

## Brn-1 (C-17)-R: sc-6028-R

### 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. 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.
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.
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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: POU3F3 (human) mapping to 2q12.1; Pou3f3 (mouse) mapping to 1 B.

### SOURCE

Brn-1 (C-17)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Brn-1 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.

Blocking peptide available for competition studies, sc-6028 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.

### RESEARCH USE

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

### APPLICATIONS

Brn-1 (C-17)-R is recommended for detection of Brn-1 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-1 (C-17)-R is also recommended for detection of Brn-1 in additional species, including bovine.

Suitable for use as control antibody for Brn-1 siRNA (h): sc-29835, Brn-1 siRNA (m): sc-29836, Brn-1 shRNA Plasmid (h): sc-29835-SH, Brn-1 shRNA Plasmid (m): sc-29836-SH, Brn-1 shRNA (h) Lentiviral Particles: sc-29835-V and Brn-1 shRNA (m) Lentiviral Particles: sc-29836-V.

Molecular Weight of Brn-1: 50 kDa.

Positive Controls: mouse brain extract: sc-2253.

### SELECT PRODUCT CITATIONS

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4. Chen, J.G., et al. 2005. Zfp312 is required for subcortical axonal projections and dendritic morphology of deep-layer pyramidal neurons of the cerebral cortex. *Proc. Natl. Acad. Sci. USA* 102: 17792-17797.
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### PROTOCOLS

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