

# FOXN4 (G-1): sc-377166

## BACKGROUND

The human gene FOXN4 encodes for a 476 amino acid nuclear protein designated FOXN4. FOXN4 cooperates with key retinogenic factors to mediate the multipotent differentiation of retinal progenitors and is believed to regulate neuronal subtype diversification. FOXN4 is expressed in a subset of mitotic progenitors during retinogenesis. As such, FOXN4 controls the formation of amacrine and horizontal cells by activating the expression of the retinogenic factors MATH-3, Neuro D and PROX1. During spinal neurogenesis, the p2 progenitor domain gives rise to two intermingled distinct subtypes of interneurons, termed V2a and V2b. FOXN4 is coexpressed with the bHLH factor ASH1 (Mash1) in a subset of p2 progenitors. Functionality of FOXN4 affects ASH1 expression and regulates interneuronal formation accordingly. Over-expression of FOXN4 alone in spinal neural progenitors promotes the V2a fate at the expense of the V2b fate, whereas ASH1 suppresses both the V2a and V2b fates.

## REFERENCES

1. Schorpp, M., et al. 2002. A zebrafish orthologue (whnb) of the mouse nude gene is expressed in the epithelial compartment of the embryonic thymic rudiment. *Mech. Dev.* 118: 179-185.
2. Kay, J.N. and Baier, H. 2004. Out-foxing fate; molecular switches create neuronal diversity in the retina. *Neuron* 43: 759-760.
3. Li, S., et al. 2004. FOXN4 controls the genesis of amacrine and horizontal cells by retinal progenitors. *Neuron* 43: 795-807.
4. Katoh, M. and Katoh, M. 2004. Human FOX gene family (review). *Int. J. Oncol.* 25: 1495-1500.
5. Katoh, M. and Katoh, M. 2004. Characterization of human FOXN4 gene in silico. *Int. J. Mol. Med.* 14: 949-953.

## CHROMOSOMAL LOCATION

Genetic locus: FOXN4 (human) mapping to 12q24.11; Foxn4 (mouse) mapping to 5 F.

## SOURCE

FOXN4 (G-1) is a mouse monoclonal antibody raised against amino acids 1-195 mapping at the N-terminus of FOXN4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FOXN4 (G-1) is available conjugated to agarose (sc-377166 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377166 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377166 PE), fluorescein (sc-377166 FITC), Alexa Fluor® 488 (sc-377166 AF488), Alexa Fluor® 546 (sc-377166 AF546), Alexa Fluor® 594 (sc-377166 AF594) or Alexa Fluor® 647 (sc-377166 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377166 AF680) or Alexa Fluor® 790 (sc-377166 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

FOXN4 (G-1) is recommended for detection of FOXN4 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 FOXN4 siRNA (h): sc-62343, FOXN4 siRNA (m): sc-62344, FOXN4 shRNA Plasmid (h): sc-62343-SH, FOXN4 shRNA Plasmid (m): sc-62344-SH, FOXN4 shRNA (h) Lentiviral Particles: sc-62343-V and FOXN4 shRNA (m) Lentiviral Particles: sc-62344-V.

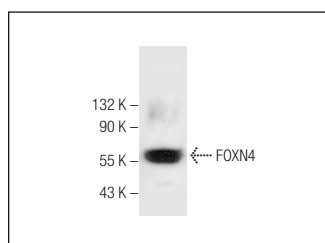
Molecular Weight of FOXN4: 55 kDa.

Positive Controls: Y79 cell lysate: sc-2240 or Jurkat nuclear extract: sc-2132.

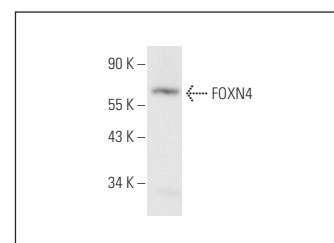
## RECOMMENDED SUPPORT REAGENTS

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



FOXN4 (G-1): sc-377166. Western blot analysis of FOXN4 expression in Y79 whole cell lysate.



FOXN4 (G-1): sc-377166. Western blot analysis of FOXN4 expression in Jurkat nuclear extract.

## SELECT PRODUCT CITATIONS

1. Greaney, A.M., et al. 2020. Platform effects on regeneration by pulmonary basal cells as evaluated by single-cell RNA sequencing. *Cell Rep.* 30: 4250-4265.e6.

## 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.