SANTA CRUZ BIOTECHNOLOGY, INC.

BRWD1 (E-15): sc-83517

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The Power to Question

BACKGROUND

Members of the WD repeat protein family are involved in a variety of cellular processes, including cell cycle progression, signal transduction, apoptosis and gene regulation. BRWD1 (bromodomain and WD repeat-containing protein 1), also known as N143 or WDR9, is a 2,320 amino acid protein that is ubiquitously expressed. Localizing to both the cytoplasm and the nucleus, BRWD1 may be involved in chromatin remodeling and may act as a transcriptional activator. It is suggested that BRWD1 is required for normal spermiogenesis and the oocyte-embryo transition. BRWD1 contains two bromo domains and eight WD repeats. The gene that encodes BRWD1 is located within the Down syndrome region-2 on chromosome 21. Alternative splicing of this gene generates three transcript variants diverging at the 3' ends.

REFERENCES

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2. Shafaatian, R., et al. 1996. PWP2, a member of the WD-repeat family of proteins, is an essential *Saccharomyces cerevisiae* gene involved in cell separation. Mol. Gen. Genet. 252: 101-114.
3. Schillhabel, M. and Schudy, A. 2000. The DNA sequence of human chromosome 21. The chromosome 21 mapping and sequencing consortium. Nature 405: 311-339.
4. Togashi, T., et al. 2000. A novel gene, DSCR5, from the distal Down syndrome critical region on chromosome 21q22.2. DNA Res. 7: 207-212.
5. Singh, B.N., et al. 2003. A highly conserved human gene encoding a novel member of WD-repeat family of proteins (WDR13). Genomics 81: 315-328.
6. Field, M., et al. 2007. Mutations in the BRWD3 gene cause X-linked mental retardation associated with macrocephaly. Am. J. Hum. Genet. 81: 367-374.
7. Philipps, D.L., et al. 2008. The dual bromodomain and WD repeat-containing mouse protein BRWD1 is required for normal spermiogenesis and the oocyte-embryo transition. Dev. Biol. 317: 72-82.
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CHROMOSOMAL LOCATION

Genetic locus: BRWD1 (human) mapping to 21q22.2; Brwd1 (mouse) mapping to 16 C4.

SOURCE

BRWD1 (E-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of BRWD1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83517 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BRWD1 (E-15) is recommended for detection of BRWD1 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).

BRWD1 (E-15) is also recommended for detection of BRWD1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for BRWD1 siRNA (h): sc-91399, BRWD1 siRNA (m): sc-141758, BRWD1 shRNA Plasmid (h): sc-91399-SH, BRWD1 shRNA Plasmid (m): sc-141758-SH, BRWD1 shRNA (h) Lentiviral Particles: sc-91399-V and BRWD1 shRNA (m) Lentiviral Particles: sc-141758-V.

Molecular Weight of BRWD1: 263 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.

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 or our catalog for detailed protocols and support products.