

BTBD1 (35.1): sc-100997

BACKGROUND

BTBD1 (BTB/POZ domain containing 1), also known as NS5ATP8 (hepatitis C virus (HCV) NS5A-transactivated protein 8), is a ubiquitously expressed cytoplasmic protein with predominant expression in skeletal muscle and heart. BTBD1 is expressed in a wide variety of species ranging from *C. elegans* to humans and specifically localizes to cytoplasmic bodies. It shares 80% amino acid sequence identity with its homolog, BTBD2. BTBD1 contains one BTB/POZ domain, which is a hydrophobic-rich motif known to mediate homomeric and heteromeric POZ-POZ interactions that are commonly found at the N-terminus of developmentally regulated zinc-finger transcription factors. BTBD1 also contains a C-terminal kelch-like region and a PHR-like region. Via its C-terminus, BTBD1 is capable of interacting with Topo I. In addition, BTBD1 is required for myoblast growth and differentiation.

REFERENCES

- Carim-Todd, L., Sumoy, L., Andreu, N., Estivill, X. and Escarceller, M. 2001. Identification and characterization of BTBD1, a novel BTB domain containing gene on human chromosome 15q24. *Gene* 262: 275-281.
- Xu, L., Yang, L., Hashimoto, K., Anderson, M., Kohlhagen, G., Pommier, Y. and D'Arpa, P. 2002. Characterization of BTBD1 and BTBD2, two similar BTB-domain-containing kelch-like proteins that interact with topoisomerase I. *BMC Genomics* 3: 1.
- Xu, L., Yang, L., Moitra, P.K., Hashimoto, K., Rallabhandi, P., Kaul, S., Meroni, G., Jensen, J.P., Weissman, A.M. and D'Arpa, P. 2003. BTBD1 and BTBD2 co-localize to cytoplasmic bodies with the RBCC/tripartite motif protein, TRIM5 δ . *Exp. Cell Res.* 288: 84-93.
- Pisani, D.F., Cabane, C., Derijard, B. and Dechesne, C.A. 2004. The topoisomerase 1-interacting protein BTBD1 is essential for muscle cell differentiation. *Cell Death Differ.* 11: 1157-1165.
- Smith, T.H., Stedronsky, K., Morgan, B. and McGowan, R.A. 2006. Identification and isolation of a BTB/POZ-containing gene expressed in oocytes and early embryos of the zebrafish *Danio rerio*. *Genome* 49: 808-814.
- Wu, W., Hodges, E. and Höög, C. 2006. Thorough validation of siRNA-induced cell death phenotypes defines new anti-apoptotic protein. *Nucleic Acids Res.* 34: e13-e13.
- Pisani, D.F., Coldefy, A.S., Elabd, C., Cabane, C., Salles, J., Le Cunff, M., Derijard, B., Amri, E.Z., Dani, C., Leger, J.J. and Dechesne, C.A. 2007. Involvement of BTBD1 in mesenchymal differentiation. *Exp. Cell Res.* 313: 2417-2426.
- Bilic, I. and Ellmeier, W. 2007. The role of BTB domain-containing zinc finger proteins in T cell development and function. *Immunol. Lett.* 108: 1-9.

CHROMOSOMAL LOCATION

Genetic locus: BTBD1 (human) mapping to 15q25.2; Btdb1 (mouse) mapping to 7 D3.

SOURCE

BTBD1 (35.1) is a mouse monoclonal antibody raised against recombinant BTBD1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

BTBD1 (35.1) is recommended for detection of BTBD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BTBD1 siRNA (h): sc-90045, BTBD1 siRNA (m): sc-141768, BTBD1 shRNA Plasmid (h): sc-90045-SH, BTBD1 shRNA Plasmid (m): sc-141768-SH, BTBD1 shRNA (h) Lentiviral Particles: sc-90045-V and BTBD1 shRNA (m) Lentiviral Particles: sc-141768-V.

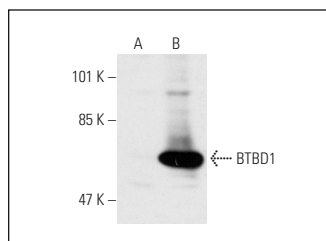
Molecular Weight of BTBD1: 53 kDa.

Positive Controls: BTBD1 (h): 293T Lysate: sc-114772 or HeLa whole cell lysate: sc-2200.

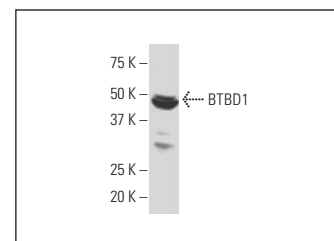
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



BTBD1 (35.1): sc-100997. Western blot analysis of BTBD1 expression in non-transfected: sc-117752 (A) and human BTBD1 transfected: sc-114772 (B) 293T whole cell lysates.



BTBD1 (35.1): sc-100997. Western blot analysis of BTBD1 expression in HeLa whole cell lysate.

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 for detailed protocols and support products.