

BRD7 (h): 293T Lysate: sc-116362

BACKGROUND

BRD7 (bromodomain containing protein 7), also known as BP75 (75 kDa bromodomain protein), NAG4 or CELTIX1, is a 651 amino acid transcription regulation factor that contains one bromodomain and is expressed in liver, pancreas, intestines, kidney and cerebellum. Localizing to the nucleus, BRD7 plays an important role in cell cycle progression, signal-dependent gene expression and cell growth. BRD7 functions as a tumor suppressor, as is suggested by its apparent suppressive role on nasopharyngeal carcinoma (NPC) cell growth when overexpressed. Specifically, BRD7 negatively regulates the expression of cell cycle related proteins such as cyclin D1 and E2F-3, thereby inhibiting the G₁/S progression. BRD7 also interacts with the centrosome associated protein BLOS2 and this BRD7-BLOS2 interaction inhibits the transcriptional suppression activity of BRD7 on various target genes.

REFERENCES

1. Peng, C., et al. 2002. Analysis of bromodomain of BRD7 gene and its prokaryotic expression. *Ai Zheng* 21: 1167-1172.
2. Zhou, J., et al. 2004. BRD7, a novel bromodomain gene, inhibits G₁/S progression by transcriptionally regulating some important molecules involved in Ras/MEK/ERK and Rb/E2F pathways. *J. Cell. Physiol.* 200: 89-98.
3. Liu, H., et al. 2006. Cloning and characterization of the BRD7 gene promoter. *DNA Cell Biol.* 25: 346-358.
4. Zhou, M., et al. 2006. Identification of nuclear localization signal that governs nuclear import of BRD7 and its essential roles in inhibiting cell cycle progression. *J. Cell. Biochem.* 98: 920-930.
5. Zhou, M., et al. 2006. BRD2 is one of BRD7-interacting proteins and its over-expression could initiate apoptosis. *Mol. Cell. Biochem.* 292: 205-212.
6. Sun, H., et al. 2007. Solution structure of BRD7 bromodomain and its interaction with acetylated peptides from Histone H3 and H4. *Biochem. Biophys. Res. Commun.* 358: 435-441.
7. Peng, C., et al. 2007. BRD7 suppresses the growth of nasopharyngeal carcinoma cells (HNE1) through negatively regulating β -catenin and ERK pathways. *Mol. Cell. Biochem.* 303: 141-149.
8. Sun, J., et al. 2008. Ceap/BLOS2 interacts with BRD7 and selectively inhibits its transcription-suppressing effect on cellular proliferation-associated genes. *Cell. Signal.* 20: 1151-1158.

CHROMOSOMAL LOCATION

Genetic locus: BRD7 (human) mapping to 16q12.1.

PRODUCT

BRD7 (h): 293T Lysate represents a lysate of human BRD7 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

BRD7 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive BRD7 antibodies. Recommended use: 10-20 μ l per lane.

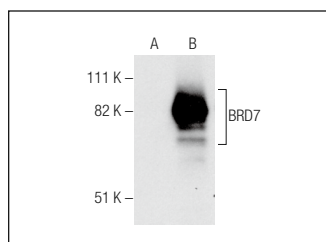
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

BRD7 (B-8): sc-376180 is recommended as a positive control antibody for Western Blot analysis of enhanced human BRD7 expression in BRD7 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

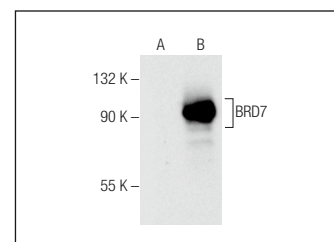
RECOMMENDED SUPPORT REAGENTS

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.

DATA



BRD7 (B-8): sc-376180. Western blot analysis of BRD7 expression in non-transfected: sc-117752 (A) and human BRD7 transfected: sc-116362 (B) 293T whole cell lysates.



BRD7 (H-2): sc-376179. Western blot analysis of BRD7 expression in non-transfected: sc-117752 (A) and human BRD7 transfected: sc-116362 (B) 293T whole cell lysates.

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.