

# ZNF553 (P-17): sc-249644

## 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. ZNF553 (zinc finger protein 553), also known as ZNF48, is a 618 amino acid nuclear protein that belongs to the Krüppel C<sub>2</sub>H<sub>2</sub>-type zinc-finger protein family. Containing 12 C<sub>2</sub>H<sub>2</sub>-type zinc fingers, ZNF553 may be involved in transcriptional regulation. ZNF553 is encoded by a gene located on human chromosome 16p11.2. Chromosome 16 encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

## REFERENCES

- Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. *Am. J. Hum. Genet.* 52: 249-254.
- Cannizzaro, L.A., et al. 1993. Human zinc finger gene ZNF23 (Kox16) maps to a zinc finger gene cluster on chromosome 16q22, and ZNF32 (Kox30) to chromosome region 10q23-q24. *Hum. Genet.* 91: 383-385.
- Rousseau-Merck, M.F., et al. 1993. Chromosomal localization of 9 KOX zinc finger genes: physical linkages suggest clustering of KOX genes on chromosomes 12, 16, and 19. *Hum. Genet.* 92: 583-587.
- Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. *Nat. Genet.* 26: 370-374.
- Sun, Y., et al. 2003. The KRAB domain of zinc finger gene ZNF268: a potential transcriptional repressor. *IUBMB Life* 55: 127-131.
- Englbrecht, C.C., et al. 2004. Conservation, diversification and expansion of C<sub>2</sub>H<sub>2</sub> zinc finger proteins in the *Arabidopsis thaliana* genome. *BMC Genomics* 5: 39.

## CHROMOSOMAL LOCATION

Genetic locus: ZNF48 (human) mapping to 16p11.2; Zfp553 (mouse) mapping to 7 F3.

## SOURCE

ZNF553 (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZNF553 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-249644 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ZNF553 (P-17) is recommended for detection of ZNF553 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).

ZNF553 (P-17) is also recommended for detection of ZNF553 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ZNF553 siRNA (h): sc-93371, ZNF553 siRNA (m): sc-155747, ZNF553 shRNA Plasmid (h): sc-93371-SH, ZNF553 shRNA Plasmid (m): sc-155747-SH, ZNF553 shRNA (h) Lentiviral Particles: sc-93371-V and ZNF553 shRNA (m) Lentiviral Particles: sc-155747-V.

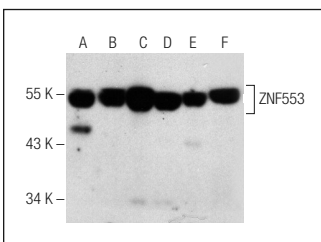
Molecular Weight of ZNF553: 68 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Daudi cell lysate: sc-2415 or K-562 nuclear extract: sc-2130.

## 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



ZNF553 (P-17): sc-249644. Western blot analysis of ZNF553 expression in Daudi whole cell lysate (A) and K-562 (B), MCF7 (C), HeLa (D) and Hep G2 (E) nuclear extracts and human liver tissue extract (F).

## 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.