

## Brn-2 (L-17): sc-31983

### 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

1. Atanatoski, 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.
2. 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.
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.

### CHROMOSOMAL LOCATION

Genetic locus: POU3F2 (human) mapping to 6q16.1; Pou3f2 (mouse) mapping to 4 A3.

### SOURCE

Brn-2 (L-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Brn-2 of human origin.

### PRODUCT

Each vial contains 200 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-31983 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-31983 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### 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 (L-17) 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)], 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-2 (L-17) is also recommended for detection of precursor and mature Brn-2 in additional species, including canine, bovine and porcine.

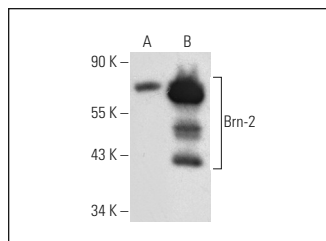
Suitable for use as control antibody for Brn-2 siRNA (h): sc-29837, Brn-2 siRNA (m): sc-29838, Brn-2 shRNA Plasmid (h): sc-29837-SH, Brn-2 shRNA Plasmid (m): sc-29838-SH, Brn-2 shRNA (h) Lentiviral Particles: sc-29837-V and Brn-2 shRNA (m) Lentiviral Particles: sc-29838-V.

Brn-2 (L-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Brn-2: 50 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, Brn-2 (m): 293T Lysate: sc-375217 or HeLa nuclear extract: sc-2120.

### DATA



Brn-2 (L-17): sc-31983. Western blot analysis of Brn-2 expression in non-transfected: sc-117752 (A) and mouse Brn-2 transfected: sc-375217 (B) 293T whole cell lysates.

### 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) or our catalog for detailed protocols and support products.



Try **Brn-2 (B-2): sc-393324** or **Brn-2 (C-2): sc-393334**, our highly recommended monoclonal alternatives to Brn-2 (L-17). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Brn-2 (B-2): sc-393324**.