

ZNF282 (T-13): sc-132170

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. ZNF282 (zinc finger protein 282), also designated HUB1, is a 671 amino acid nuclear protein that contains one KRAB domain and 5 C₂H₂-type zinc fingers. Expressed ubiquitously, ZNF282 binds to the 5'-TCCACCCC-3' sequence within the U5 repressive element (U5RE) of the human T cell leukemia virus type I (HTLV-1) long terminal repeat. Through its interaction with the U5RE, ZNF282 effectively represses HTLV-1-mediated expression, thereby suppressing viral replication.

REFERENCES

1. Bellefroid, E.J., et al. 1991. The evolutionarily conserved Krüppel-associated box domain defines a subfamily of eukaryotic multifingered proteins. *Proc. Natl. Acad. Sci. USA* 88: 3608-3612.
2. Rosenfeld, R., et al. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. *J. Biomol. Struct. Dyn.* 11: 557-570.
3. Margolin, J.F., et al. 1994. Krüppel-associated boxes are potent transcriptional repression domains. *Proc. Natl. Acad. Sci. USA* 91: 4509-4513.
4. Okumura, K., et al. 1997. HUB1, a novel Krüppel type zinc finger protein, represses the human T cell leukemia virus type I long terminal repeat-mediated expression. *Nucleic Acids Res.* 25: 5025-5032.
5. Peng, H., et al. 2000. Biochemical analysis of the Krüppel-associated box (KRAB) transcriptional repression domain. *J. Biol. Chem.* 275: 18000-18010.
6. Peng, H., et al. 2000. Reconstitution of the KRAB-KAP-1 repressor complex: a model system for defining the molecular anatomy of RING-B box-coiled-coil domain-mediated protein-protein interactions. *J. Mol. Biol.* 295: 1139-1162.

CHROMOSOMAL LOCATION

Genetic locus: ZNF282 (human) mapping to 7q36.1; Zfp282 (mouse) mapping to 6 B2.3.

SOURCE

ZNF282 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZNF282 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132170 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ZNF282 (T-13) is recommended for detection of ZNF282 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other ZNF family members.

ZNF282 (T-13) is also recommended for detection of ZNF282 in additional species, including canine and porcine.

Suitable for use as control antibody for ZNF282 siRNA (h): sc-89572, ZNF282 siRNA (m): sc-108045, ZNF282 shRNA Plasmid (h): sc-89572-SH, ZNF282 shRNA Plasmid (m): sc-108045-SH, ZNF282 shRNA (h) Lentiviral Particles: sc-89572-V and ZNF282 shRNA (m) Lentiviral Particles: sc-108045-V.

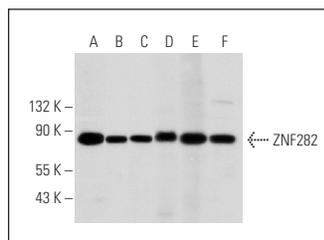
Molecular Weight of ZNF282: 74 kDa.

Positive Controls: NIH/3T3 Whole Cell Lysate : sc-2210, rat ovary extract : sc-2399 or mouse brain extract : sc-2253.

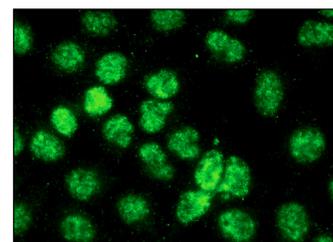
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ZNF282 (T-13): sc-132170. Western blot analysis of ZNF282 expression in NIH/3T3 (A) and RAW 264.7 (B) whole cell lysates, rat ovary (C), mouse brain (D) and mouse testis (E) tissue extracts and NIH/3T3 nuclear extract (F).



ZNF282 (T-13): sc-132170. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

RESEARCH USE

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

PROTOCOLS

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