

ZNF74 (B-11): sc-390612

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 Krüppel C₂H₂-type zinc-finger protein family, ZNF74 (zinc finger protein 74) is a 643 amino acid nuclear protein that contains one KRAB domain and 12 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

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. Cote, 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.

CHROMOSOMAL LOCATION

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

SOURCE

ZNF74 (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 621-639 at the C-terminus of ZNF74 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390612 X, 200 µg/0.1 ml.

ZNF74 (B-11) is available conjugated to agarose (sc-390612 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390612 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390612 PE), fluorescein (sc-390612 FITC), Alexa Fluor® 488 (sc-390612 AF488), Alexa Fluor® 546 (sc-390612 AF546), Alexa Fluor® 594 (sc-390612 AF594) or Alexa Fluor® 647 (sc-390612 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390612 AF680) or Alexa Fluor® 790 (sc-390612 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390612 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

ZNF74 (B-11) is recommended for detection of ZNF74 of human origin by Western Blotting (starting dilution 1:100, 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).

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 (B-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

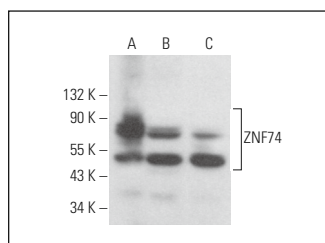
Molecular Weight of ZNF74: 67 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ZNF74 (B-11): sc-390612. Western blot analysis of ZNF74 expression in HeLa (A) and Jurkat (B) nuclear extracts and K-562 whole cell lysate (C).

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 for detailed protocols and support products.