

# FOXN1 (P-16): sc-26331

## BACKGROUND

The Fox family of transcription factors is a large group of proteins that share a common DNA binding domain termed a winged-helix or forkhead domain. FOXN1, also designated transcription factor winged-nude (WHN), is required for keratinocyte growth, as well as differentiation of epithelial progenitor cells in the thymic primordium into subcapsular, cortical and medullary epithelial cells of the mature thymus. Mutations in the FOXN1 gene are responsible for nude, immune-deficient mice and rats. These nude mice are useful as hosts for xenografts in cancer research. The promoters for FOXN1 are active in the skin and thymus reflecting the critical role FOXN1 plays in the proper development of these tissues. Secreted Wnt glycoproteins appear to regulate FOXN1 transcription in the thymus. FOXN1 is expressed in the embryonic thymus after the common primordium is formed, beginning at E11.25. FOXN1 is also expressed at very low levels in normal human kidney and thyroid gland. In human, it is also expressed in the differentiating cells of the hair follicle precortex, the innermost layer of the outer root sheath and the thymus.

## REFERENCES

1. Nehls, M., Pfeifer, D., Schorpp, M., Hedrich, H. and Boehm, T. 1994. New member of the winged-helix protein family disrupted in mouse and rat nude mutations. *Nature* 372: 103-107.
2. Segre, J.A., Nemhauser, J.L., Taylor, B.A., Nadeau, J.H. and Lander, E.S. 1995. Positional cloning of the nude locus: genetic, physical, and transcription maps of the region and mutations in the mouse and rat. *Genomics* 28: 549-559.
3. Schorpp, M., Hofmann, M., Dear, T.N. and Boehm, T. 1997. Characterization of mouse and human nude genes. *Immunogenetics* 46: 509-515.
4. Gattenlohner, S., Muller-Hermelink, H.K. and Marx, A. 1999. Transcription of the nude gene (WHN) in human normal organs and mediastinal and pulmonary tumors. *Pathol. Res. Pract.* 195: 571-574.

## CHROMOSOMAL LOCATION

Genetic locus: FOXN1 (human) mapping to 17q11.2; Foxn1 (mouse) mapping to 11 B5.

## SOURCE

FOXN1 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FOXN1 of human 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-26331 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

FOXN1 (P-16) is recommended for detection of FOXN1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

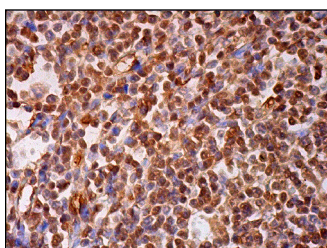
Suitable for use as control antibody for FOXN1 siRNA (h): sc-38611, FOXN1 siRNA (m): sc-38612, FOXN1 shRNA Plasmid (h): sc-38611-SH, FOXN1 shRNA Plasmid (m): sc-38612-SH, FOXN1 shRNA (h) Lentiviral Particles: sc-38611-V and FOXN1 shRNA (m) Lentiviral Particles: sc-38612-V.

Molecular Weight of FOXN1: 69 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



FOXN1 (P-16): sc-26331. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of cells in germinal centers and cells in non-germinal centers.

## RESEARCH USE

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

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Try **FOXN1 (E-3): sc-271256**, our highly recommended monoclonal alternative to FOXN1 (P-16).