

BTBD14B (S-15): sc-109928

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 C₂H₂-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., et al. 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, NAC-1, is related to tumor recurrence and is essential for tumor growth and survival. *Proc. Natl. Acad. Sci. USA* 103: 18739-18744.

CHROMOSOMAL LOCATION

Genetic locus: NACC1 (human) mapping to 19p13.2.

SOURCE

BTBD14B (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BTBD14B 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-109928 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

BTBD14B (S-15) is recommended for detection of BTBD14B of 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); non cross-reactive with other BTB family members.

BTBD14B (S-15) is also recommended for detection of BTBD14B in additional species, including equine, canine, bovine and porcine.

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

Molecular Weight (predicted) of BTBD14B: 57 kDa.

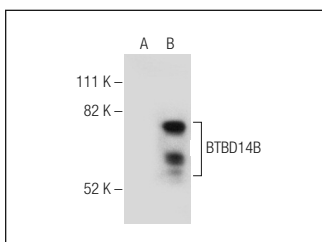
Molecular Weight (observed) of BTBD14B: 62 kDa.

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

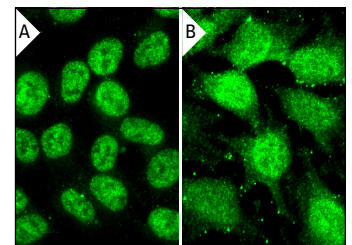
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



BTBD14B (S-15): sc-109928. Western blot analysis of BTBD14B expression in non-transfected: sc-117752 (A) and human BTBD14B transfected: sc-116444 (B) 293T whole cell lysates.



BTBD14B (S-15): sc-109928. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization (A). Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (B).

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.