

# Brn-2 (ZD-12): sc-81981

## 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

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- 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 (ZD-12) is a mouse monoclonal antibody raised against recombinant Brn-2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

Brn-2 (ZD-12) is recommended for detection of precursor and mature Brn-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] 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.

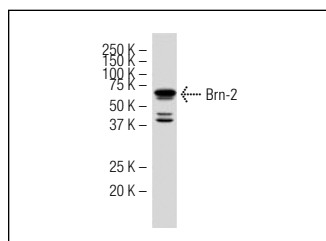
Molecular Weight of Brn-2: 50 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237 or HeLa nuclear extract: sc-2120.

## 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, 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).

## DATA




Brn-2 (ZD-12): sc-81981. Western blot analysis of Brn-2 expression in HeLa nuclear extract.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



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