

FOXN1 (G-20): sc-23566

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 pre-cortex, the innermost layer of the outer root sheath, and the thymus.

CHROMOSOMAL LOCATION

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

SOURCE

FOXN1 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-23566 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FOXN1 (G-20) 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), 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).

FOXN1 (G-20) is also recommended for detection of FOXN1 in additional species, including equine, canine, bovine and porcine.

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.

Positive Controls: FOXN1 (h2): 293T Lysate: sc-128644.

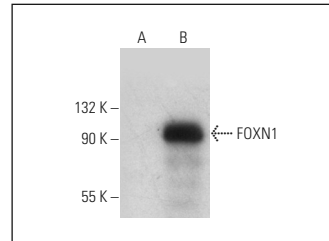
RESEARCH USE

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

STORAGE

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

DATA



FOXN1 (G-20): sc-23566. Western blot analysis of FOXN1 expression in non-transfected: sc-117752 (A) and human FOXN1 transfected: sc-128644 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Li, J., et al. 2007. FOXN1 promotes keratinocyte differentiation by regulating the activity of protein kinase C. *Differentiation* 75: 694-701.
- Weiner, L., et al. 2007. Dedicated epithelial recipient cells determine pigmentation patterns. *Cell* 130: 932-942.
- Cai, J., et al. 2009. Genetic interplays between Msx-2 and FOXN1 are required for Notch 1 expression and hair shaft differentiation. *Dev. Biol.* 326: 420-430.
- Chen, L., et al. 2009. FOXN1 is required to maintain the postnatal thymic microenvironment in a dosage-sensitive manner. *Blood* 113: 567-574.
- Cai, J., et al. 2011. Msx2 and Foxn1 regulate nail homeostasis. *Genesis* 49: 449-459.
- Wei, Q., et al. 2011. A focused *in situ* hybridization screen identifies candidate transcriptional regulators of thymic epithelial cell development and function. *PLoS ONE* 6: e26795.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **FOXN1 (E-3): sc-271256**, our highly recommended monoclonal alternative to FOXN1 (G-20).