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SETD4 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18238a

Product Information

Application	WB, E
Primary Accession	Q9NVD3
Other Accession	NP_001007260.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB37631
Calculated MW	50416
Antigen Region	14-41

Additional Information

Gene ID	54093
Other Names	SET domain-containing protein 4, 211-, SETD4, C21orf18, C21orf27
Target/Specificity	This SETD4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 14-41 amino acids from the N-terminal region of human SETD4.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SETD4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SETD4 {ECO:0000303|PubMed:24738023, ECO:0000312|HGNC:HGNC:1258}
Function	Protein-lysine N-methyltransferase that methylates both histones and non-histone proteins (PubMed:31308046, PubMed:35545041, PubMed:37926288). Via its catalytic activity, regulates many processes, including cell proliferation, cell differentiation, inflammatory response and

apoptosis. Regulates the inflammatory response by mediating mono- and dimethylation of 'Lys-4' of histone H3 (H3K4me1 and H3K4me2, respectively), leading to activate the transcription of pro- inflammatory cytokines IL6 and TNF-alpha (By similarity). Through the catalysis of TBK1 monomethylation, may regulate virus-induced interferon signaling. TBK1 monomethylation enhances its interaction with MAVS, STING and IRF3, hence promoting antiviral interferon signaling (PubMed:37926288). Also involved in the regulation of stem cell quiescence by catalyzing the trimethylation of 'Lys-20' of histone H4 (H4K20me3), thereby promoting heterochromatin formation (PubMed:31308046). In the brain, epigenetically controls quiescence of neural stem cells for sustaining a protected neural stem cell population and maintaining a stem cell reservoir for neurogenesis (By similarity). Involved in proliferation, migration, paracrine and myogenic differentiation of bone marrow mesenchymal stem cells (BMSCs) (By similarity). Through the catalysis of XRCC5/Ku70 trimethylation, regulates BAX-mediated apoptosis. SETD4-catalyzed XRCC5 methylation results in XRCC5 translocation to the cytoplasm, where it interacts with BAX, sequestering it from the mitochondria, hence preventing BAX- mediated apoptosis (PubMed:35545041).

Cellular Location Cytoplasm, cytosol. Nucleus

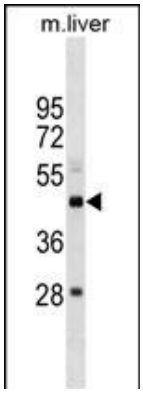
Background

C21orf18 contains 1 SET domain. The exact function is not known.

References

Hillman, R.T., et al. Genome Biol. 5 (2), R8 (2004) :
Reymond, A., et al. Genomics 78 (1-2), 46-54 (2001) :
Watanabe, K., et al. Genomics 52(1):95-100(1998)

Images



SETD4 Antibody (N-term) (Cat. #AP18238a) western blot analysis in mouse liver tissue lysates (35ug/lane).This demonstrates the SETD4 antibody detected the SETD4 protein (arrow).