

ZNF74 (S-19): sc-86267

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 krueppel C₂H₂-type zinc-finger protein family, ZNF74 (zinc finger protein 74) is a 643 amino acid nuclear protein that contains one KRAB domain and twelve C₂H₂-type zinc fingers. These internal features enable ZNF74 to bind tightly to the nuclear matrix and be involved in protein-protein interactions. Mapping to chromosome 22, the gene encoding ZNF74 is found to be consistently deleted in DiGeorge syndrome, a disease characterized by congenital heart defects, recurrent infections, palate abnormalities and learning disabilities. There are four isoforms of ZNF74 that are produced as a result of alternative splicing events.

REFERENCES

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3. Côté, F., et al. 2001. Alternative promoter usage and splicing of ZNF74 multifinger gene produce protein isoforms with a different repressor activity and nuclear partitioning. *DNA Cell Biol.* 20: 159-173.
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6. Williams, N.M., et al. 2002. Mutation screening and LD mapping in the VCFS deleted region of chromosome 22q11 in schizophrenia using a novel DNA pooling approach. *Mol. Psychiatry.* 7: 1092-1100.
7. Germain-Desprez, D., et al. 2003. Oligomerization of transcriptional intermediary factor 1 regulators and interaction with ZNF74 nuclear matrix protein revealed by bioluminescence resonance energy transfer in living cells. *J. Biol. Chem.* 278: 22367-22373.
8. Arcand, S.L., et al. 2004. Gene expression microarray analysis and genome databases facilitate the characterization of a chromosome 22 derived homogeneously staining region. *Mol. Carcinog.* 41: 17-38.
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STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: ZNF74 (human) mapping to 22q11.21.

SOURCE

ZNF74 (S-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of ZNF74 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-86267 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-86267 X, 100 µg/0.1 ml.

APPLICATIONS

ZNF74 (S-19) is recommended for detection of ZNF74 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); non cross-reactive with other ZNF family members.

Suitable for use as control antibody for ZNF74 siRNA (h): sc-77004, ZNF74 shRNA Plasmid (h): sc-77004-SH and ZNF74 shRNA (h) Lentiviral Particles: sc-77004-V.

ZNF74 (S-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ZNF74: 67 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132.

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.

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.