

Anti-SETD4 Antibody

HA500606



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 50 kDa

Description: Protein-lysine N-methyltransferase that methylates both histones and non-histone proteins. 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. Also involved in the regulation of stem cell quiescence by catalyzing the trimethylation of 'Lys-20' of histone H4 (H4K20me3), thereby promoting heterochromatin formation. 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.

Positive control: Mouse brain tissue lysate, Rat brain tissue lysate, human brain tissue, human kidney tissue, mouse brain tissue, mouse kidney tissue, rat brain tissue, rat kidney tissue.

Subcellular location: Cytoplasm, cytosol, Nucleus.

Database links: SwissProt: Q9NVD3 Human | P58467 Mouse
Entrez Gene: 245975 Rat

Recommended Dilutions:

WB	1:2,000
IHC-P	1:200

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Immunogen affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

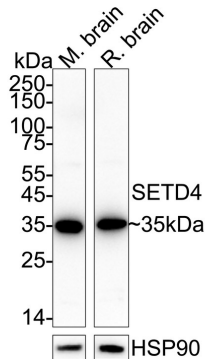
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Images

Fig1: Western blot analysis of SETD4 on different lysates with Rabbit anti-SETD4 antibody (HA500606) at 1/2,000 dilution.

Lane 1: Mouse brain tissue lysate

Lane 2: Rat brain tissue lysate



Lysates/proteins at 20 µg/Lane.

Predicted band size: 50 kDa

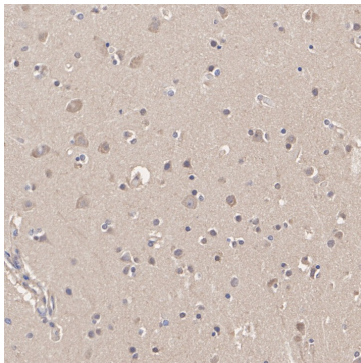
Observed band size: 35 kDa

Exposure time: 1 minute 18 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

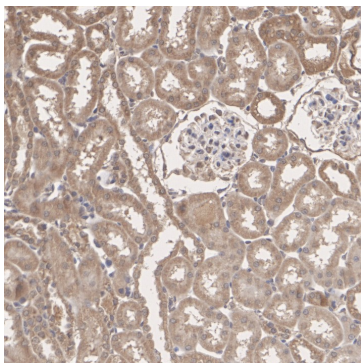
Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA500606) at 1/2,000 dilution was used in 5% BSA at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Fig2: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-SETD4 antibody (HA500606) at 1/200 dilution.



The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA500606) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-SETD4 antibody (HA500606) at 1/200 dilution.



The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA500606) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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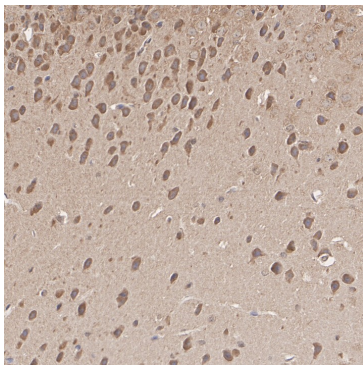


Fig4: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-SETD4 antibody (HA500606) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA500606) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

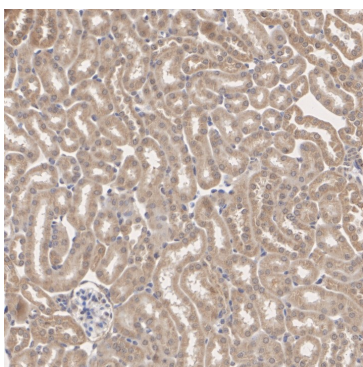


Fig5: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-SETD4 antibody (HA500606) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA500606) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

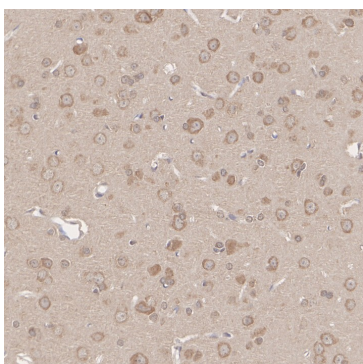


Fig6: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-SETD4 antibody (HA500606) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA500606) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

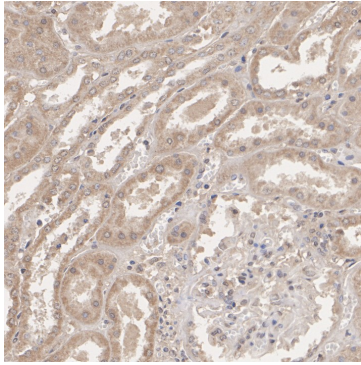


Fig7: Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Rabbit anti-SETD4 antibody (HA500606) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA500606) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Wang C et al. SETD4 inhibits prostate cancer development by promoting H3K27me3-mediated NUPR1 transcriptional repression and cell cycle arrest. *Cancer Lett.* 2023 Nov
2. Wang Y et al. SETD4-mediated KU70 methylation suppresses apoptosis. *Cell Rep.* 2022 May

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