



## BRDT siRNA (h): sc-60286

### BACKGROUND

The bromodomain-containing proteins include BRD2, BRD3, BRD4 and BRDT. BRD2 (RING3 protein) is a mitogen-activated nuclear protein whose gene is located in the human MHC II region, suggesting its relation to HLA-associated diseases. The gene encoding BRD3 (RING3-like protein) contains two bromodomains and the gene encoding for the protein maps to chromosome 9q34.2. BRD4 (HUNK1 protein) is a nuclear protein involved in the regulation of chromosomal dynamics during mitosis. The testis-specific bromodomain protein BRDT contains a PEST sequence, indicating that it undergoes rapid intracellular degradation. The bromodomain-containing proteins are ubiquitously expressed.

### REFERENCES

1. Jones, M.H., et al. 1997. Identification and characterization of BRDT: a testis-specific gene related to the bromodomain genes RING3 and *Drosophila* fsh. *Genomics* 45: 529-534.
2. Dhalluin, C., et al. 1999. Structure and ligand of a histone acetyltransferase bromodomain. *Nature* 399: 491-496.
3. Scanlan, M.J., et al. 2000. Expression of cancer-testis antigens in lung cancer: definition of bromodomain testis-specific gene (BRDT) as a new CT gene, CT9. *Cancer Lett.* 150: 155-164.
4. Pivot-Pajot, C., et al. 2003. Acetylation-dependent chromatin reorganization by BRDT, a testis-specific bromodomain-containing protein. *Mol. Cell. Biol.* 23: 5354-5365.

### CHROMOSOMAL LOCATION

Genetic locus: BRDT (human) mapping to 1p22.1.

### PRODUCT

BRDT siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BRDT shRNA Plasmid (h): sc-60286-SH and BRDT shRNA (h) Lentiviral Particles: sc-60286-V as alternate gene silencing products.

For independent verification of BRDT (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-60286A, sc-60286B and sc-60286C.

### 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

BRDT siRNA (h) is recommended for the inhibition of BRDT expression in human 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  $\mu$ M in 66  $\mu$ l. 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.

### GENE EXPRESSION MONITORING

BRDT (B-11): sc-515674 is recommended as a control antibody for monitoring of BRDT gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor BRDT gene expression knockdown using RT-PCR Primer: BRDT (h)-PR: sc-60286-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

### SELECT PRODUCT CITATIONS

1. Nerlakanti, N., et al. 2018. Targeting the BRD4-HOXB13 coregulated transcriptional networks with bromodomain-kinase inhibitors to suppress metastatic castration-resistant prostate cancer. *Mol. Cancer Ther.* 17: 2796-2810.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.