

#4183 Store at -20°C

# NAC1 Antibody (Rodent Preferred)



100 µl  
 (10 western blots)

**Orders** ■ 877-616-CELL (2355)  
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New 11/09

This product is for *in vitro* research use only and is not intended for use in humans or animals.  
 This product is not intended for use as a therapeutic or in diagnostic procedures.

**Entrez-Gene ID** #112939  
**Swiss-Prot Acc.** #Q96RE7

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	M, R, (H)	62 kDa	Rabbit**

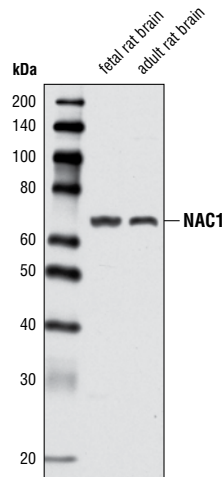
**Background:** NAC1 or nuclear accumbens-1 is a nuclear factor that belongs to the POZ/BTB (Pox virus and zinc finger/bric-a-brac tramtrack broad complex) domain family. Also known as BTBD14B, it was originally identified in a unique neuronal forebrain structure responsible for reward motivation and addictive behaviors (1,2). NAC1 recruits HDAC3 and HDAC4 to transcriptionally repress gene expression in neuronal cells (3) and specifically co-represses other POZ/BTB proteins in the central nervous system (4). NAC1 is upregulated in several tumor types, including breast, renal cell, and hepatocellular carcinoma, as well as high grade ovarian serous carcinoma, where it has long been suspected as a chemoresistance gene (5,6). The chemoresistance mechanism reportedly occurs through NAC1 negative regulation of the GADD45 pathway (7). NAC1 has also been described as part of the extended transcriptional network in pluripotent cells that involves Oct-4, Sox2, Nanog, Sall1, KLF4 and Sall4 (8).

**Specificity/Sensitivity:** NAC1 Antibody (Rodent Preferred) detects endogenous levels of total NAC1 protein in mouse and rat and weakly detects human NAC1 protein.

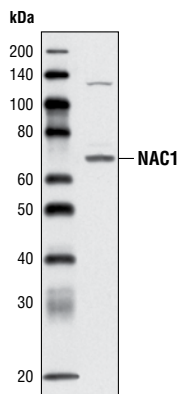
**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic (KLH-coupled) peptide corresponding to the amino acid sequence surrounding Ala321 of human NAC1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

- (1) Kalivas, P.W. et al. (1999) *Synapse* 33, 153-9.
- (2) Mackler, S.A. et al. (2000) *J Neurosci* 20, 6210-7.
- (3) Korutla, L. et al. (2005) *J Neurochem* 94, 786-93.
- (4) Korutla, L. et al. *Neurochem Int* 54, 245-52.
- (5) Nakayama, K. et al. (2006) *Proc Natl Acad Sci USA* 103, 18739-44.
- (6) Yeasmin, S. et al. (2008) *Clin Cancer Res* 14, 1686-91.
- (7) Jinawath, N. et al. (2009) *Oncogene* 28, 1941-8.
- (8) Kim, J. et al. (2008) *Cell* 132, 1049-61.



Western blot analysis of extracts from fetal and adult rat brain using NAC1 Antibody (Rodent Preferred).



Western blot analysis of extracts from adult mouse brain using NAC1 Antibody (Rodent Preferred).

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**\*Species cross-reactivity is determined by western blot.**

**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

Western blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.