

# 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 C<sub>2</sub>H<sub>2</sub>-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.

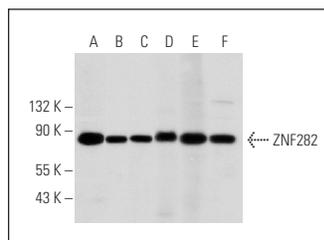
Molecular Weight of ZNF282: 74 kDa.

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

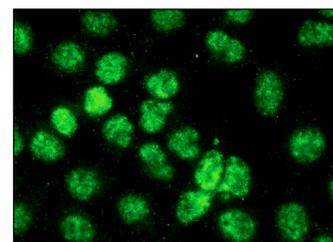
## RECOMMENDED SECONDARY REAGENTS

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](http://www.scbt.com) or our catalog for detailed protocols and support products.