

# Brn-2 (A-11): sc-398966

## 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 domain proteins. Expressed during the development of the forebrain and coexpressed in most layer II-V cortical neurons, Brn-1 and Brn-2 appear to critically control the initiation of radial migration of cortical neurons. Brn-2 is thought to be involved in smooth muscle cell development and differentiation. 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. Brn-3a has two functional transactivating domains, one at the amino terminus and one at the carboxy terminus. 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.

## REFERENCES

- Atanasoski, S., et al. 1995. Isolation of the human genomic brain-2/N-Oct 3 gene (POUF3) and assignment to chromosome 6q16. *Genomics* 26: 272-280.
- Fedtsova, N.G., et al. 1995. Brn-3.0 expression identifies early post-mitotic CNS neurons and sensory neural precursors. *Mech. Dev.* 53: 291-304.
- 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.
- 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.
- 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.
- 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.
- 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: POU3F2 (human) mapping to 6q16.1; Pou3f2 (mouse) mapping to 4 A3.

## SOURCE

Brn-2 (A-11) is a mouse monoclonal antibody raised against amino acids 181-240 mapping within an internal region of Brn-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> 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-398966 X, 200 µg/0.1 ml.

## RESEARCH USE

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

## APPLICATIONS

Brn-2 (A-11) is recommended for detection of Brn-2 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).

Suitable for use as control antibody for Brn-2 siRNA (h): sc-29837, Brn-2 siRNA (m): sc-29838, Brn-2 shRNA Plasmid (h): sc-29837-SH, Brn-2 shRNA Plasmid (m): sc-29838-SH, Brn-2 shRNA (h) Lentiviral Particles: sc-29837-V and Brn-2 shRNA (m) Lentiviral Particles: sc-29838-V.

Brn-2 (A-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

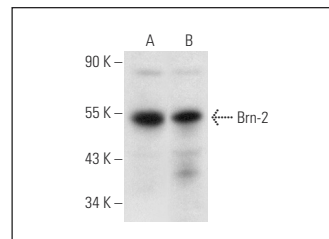
Molecular Weight of Brn-2: 50 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, A-375 cell lysate: sc-3811 or HEK293 whole cell lysate: sc-45136.

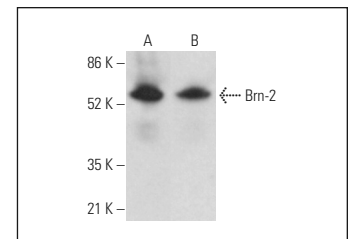
## RECOMMENDED SUPPORT REAGENTS

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-2 (A-11): sc-398966. Western blot analysis of Brn-2 expression in Jurkat nuclear extract (A) and HEK293 whole cell lysate (B).



Brn-2 (A-11): sc-398966. Western blot analysis of Brn-2 expression in A-375 (A) and SK-MEL-24 (B) 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.



See **Brn-2 (B-2): sc-393324** for Brn-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.