SANTA CRUZ BIOTECHNOLOGY, INC.

BRWD1 siRNA (m): sc-141758

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 2320 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 21q22.2. Alternative splicing of this gene generates 3 transcript variants diverging at the 3' ends.

REFERENCES

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3. Schillhabel, M., et al. 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.
8. Smith, T.F. 2008. Diversity of WD-repeat proteins. Subcell. Biochem. 48: 20-30.

CHROMOSOMAL LOCATION

Genetic locus: Brwd1 (mouse) mapping to 16 C4.

PRODUCT

BRWD1 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BRWD1 shRNA Plasmid (m): sc-141758-SH and BRWD1 shRNA (m) Lentiviral Particles: sc-141758-V as alternate gene silencing products.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

BRWD1 siRNA (m) is recommended for the inhibition of BRWD1 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor BRWD1 gene expression knockdown using RT-PCR Primer: BRWD1 (m)-PR: sc-141758-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.