

BF-1 (N-15): sc-18581

BACKGROUND

The winged-helix transcriptional repressor (WH) BF-1 gene encodes brain factor 1 (BF-1), also known as FOXG1, and is essential for the proliferation of progenitor cells in the cerebral cortex and influences regional patterning in the mammalian telencephalon. WH proteins are a family of putative transcriptional regulators with diverse roles in development, and are characterized by a highly conserved DNA binding structure, the WH domain. BF-1 plays a critical role in the development of the cerebral hemispheres of the brain and targeted disruption of the gene leads to severe defects in the development of telencephalic structures, such as the cerebral cortex and basal ganglia. The loss of BF-1 results in an accelerated rate of neuronal differentiation and the shortening of the neurogenetic period in the embryonic cerebral cortex. BF-1 is expressed by E8.5 in telencephalic progenitors. BF-1 may also regulate the response of cerebral cortical progenitors to environmental cues.

REFERENCES

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2. Shimamura, K., et al. 1995. Longitudinal organization of the anterior neural plate and neural tube. *Development* 121: 3923-3933.
3. Kaufmann, E. and Knochel, W. 1996. Five years on the wings of fork head. *Mech. Dev.* 57: 3-20.
4. Hatini, V., et al. 1999. Dynamics of placodal lineage development revealed by targeted transgene expression. *Dev. Dyn.* 215: 332-343.
5. Kaestner, K., et al. 2000. Unified nomenclature for the winged helix/fork-head transcription factors. *Genes Dev.* 14: 142-146.
6. Dou, C., et al. 2000. BF-1 interferes with transforming growth factor β signaling by associating with Smad partners. *Mol. Cell. Biol.* 20: 6201-6211.
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CHROMOSOMAL LOCATION

Genetic locus: FOXG1 (human) mapping to 14q12; Foxg1 (mouse) mapping to 12 B3.

SOURCE

BF-1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of BF-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18581 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-18581 X, 200 μ g/0.1 ml.

APPLICATIONS

BF-1 (N-15) is recommended for detection of BF-1 of mouse, rat and human origin, BF-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

BF-1 (N-15) is also recommended for detection of BF-1 and BF-2 in additional species, including bovine and avian.

Suitable for use as control antibody for BF-1 siRNA (m): sc-141691, BF-1 shRNA Plasmid (m): sc-141691-SH and BF-1 shRNA (m) Lentiviral Particles: sc-141691-V

BF-1 (N-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

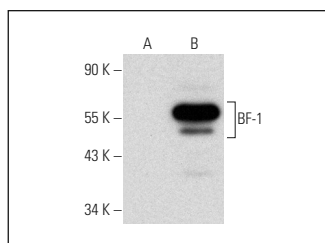
Molecular Weight of BF-1: 51 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, BF-1 (m): 293T Lysate: sc-118802 or SK-N-SH cell lysate: sc-2410.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



BF-1 (N-15): sc-18581. Western blot analysis of BF-1 expression in non-transfected: sc-117752 (A) and mouse BF-1 transfected: sc-118802 (B) 293T whole cell lysates.

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.