

ZNF651 (C-18): sc-100268

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. As a member of the krüppel C₂H₂-type zinc-finger protein family, ZNF651 (Zinc finger protein 651), also known as ZBTB47 (Zinc finger and BTB domain-containing protein 47), is a 371 amino acid nuclear protein that contains 9 C₂H₂-type zinc fingers. The gene encoding ZNF651 maps to human chromosome 3, which is made up of about 214 million bases encoding over 1,100 genes, including a chemo-kine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. Payre, F., et al. 1988. Finger proteins and DNA-specific recognition: distinct patterns of conserved amino acids suggest different evolutionary modes. *FEBS Lett.* 234: 245-250.
2. Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. *New Biol.* 2: 363-374.
3. 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.
4. Müller, S., et al. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
5. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
6. Edelstein, L.C., et al. 2005. The SCAN domain family of zinc finger transcription factors. *Gene* 359: 1-17.
7. Liu, J., et al. 2008. Context-dependent DNA recognition code for C₂H₂ zinc-finger transcription factors. *Bioinformatics* 24: 1850-1857.
8. Ruiz-Herrera, A., et al. 2008. Evolutionary plasticity and cancer breakpoints in human chromosome 3. *Bioessays* 30: 1126-1137.

CHROMOSOMAL LOCATION

Genetic locus: ZBTB47 (human) mapping to 3p22.1.

SOURCE

ZNF651 (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of ZNF651 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-100268 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZNF651 (C-18) is recommended for detection of ZNF651 of 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).

Suitable for use as control antibody for ZNF651 siRNA (h): sc-78249, ZNF651 shRNA Plasmid (h): sc-78249-SH and ZNF651 shRNA (h) Lentiviral Particles: sc-78249-V.

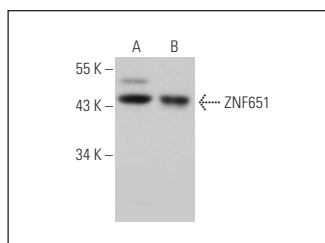
Molecular Weight of ZNF651: 42 kDa.

Positive Controls: ZNF651 (h): 293T Lysate: sc-113967, HL-60 whole cell lysate: sc-2209 or human testis extract: sc-363781.

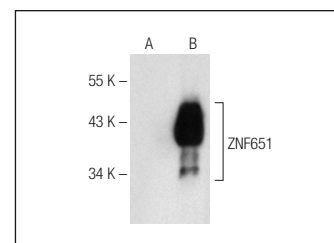
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ZNF651 (C-18): sc-100268. Western blot analysis of ZNF651 expression in HL-60 whole cell lysate (A) and human testis tissue extract (B).



ZNF651 (C-18): sc-100268. Western blot analysis of ZNF651 expression in non-transfected: sc-117752 (A) and human ZNF651 transfected: sc-113967 (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.

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.