876.

Biochemical characterization of a SET and transposase fusion protein, Metnase: its DNA binding and DNA cleavage activity. Roman Y, et al. Biochemistry, 2007 Oct 9. PMID 17877369.