

# BTBD14A (K-13): sc-131882

## BACKGROUND

BTBD14A (BTB/POZ domain-containing protein 14A), also known as BTBD14, is a 587 amino acid protein that contains one BTB/POZ domain. The BTB/POZ domain mediates homomeric and heteromeric POZ-POZ interactions and is common to transcriptional regulators involved in chromatin modeling. In several BTB/POZ containing proteins, including Bcl-6 and the promyelocytic leukemia zinc-finger (PLZF) oncoprotein, this domain interacts with the SMRT/N-CoR-mSin3A HDAC complex and is directly involved in repressing and silencing gene transcription. When this domain is deleted, as with the oncogenic PLZF-RAR chimera of promyelocytic leukemias, this transcriptional repression is attenuated. This suggests that BTBD14A may play a role in transcription regulation.

## REFERENCES

1. Wong, C.W. and Privalsky, M.L. 1998. Components of the SMRT corepressor complex exhibit distinctive interactions with the POZ domain oncoproteins PLZF, PLZF-RAR $\alpha$  and Bcl-6. *J. Biol. Chem.* 273: 27695-27702.
2. David, G., Alland, L., Hong, S.H., Wong, C.W., DePinho, R.A. and Dejean, A. 1998. Histone deacetylase associated with mSin3A mediates repression by the acute promyelocytic leukemia-associated PLZF protein. *Oncogene* 16: 2549-2556.
3. Huynh, K.D. and Bardwell, V.J. 1998. The Bcl-6 POZ domain and other POZ domains interact with the corepressors N-CoR and SMRT. *Oncogene* 17: 2473-2484.
4. Ahmad, K.F., Engel, C.K. and Prive, G.G. 1998. Crystal structure of the BTB domain from PLZF. *Proc. Natl. Acad. Sci. USA* 95: 12123-12128.
5. Deltour, S., Guerardel, C. and Leprince, D. 1999. Recruitment of SMRT/N-CoR-mSin3A-HDAC-repressing complexes is not a general mechanism for BTB/POZ transcriptional repressors: the case of HIC-1 and  $\gamma$ FBP-B. *Proc. Natl. Acad. Sci. USA* 96: 14831-14836.
6. Melnick, A., Carlile, G., Ahmad, K.F., Kiang, C.L., Corcoran, C., Bardwell, V., Prive, G.G. and Licht, J.D. 2002. Critical residues within the BTB domain of PLZF and Bcl-6 modulate interaction with corepressors. *Mol. Cell. Biol.* 22: 1804-1818.
7. Humphray, S.J., Oliver, K., Hunt, A.R., Plumb, R.W., Loveland, J.E., Howe, K.L., Andrews, T.D., Searle, S., Hunt, S.E., Scott, C.E., Jones, M.C., Ainscough, R., Almeida, J.P., Ambrose, K.D., Ashwell, R.I., et al. 2004. DNA sequence and analysis of human chromosome 9. *Nature* 429: 369-374.
8. Kelly, K.F. and Daniel, J.M. 2006. POZ for effect-POZ-ZF transcription factors in cancer and development. *Trends Cell Biol.* 16: 578-587.

## CHROMOSOMAL LOCATION

Genetic locus: NACC2 (human) mapping to 9q34.3; Nacc2 (mouse) mapping to 2 A3.

## SOURCE

BTBD14A (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BTBD14A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131882 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

BTBD14A (K-13) is recommended for detection of BTBD14A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 BTBD family members.

BTBD14A (K-13) is also recommended for detection of BTBD14A in additional species, including equine, canine and bovine.

Suitable for use as control antibody for BTBD14A siRNA (h): sc-92557, BTBD14A siRNA (m): sc-141772, BTBD14A shRNA Plasmid (h): sc-92557-SH, BTBD14A shRNA Plasmid (m): sc-141772-SH, BTBD14A shRNA (h) Lentiviral Particles: sc-92557-V and BTBD14A shRNA (m) Lentiviral Particles: sc-141772-V.

Molecular Weight of BTBD14A: 63 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## 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) 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.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.