

## NT5DC2 siRNA (h): sc-78545

### BACKGROUND

Nucleotidases are hydrolytic enzymes that catalyze the hydrolysis of nucleotides into phosphates and nucleosides. NT5DC2 (5'-nucleotidase domain containing 2) is a 520 amino acid protein belonging to the 5'(3')-deoxyribonucleotidase family. Existing as 4 isoforms produced by alternative splicing events, NT5DC2 is encoded by a gene mapping to human chromosome 3p21.1, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

### REFERENCES

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3. Yue, Y., Grossmann, B., Ferguson-Smith, M., Yang, F. and Haaf, T. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. *Genomics* 85: 36-47.
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5. Loginov, V.I., Khodyrev, D.S., Pronina, I.V., Kazubskaja, T.P., Ermilova, V.D., Gar'kavtseva, R.F. and Braga, E.A. 2009. Methylation of promoter region of RASSF1A gene and frequencies of allelic imbalances in chromosome 3 critical regions are correlated with progression of clear cell renal cell carcinoma. *Mol. Biol.* 43: 429-438.

### CHROMOSOMAL LOCATION

Genetic locus: NT5DC2 (human) mapping to 3p21.1.

### PRODUCT

NT5DC2 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 NT5DC2 shRNA Plasmid (h): sc-78545-SH and NT5DC2 shRNA (h) Lentiviral Particles: sc-78545-V as alternate gene silencing products.

For independent verification of NT5DC2 (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-78545A, sc-78545B and sc-78545C.

### RESEARCH USE

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

### 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

NT5DC2 siRNA (h) is recommended for the inhibition of NT5DC2 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.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NT5DC2 gene expression knockdown using RT-PCR Primer: NT5DC2 (h)-PR: sc-78545-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

### PROTOCOLS

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