

FOXN4 (H-195): sc-134981

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

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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.
6. Danilova, N., et al. 2004. Expression of the winged helix/forkhead gene, FOXN4, during zebrafish development. *Brain Res. Dev. Brain Res.* 153: 115-119.
7. Li, S., et al. 2005. FOXN4 acts synergistically with Mash1 to specify subtype identity of V2 interneurons in the spinal cord. *Proc. Natl. Acad. Sci. USA* 102: 10688-10693.

CHROMOSOMAL LOCATION

Genetic locus: FOXN4 (human) mapping to 12q24.11.

SOURCE

FOXN4 (H-195) is a rabbit polyclonal antibody raised against amino acids 1-195 mapping at the N-terminus of FOXN4 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.

STORAGE

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

APPLICATIONS

FOXN4 (H-195) is recommended for detection of FOXN4 of 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).

FOXN4 (H-195) is also recommended for detection of FOXN4 in additional species, including canine.

Suitable for use as control antibody for FOXN4 siRNA (h): sc-62343, FOXN4 shRNA Plasmid (h): sc-62343-SH and FOXN4 shRNA (h) Lentiviral Particles: sc-62343-V.

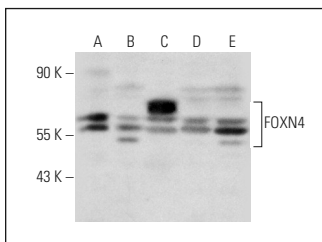
Molecular Weight of FOXN4: 55 kDa.

Positive Controls: Y79 nuclear extract: sc-2126, Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



FOXN4 (H-195): sc-134981. Western blot analysis of FOXN4 expression in Y79 (A), HeLa (B), Hep G2 (C), Jurkat (D) and U-937 (E) nuclear extracts.

RESEARCH USE

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



Try **FOXN4 (G-1): sc-377166**, our highly recommended monoclonal alternative to FOXN4 (H-195).