SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF74 (C-12): sc-86265

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 C_2H_2-type zinc-finger protein family, ZNF74 (zinc finger protein 74) is a 643 amino acid nuclear protein that contains one KRAB domain and 12 C_2H_2-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

1. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 194548. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Ravassard, P., et al. 1999. ZNF74, a gene deleted in DiGeorge syndrome, is expressed in human neural crest-derived tissues and foregut endoderm epithelia. Genomics 62: 82-85.
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.
4. Takase, K., et al. 2001. Association of ZNF74 gene genotypes with age-at-onset of schizophrenia. Schizophr. Res. 52: 161-165.
5. Ladomery, M. and Dellaire, G. 2002. Multifunctional zinc finger proteins in development and disease. Ann. Hum. Genet. 66: 331-342.

CHROMOSOMAL LOCATION

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

SOURCE

ZNF74 (C-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at 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-86265 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-86265 X, 100 µg/0.1 ml.

STORAGE

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

APPLICATIONS

ZNF74 (C-12) 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 (C-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

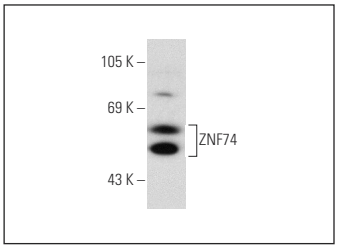
Molecular Weight of ZNF74: 67 kDa.

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.

DATA



ZNF74 (C-12): sc-86265. Western blot analysis of ZNF74 expression in Jurkat nuclear extract.

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.