



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

# NAC1 Antibody

Store at -20C  
#4420

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 62	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q96RE7	<b>Entrez-Gene Id:</b> 112939
---------------------------	-------------------------	-----------------------------------	------------------------	----------------------------------	-------------------------------	----------------------------------

## Product Usage Information

### Application

Western Blotting

### Dilution

1:1000

## 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.

## Specificity/Sensitivity

NAC1 Antibody detects endogenous levels of total NAC1 protein.

## Species predicted to react based on 100% sequence homology

Monkey

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to an amino acid sequence at the carboxyl terminus of human NAC1. Antibodies are purified by protein A and peptide affinity chromatography.

## 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).

## 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. (2009) *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.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

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

## Applications Key

**W:** Western Blotting

## Cross-Reactivity Key

**H:** Human

## Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

## Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless

separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.