

BRD7 (T-12): sc-131879

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

- Peng, C., et al. 2002. Analysis of bromodomain of BRD7 gene and its prokaryotic expression. *Ai Zheng* 21: 1167-1172.
- 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.
- Liu, H., et al. 2006. Cloning and characterization of the BRD7 gene promoter. *DNA Cell Biol.* 25: 346-358.
- 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.
- Zhou, M., et al. 2006. BRD2 is one of BRD7-interacting proteins and its overexpression could initiate apoptosis. *Mol. Cell. Biochem.* 292: 205-212.
- 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.
- 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.
- 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.
- Liu, H., et al. 2008. Preparation of polyclonal antibody specific for BRD7 and detection of its expression pattern in the human fetus. *J. Histochem. Cytochem.* 56: 531-538.

CHROMOSOMAL LOCATION

Genetic locus: BRD7 (human) mapping to 16q12.1; Brd7 (mouse) mapping to 8 C3.

SOURCE

BRD7 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BRD7 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-131879 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BRD7 (T-12) is recommended for detection of BRD7 isoforms 1 and 2 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 BRD family members.

BRD7 (T-12) is also recommended for detection of BRD7 isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BRD7 siRNA (h): sc-92998, BRD7 siRNA (m): sc-141741, BRD7 shRNA Plasmid (h): sc-92998-SH, BRD7 shRNA Plasmid (m): sc-141741-SH, BRD7 shRNA (h) Lentiviral Particles: sc-92998-V and BRD7 shRNA (m) Lentiviral Particles: sc-141741-V.

Molecular Weight of BRD7: 75 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.



Try **BRD7 (B-8): sc-376180** or **BRD7 (H-2): sc-376179**, our highly recommended monoclonal alternatives to BRD7 (T-12).