

Brn-3 (A-4): sc-390780

BACKGROUND

The Brn family of transcription factors are found in a highly restricted subset of neurons and are critical to the early embryonic development of the central nervous system. Brn-1 and Brn-2 are class III POU (Pit-Oct-Unc) domain proteins, whereas Brn-3 is a class IV POU domain protein. Three Brn-3 proteins have been described and are designated Brn-3a, Brn-3b and Brn-3c. While Brn-3a and Brn-3c stimulate transcription, Brn-3b generally functions as a transcriptional repressor. However, Brn-3b, but not Brn-3a, has been shown to regulate the expression of the acetylcholine receptor. Interestingly, Brn-3a has two functional transactivating domains, one at the amino-terminus and one at the carboxy-terminus. Brn-2 is thought to be involved in smooth muscle cell development and differentiation.

SOURCE

Brn-3 (A-4) is a mouse monoclonal antibody raised against amino acids 321-400 mapping near the C-terminus of Brn-3a of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-390780 X, 200 µg/0.1 ml.

Brn-3 (A-4) is available conjugated to agarose (sc-390780 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390780 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390780 PE), fluorescein (sc-390780 FITC), Alexa Fluor® 488 (sc-390780 AF488), Alexa Fluor® 546 (sc-390780 AF546), Alexa Fluor® 594 (sc-390780 AF594) or Alexa Fluor® 647 (sc-390780 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390780 AF680) or Alexa Fluor® 790 (sc-390780 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Brn-3 (A-4) is recommended for detection of Brn-3a, Brn-3b and Brn-3c 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).

Brn-3 (A-4) is also recommended for detection of Brn-3a, Brn-3b and Brn-3c in additional species, including bovine, porcine and avian.

Brn-3 (A-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Brn-3a: 53 kDa.

Molecular Weight of Brn-3b: 51 kDa.

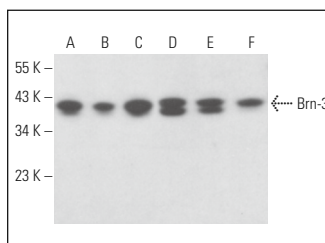
Molecular Weight of Brn-3c: 42 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HEL 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203.

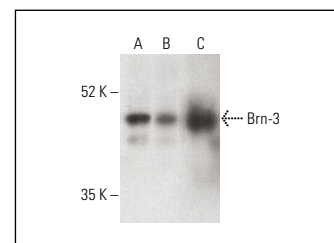
RECOMMENDED SUPPORT REAGENTS

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



Brn-3 (A-4): sc-390780. Western blot analysis of Brn-3 expression in K-562 (A), SJRH30 (B), HEL 92.1.7 (C), Neuro-2A (D), C6 (E) and MCF7 (F) whole cell lysates.



Brn-3 (A-4) HRP: sc-390780 HRP. Direct western blot analysis of Brn-3 expression in HEL 92.1.7 (A), K-562 (B) and SJRH30 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Xiao, D., et al. 2020. Generation of self-organized sensory ganglion organoids and retinal ganglion cells from fibroblasts. *Sci. Adv.* 6: eaaz5858.
- Gabriel, E., et al. 2021. Human brain organoids assemble functionally integrated bilateral optic vesicles. *Cell Stem Cell* 28: 1740-1757.e8.
- Xiao, D., et al. 2021. *In vivo* regeneration of ganglion cells for vision restoration in mammalian retinas. *Front. Cell Dev. Biol.* 9: 755544.

STORAGE

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

PROTOCOLS

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

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