

ZBTB4 (A-7): sc-514883

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. ZBTB4 (zinc finger and BTB domain containing 4), also known as KAISO-L1 (KAISO-like zinc finger protein 1), is a 1,013 amino acid nuclear protein that is involved in transcriptional regulation. ZBTB4 contains one BTB (POZ) domain, six C₂H₂-type zinc fingers and is phosphorylated and downregulated by HIPK2. The gene encoding ZBTB4 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

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2. Rosenfeld, R. and Margalit, H. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. *J. Biomol. Struct. Dyn.* 11: 557-570.
3. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 7: 143-150.
4. Filion, G.J., et al. 2006. A family of human zinc finger proteins that bind methylated DNA and repress transcription. *Mol. Cell. Biol.* 26: 169-181.
5. Weber, A., et al. 2008. ZBTB4 represses transcription of P21CIP1 and controls the cellular response to p53 activation. *EMBO J.* 27: 1563-1574.
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CHROMOSOMAL LOCATION

Genetic locus: ZBTB4 (human) mapping to 17p13.1; Zbtb4 (mouse) mapping to 11 B3.

SOURCE

ZBTB4 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 614-633 within an internal region of ZBTB4 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514883 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

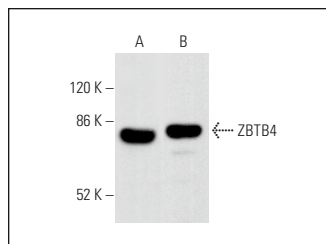
ZBTB4 (A-7) is recommended for detection of ZBTB4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ZBTB4 siRNA (h): sc-93593, ZBTB4 siRNA (m): sc-155447, ZBTB4 shRNA Plasmid (h): sc-93593-SH, ZBTB4 shRNA Plasmid (m): sc-155447-SH, ZBTB4 shRNA (h) Lentiviral Particles: sc-93593-V and ZBTB4 shRNA (m) Lentiviral Particles: sc-155447-V.

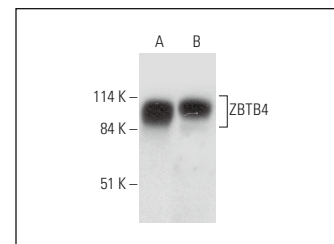
Molecular Weight of ZBTB4: 105 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, C6 whole cell lysate: sc-364373 or HEK293 whole cell lysate: sc-45136.

DATA



ZBTB4 (A-7): sc-514883. Western blot analysis of ZBTB4 expression in SK-N-SH (A) and C6 (B) whole cell lysates.



ZBTB4 (A-7): sc-514883. Western blot analysis of ZBTB4 expression in SK-N-SH (A) and HEK293 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yu, Y., et al. 2018. Tumor suppressive ZBTB4 inhibits cell growth by regulating cell cycle progression and apoptosis in Ewing sarcoma. *Biomed. Pharmacother.* 100: 108-115.
2. Fan, H., et al. 2019. MicroRNA-301b-3p accelerates the growth of gastric cancer cells by targeting zinc finger and BTB domain containing 4. *Pathol. Res. Pract.* 25: 152667.
3. Ni, D., et al. 2020. Expression characterization and transcription regulation analysis of porcine Yip1 domain family member 3 gene. *Asian-Australas. J. Anim. Sci.* 33: 398-407.
4. Yang, Z., et al. 2023. Identification of ZBTB4 as an immunological biomarker that can inhibit the proliferation and invasion of pancreatic cancer. *BMC Cancer* 23: 263.
5. Wu, H., et al. 2024. MSC-derived exosomes deliver ZBTB4 to mediate transcriptional repression of ITIH3 in astrocytes in spinal cord injury. *Brain Res. Bull.* 212: 110954.

RESEARCH USE

For research use only, not for use in diagnostic procedures.