SANTA CRUZ BIOTECHNOLOGY, INC.

GBDR1 siRNA (h): sc-92662

BACKGROUND

GBDR1 (glialblastoma cell differentiation-related protein 1), also known as UBAC1 (ubiquitin-associated domain-containing protein 1), KPC2 or UBADC1, is a 405 amino acid protein that localizes to the cytoplasm and contains one ubiquitin-like domain, one STI1 domain and two UBA domains. Expressed ubiquitously with highest expression in heart and skeletal muscle, GBDR1 functions as a non-catalytic subunit of the KPC E3 ubiquitin-protein ligase complex, of which RNF123 is the catalytic subunit. Existing as a critical component of the KPC complex, GBDR1 is essential for the ubiquitination and proteasome-mediated degradation of p27 during the G_1 phase of the cell cycle. The gene encoding GBDR1 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

REFERENCES

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6. Tao, Y., Kupfer, R., Stewart, B.J., Williams-Skipp, C., Crowell, C.K., Patel, D.D., Sain, S. and Scheinman, R.I. 2006. AIRE recruits multiple transcriptional components to specific genomic regions through tethering to nuclear matrix. Mol. Immunol. 43: 335-345.

CHROMOSOMAL LOCATION

Genetic locus: UBAC1 (human) mapping to 9q34.3.

PRODUCT

GBDR1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GBDR1 shRNA Plasmid (h): sc-92662-SH and GBDR1 shRNA (h) Lentiviral Particles: sc-92662-V as alternate gene silencing products.

For independent verification of GBDR1 (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-92662A, sc-92662B and sc-92662C.

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

GBDR1 siRNA (h) is recommended for the inhibition of GBDR1 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 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 GBDR1 gene expression knockdown using RT-PCR Primer: GBDR1 (h)-PR: sc-92662-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.

PROTOCOLS

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