

ZNF513 (G-18): sc-249602

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. ZNF513 (zinc finger protein 513), also known as RP58 or HMFT0656, is a 541 amino acid nuclear protein that is expressed in retina and belongs to the Krüppel C₂H₂-type zinc-finger protein family. Containing eight C₂H₂-type zinc fingers, ZNF513 is thought to be a transcriptional regulator that is involved in retinal development and maintenance. Defects in ZNF513 are suggested to be the cause of retinitis pigmentosa type 58 (RP58), which is characterized retinal pigment deposits that are visible upon fundus examination, and primary loss of rod photoreceptor cells followed by secondary loss of cone photoreceptors. Night vision blindness and loss of midperipheral visual field are typical in people with RP58. ZNF513 exists as three alternatively spliced isoforms.

REFERENCES

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2. Edelstein, L.C. and Collins, T. 2005. The SCAN domain family of zinc finger transcription factors. *Gene* 359: 1-17.
3. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. *Nature* 439: 331-335.
4. Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. *Genome Res.* 16: 55-65.
5. Zhong, Z., et al. 2007. Identification of a novel human zinc finger gene, ZNF438, with transcription inhibition activity. *J. Biochem. Mol. Biol.* 40: 517-524.
6. O'Geen, H., et al. 2007. Genome-wide analysis of KAP1 binding suggests autoregulation of KRAB-ZNFs. *PLoS Genet.* 3: e89.
7. Li, L., et al. 2010. A mutation in ZNF513, a putative regulator of photoreceptor development, causes autosomal-recessive retinitis pigmentosa. *Am. J. Hum. Genet.* 87: 400-409.

CHROMOSOMAL LOCATION

Genetic locus: ZNF513 (human) mapping to 2p23.3.

SOURCE

ZNF513 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ZNF513 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-249602 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZNF513 (G-18) is recommended for detection of ZNF513 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ZNF513 (G-18) is also recommended for detection of ZNF513 in additional species, including porcine.

Suitable for use as control antibody for ZNF513 siRNA (h): sc-94285, ZNF513 shRNA Plasmid (h): sc-94285-SH and ZNF513 shRNA (h) Lentiviral Particles: sc-94285-V.

Molecular Weight of ZNF513 isoforms: 58/51/22 kDa.

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) 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.

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.