

ZBED1 (H-2): sc-374061



The Power to Question

BACKGROUND

ZBED1 (zinc finger BED domain-containing protein 1), also known as ALTE (Ac-like transposable element), DREF or TRAMP, is a 694 amino acid protein that localizes specifically to granular structures within the nucleus. Expressed ubiquitously at low levels and present at higher levels in heart, placenta, spleen and skeletal muscle, ZBED1 is thought to function as a transcription factor that regulates a number of ribosomal protein (RP) encoding genes, thereby playing a role in the cell cycle and in cell proliferation events. ZBED1 contains one BED-type zinc finger and binds specifically to 5'-TGTCG[CT]GA[CT]A-3' DNA regions found in RP promoters. Additionally, ZBED1 binds strongly to the promoter region of Histone H1 (a protein required for the condensation of nucleosomes into higher order structures), subsequently activating H1 transcription.

REFERENCES

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2. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 5: 277-286.
3. Esposito, T., et al. 1999. A novel pseudoautosomal human gene encodes a putative protein similar to Ac-like transposases. *Hum. Mol. Genet.* 8: 61-67.
4. Ohshima, N., et al. 2003. Identification of a human homologue of the DREF transcription factor with a potential role in regulation of the Histone H1 gene. *J. Biol. Chem.* 278: 22928-22938.
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6. Yamashita, D., et al. 2007. Human DNA replication-related element binding factor (hDREF) self-association via hATC domain is necessary for its nuclear accumulation and DNA binding. *J. Biol. Chem.* 282: 7563-7575.
7. Yamashita, D., et al. 2007. hDREF regulates cell proliferation and expression of ribosomal protein genes. *Mol. Cell. Biol.* 27: 2003-2013.

CHROMOSOMAL LOCATION

Genetic locus: ZBED1 (human) mapping to Xp22.33/Yp11.31.

SOURCE

ZBED1 (H-2) is a mouse monoclonal antibody raised against a peptide mapping near the C-terminus of ZBED1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-374061 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

ZBED1 (H-2) is recommended for detection of ZBED1 of 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).

ZBED1 (H-2) is also recommended for detection of ZBED1 in additional species, including equine and bovine.

Suitable for use as control antibody for ZBED1 siRNA (h): sc-91580, ZBED1 shRNA Plasmid (h): sc-91580-SH and ZBED1 shRNA (h) Lentiviral Particles: sc-91580-V.

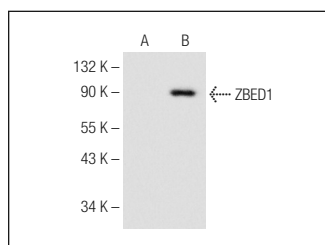
Molecular Weight of ZBED1: 86 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or ZBED1 (h): 293T Lysate: sc-111867.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ZBED1 (H-2): sc-374061. Western blot analysis of ZBED1 expression in non-transfected: sc-117752 (A) and human ZBED1 transfected: sc-111867 (B) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.