

BRD1 (H-74): sc-98304

BACKGROUND

BRD1 (bromodomain-containing protein 1, peregrin-like protein) is a 1,058 amino acid protein that is encoded by the human gene BRD1 and shares homology to peregrin, a protein thought to function as a transcription factor. BRD1, like peregrin, is a nuclear protein that contains one bromodomain, one PHD-type zinc finger and one PWWP domain. The zinc finger and leucine zipper domains of peregrin and BRD1 have significant homology to those of AF-10 and MLLT6, two proteins that are involved in various acute leukemias. This suggests a possible role of BRD1 in the development of leukemia. Additionally, the chromosomal region (22q12-13) containing BRD1 may contain one or more susceptibility genes for schizophrenia (SZ) and bipolar affective disorder (BPD), implicating BRD1 in the pathogenesis of these mental illnesses.

REFERENCES

- Gregorini, A., Sahin, F.I., Lillington, D.M., Meerabux, J., Saha, V., McCullagh, P., Bocci, M., Menevse, S., Papa, S. and Young, B.D. 1997. Gene BR140, which is related to AF and AF17, maps to chromosome band 3p25. *Genes Chromosomes Cancer* 17: 269-272.
- Linder, B., Jones, L.K., Chaplin, T., Mohd-Sarip, A., Heinlein, U.A., Young, B.D. and Saha, V. 1999. Expression pattern and cellular distribution of the murine homologue of AF10. *Biochim. Biophys. Acta* 1443: 285-296.
- McCullagh, P., Chaplin, T., Meerabux, J., Grenzeliass, D., Lillington, D., Poulsom, R., Gregorini, A., Saha, V. and Young, B.D. 2000. The cloning, mapping and expression of a novel gene, BRL, related to the AF10 leukaemia gene. *Oncogene* 18: 7442-7452.
- Loeb, C.R., Harris, J.L. and Craik, C.S. 2006. Granzyme B proteolyzes receptors important to proliferation and survival, tipping the balance toward apoptosis. *J. Biol. Chem.* 281: 28326-28335.
- Severinsen, J.E., Bjarkam, C.R., Kiaer-Larsen, S., Olsen, I.M., Nielsen, M.M., Blechingberg, J., Nielsen, A.L., Holm, I.E., Foldager, L., Young, B.D., Muir, W.J., Blackwood, D.H., Corydon, T.J., Mors, O. and Børghlum, A.D. 2006. Evidence implicating BRD1 with brain development and susceptibility to both schizophrenia and bipolar affective disorder. *Mol. Psychiatry* 11: 1126-1138.
- Caudell, D. and Aplan, P.D. 2007. The role of CALM-AF10 gene fusion in acute leukemia. *Leukemia* 22: 678-685.

CHROMOSOMAL LOCATION

Genetic locus: BRD1 (human) mapping to 22q13.33; Brd1 (mouse) mapping to 15 E3.

SOURCE

BRD1 (H-74) is a rabbit polyclonal antibody raised against amino acids 396-469 mapping within an internal region of BRD1 of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

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

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-98304 X, 200 µg/0.1 ml.

APPLICATIONS

BRD1 (H-74) is recommended for detection of BRD1 of mouse, rat and 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).

BRD1 (H-74) is also recommended for detection of BRD1 in additional species, including equine and canine.

Suitable for use as control antibody for BRD1 siRNA (h): sc-72663, BRD1 siRNA (m): sc-141739, BRD1 shRNA Plasmid (h): sc-72663-SH, BRD1 shRNA Plasmid (m): sc-141739-SH, BRD1 shRNA (h) Lentiviral Particles: sc-72663-V and BRD1 shRNA (m) Lentiviral Particles: sc-141739-V.

BRD1 (H-74) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of BRD1: 120 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.