

Brn-3a (A-17): sc-31985

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.

REFERENCES

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3. Schonemann, M.D., et al. 1995. Development and survival of the endocrine hypothalamus and posterior pituitary gland requires the neuronal POU domain factor Brn-2. *Genes Dev.* 9: 3122-3135.
4. Budhram-Mahadeo, V., et al. 1996. The different activities of the two activation domains of the Brn-3a transcription factor are dependent on the context of the binding site. *J. Biol. Chem.* 271: 9108-9113.
5. Dawson, S.J., et al. 1996. A single amino acid change converts an inhibitory transcription factor into an activator. *J. Biol. Chem.* 271: 11631-11633.
6. Erkman, L., et al. 1996. Role of transcription factors Brn-3.1 and Brn-3.2 in auditory and visual system development. *Nature* 381: 603-606.
7. Gan, L., et al. 1996. POU domain factor Brn-3b is required for the development of a large set of retinal ganglion cells. *Proc. Natl. Acad. Sci. USA* 93: 3920-3925.

CHROMOSOMAL LOCATION

Genetic locus: POU4F1 (human) mapping to 13q31.1; Pou4f1 (mouse) mapping to 14 E2.3.

SOURCE

Brn-3a (A-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Brn-3a of human origin.

PRODUCT

Each vial contains 100 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-31985 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-31985 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Brn-3a (A-17) is recommended for detection of Brn-3a 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).

Brn-3a (A-17) is also recommended for detection of Brn-3a in additional species, including canine and avian.

Suitable for use as control antibody for Brn-3a siRNA (h): sc-29839, Brn-3a siRNA (m): sc-29840, Brn-3a shRNA Plasmid (h): sc-29839-SH, Brn-3a shRNA Plasmid (m): sc-29840-SH, Brn-3a shRNA (h) Lentiviral Particles: sc-29839-V and Brn-3a shRNA (m) Lentiviral Particles: sc-29840-V.

Brn-3a (A-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Brn-3a: 43 kDa.

Molecular Weight (observed) of Brn-3a: 47 kDa.

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.

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.

PROTOCOLS

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


 MONOS
Satisfation
Guaranteed

Try **Brn-3a (14A6): sc-8429** or **Brn-3a (H-6): sc-390078**, our highly recommended monoclonal alternatives to Brn-3a (A-17). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Brn-3a (14A6): sc-8429**.