

ZNF545 (Y-12): sc-132980

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 Krüppel-type DNA binding domains that are frequently observed to be involved in sequence-specific DNA binding. ZNF545 is a 532 amino acid transcriptional regulator belonging to the Krüppel C₂H₂-type zinc finger protein family. ZNF545 localizes to the nucleus and contains 13 C₂H₂-type zinc fingers and a KRAB domain. Two isoforms of ZNF545 are formed due to alternative splicing. ZNF545 is encoded by a gene located on chromosome 19, which contains a diversity of interesting genes and is recognized for having the greatest gene density of the human chromosomes. Chromosome 19 is the genetic home for a number of immunoglobulin superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcR). Key genes for eye color and hair color also map to chromosome 19.

REFERENCES

1. Payre, F. and Vincent, A. 1988. Finger proteins and DNA-specific recognition: distinct patterns of conserved amino acids suggest different evolutionary modes. *FEBS Lett.* 234: 245-250.
2. Berg, J.M. 1988. Proposed structure for the zinc-binding domains from transcription factor IIIA and related proteins. *Proc. Natl. Acad. Sci. USA* 85: 99-102.
3. Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. *New Biol.* 2: 363-374.
4. Rosenfeld, R. and Margalit, H. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. *J. Biomol. Struct. Dyn.* 11: 557-570.
5. Abrink, M., Aveskogh, M. and Hellman, L. 1995. Isolation of cDNA clones for 42 different Krüppel-related zinc finger proteins expressed in the human monoblast cell line U-937. *DNA Cell Biol.* 14: 125-136.
6. Walter, L. and Günther, E. 2000. Physical mapping and evolution of the centromeric class I gene-containing region of the rat MHC. *Immunogenetics* 51: 829-837.
7. Durand, S., Abadie, P., Angeletti, S. and Genti-Raimondi, S. 2003. Identification of multiple differentially expressed messenger RNAs in normal and pathological trophoblast. *Placenta.* 24: 209-218.
8. Brayer, K.J., Kulshreshtha, S. and Segal, D.J. 2008. The protein-binding potential of C₂H₂ zinc finger domains. *Cell Biochem. Biophys.* 51: 9-19.
9. Liu, J. and Stormo, G.D. 2008. Context-dependent DNA recognition code for C₂H₂ zinc-finger transcription factors. *Bioinformatics* 24: 1850-1857.

CHROMOSOMAL LOCATION

Genetic locus: Zfp82 (mouse) mapping to 7 B1.

RESEARCH USE

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

SOURCE

ZNF545 (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZNF545 of mouse 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-132980 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZNF545 (Y-12) is recommended for detection of ZNF545 isoforms 1 and 2 of mouse and rat 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.

Suitable for use as control antibody for ZNF545 siRNA (m): sc-155745, ZNF545 shRNA Plasmid (m): sc-155745-SH and ZNF545 shRNA (m) Lentiviral Particles: sc-155745-V.

Molecular Weight of ZNF545: 63 kDa.

Positive Controls: mouse brain extract: sc-2253.

STORAGE

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

PROTOCOLS

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