

# BTBD14B (H-74): sc-98638

## BACKGROUND

The BTB (broad-complex, Tramtrack and Bric a brac) domain, also known as the POZ (poxvirus and zinc finger) domain, is an N-terminal homodimerization domain that contains multiple copies of kelch repeats and/or C<sub>2</sub>H<sub>2</sub>-type zinc fingers. Proteins that contain BTB domains are thought to be involved in transcriptional regulation via control of chromatin structure and function. BTBD14B (BTB/POZ domain-containing protein 14B), also known as NACC1 (nucleus accumbens associated 1), BEND8 or NAC1, is a 527 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one BTB (POZ) domain. Existing as a homooligomer that interacts with HDAC3 and HDAC4, BTBD14B functions as a transcriptional repressor that influences the transcriptional activity of CRIF1 and is required for proteasome recruitment to the nucleus and cytoplasm in dendritic spines. BTBD14B is overexpressed in multiple carcinomas, suggesting a role in tumor development and metastasis.

## REFERENCES

1. Bardwell, V.J. and Treisman, R. 1994. The POZ domain: a conserved protein-protein interaction motif. *Genes Dev.* 8: 1664-1677.
2. Zollman, S., et al. 1994. The BTB domain, found primarily in zinc finger proteins, defines an evolutionarily conserved family that includes several developmentally regulated genes in *Drosophila*. *Proc. Natl. Acad. Sci. USA* 91: 10717-10721.
3. Korutla, L., et al. 2002. Differences in expression, actions and cocaine regulation of two isoforms for the brain transcriptional regulator NAC1. *Neuroscience* 110: 421-429.
4. Korutla, L., et al. 2005. The POZ/BTB protein NAC1 interacts with two different histone deacetylases in neuronal-like cultures. *J. Neurochem.* 94: 786-793.
5. Nakayama, K., et al. 2006. A BTB/POZ protein, NAC1, is related to tumor recurrence and is essential for tumor growth and survival. *Proc. Natl. Acad. Sci. USA* 103: 18739-18744.
6. Nakayama, K., et al. 2007. NAC1 controls cell growth and survival by repressing transcription of GADD45GIP1, a candidate tumor suppressor. *Cancer Res.* 67: 8058-8064.
7. Davidson, B., et al. 2007. Expression and clinical role of the bric-a-brac tramtrack broad-complex/poxvirus and zinc protein NAC1 in ovarian carcinoma effusions. *Hum. Pathol.* 38: 1030-1036.

## CHROMOSOMAL LOCATION

Genetic locus: NACC1 (human) mapping to 19p13.2; Nacc1 (mouse) mapping to 8 C3.

## SOURCE

BTBD14B (H-74) is a rabbit polyclonal antibody raised against amino acids 284-357 mapping within an internal region of BTBD14B of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

BTBD14B (H-74) is recommended for detection of BTBD14B 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).

Suitable for use as control antibody for BTBD14B siRNA (h): sc-97419, BTBD14B siRNA (m): sc-141773, BTBD14B shRNA Plasmid (h): sc-97419-SH, BTBD14B shRNA Plasmid (m): sc-141773-SH, BTBD14B shRNA (h) Lentiviral Particles: sc-97419-V and BTBD14B shRNA (m) Lentiviral Particles: sc-141773-V.

Molecular Weight (predicted) of BTBD14B: 57 kDa.

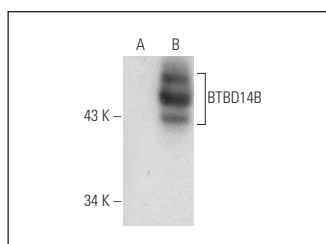
Molecular Weight (observed) of BTBD14B: 62 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or BTBD14B (h): 293T Lysate: sc-116444.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



BTBD14B (H-74): sc-98638. Western blot analysis of BTBD14B expression in non-transfected: sc-117752 (A) and human BTBD14B transfected: sc-116444 (B) 293T whole cell lysates.

## STORAGE

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