

# FOXN2 (D-4): sc-514664

## BACKGROUND

The forkhead domain-containing gene family (Fox) comprises over 20 members in mammals and is defined by a conserved 110 amino-acid motif containing a winged helix structure DNA-binding domain. The members of this gene family have been implicated as key regulators of embryogenesis, cell cycling, cell lineage restriction and cancer. As such, FOXN2 contains a domain with homology to the forkhead DNA binding domain. FOXN2, or human T-cell leukemia virus enhancer factor, is a 341 amino acid protein mapping to human gene FOXN2, which has been localized to human chromosome 2p16.3. This protein, encoded by a 1239-bp cDNA isolated from the Jurkat cDNA library, is capable of binding to a region of the human T-cell leukemia virus long terminal repeat (HTLV-I LTR) located between amino acids 155 and 117. This purine-rich region is important in the regulation of gene expression by the Ets family of transcription factors. FOXN2 is a unique cellular gene that may function in the transcriptional regulation of HTLV-I LTR.

## REFERENCES

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- Schlake, T., et al. 2000. Formation of regulator/target gene relationships during evolution. *Gene* 256: 29-34.
- Ariyama, Y., et al. 2000. Chromosomal imbalances in adult T-cell leukemia revealed by comparative genomic hybridization: gains at 14q and 2p16-22 in cell lines. *J. Hum. Genet.* 44: 357-363.
- Boehm, T., et al. 2003. Genetic dissection of thymus development in mouse and zebrafish. *Immunol. Rev.* 195: 15-27.
- Katoh, M., et al. 2004. Characterization of human FOXN4 gene in silico. *Int. J. Mol. Med.* 14: 949-953.
- Katoh, M., et al. 2004. Human FOX gene family (review). *Int. J. Oncol.* 25: 1495-1500.
- Schuff, M., et al. 2006. Temporal and spatial expression patterns of FOXN genes in *Xenopus laevis* embryos. *Int. J. Dev. Biol.* 50: 429-434.

## CHROMOSOMAL LOCATION

Genetic locus: FOXN2 (human) mapping to 2p16.3; Foxn2 (mouse) mapping to 17 E4.

## SOURCE

FOXN2 (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 62-85 within an internal region of FOXN2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgM 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-514664 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-514664 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

FOXN2 (D-4) is recommended for detection of FOXN2 of mouse, rat and 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 FOXN2 siRNA (h): sc-62341, FOXN2 siRNA (m): sc-62342, FOXN2 shRNA Plasmid (h): sc-62341-SH, FOXN2 shRNA Plasmid (m): sc-62342-SH, FOXN2 shRNA (h) Lentiviral Particles: sc-62341-V and FOXN2 shRNA (m) Lentiviral Particles: sc-62342-V.

FOXN2 (D-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

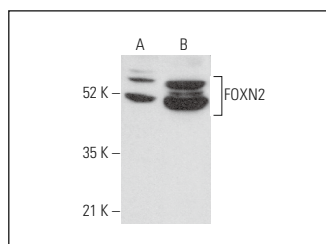
Molecular Weight of FOXN2: 37 kDa.

Positive Controls: TK-1 whole cell lysate: sc-364798, NIH/3T3 nuclear extract: sc-2138 or rat heart extract: sc-2393.

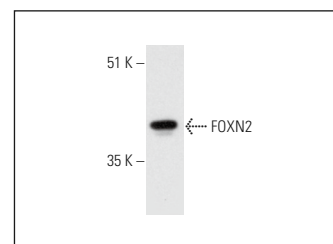
## RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



FOXN2 (D-4): sc-514664. Western blot analysis of FOXN2 expression in TK-1 whole cell lysate (A) and rat heart tissue extract (B).



FOXN2 (D-4): sc-514664. Western blot analysis of FOXN2 expression in NIH/3T3 nuclear extract.

## 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.