FOXN4 (S-14): sc-66775

SANTA CRUZ® BIOTECHNOLOGY

The Power to Question

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. Overexpression 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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7. Li, S., Misra, K., Matise, M.P. and Xiang, M. 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; Foxn4 (mouse) mapping to 5 F.

SOURCE

FOXN4 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FOXN4 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG 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-66775 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-66775 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FOXN4 (S-14) is recommended for detection of FOXN4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FOXN4 (S-14) is also recommended for detection of FOXN4 in additional species, including equine, canine, bovine, porcine and avian.

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.

FOXN4 (S-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of FOXN4: 55 kDa.

Positive Controls: Y79 nuclear extract: sc-2126 or NIH/3T3 nuclear extract: sc-2138.

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.

RESEARCH USE

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

MONOS Satisfation Guaranteed

Try **FOXN4 (H-2): sc-390456** or **FOXN4 (G-1): sc-377166**, our highly recommended monoclonal alternatives to FOXN4 (S-14).