SANTA CRUZ BIOTECHNOLOGY, INC.

# GPS2 siRNA (h): sc-93692

## BACKGROUND

The N-Cor-HDAC3 repressor complex inhibits the JNK pathway, which is involved in cell differentiation and apoptosis and responds to stress stimuli. G protein pathway suppressor 2 (GPS2), also referred to as AMF1, is an integral component of the N-Cor-HDAC3 complex and functions to suppress G protein and MAP kinase-mediated signal transduction. The N-Cor complex inhibits the JNK pathway, a pathway that is involved in cell differentiation and apoptosis and responds to stress stimuli. TBL1, another component of the complex, interacts with GPS2 to form a heterotrimeric structure. GPS2 can also stimulate the activity of cellular transcription factors including the human papilloma virus E2 and E6 proteins, as well as p53. Amplified expression of GPS2 may augment p53-dependent transcription, causing a $G_1$ arrest in cells.

## REFERENCES


1. Jin, D.Y., et al. 1997. A human suppressor of c-Jun N-terminal kinase 1 activation by tumor necrosis factor $\alpha$. J. Biol. Chem. 272: 25816-25823.
2. Peng, Y.C., et al. 2000. AMF-1/GPS2 binds p300 and enhances its interaction with papillomavirus E2 proteins. J. Virol. 74: 5872-5879.
3. Degenhardt, Y.Y., et al. 2001. GPS2, a protein partner for human papillomavirus E6 proteins. J. Virol. 75: 151-160.
4. Peng, Y.C., et al. 2001. AMF1 (GPS2) modulates p53 transactivation. Mol. Cell. Biol. 21: 5913-5924.
5. Zhang, J., et al. 2002. The N-CoR-HDAC3 nuclear receptor corepressor complex inhibits the JNK pathway through the integral subunit GPS2. Mol. Cell 9: 611-623.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 6019. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Diederichs, S., et al. 2004. Identification of interaction partners and substrates of the cyclin A1-CDK2 complex. J. Biol. Chem. 279: 33727-33741.
8. Lee, T.H., et al. 2005. Formation of hMSH4-hMSH5 heterocomplex is a prerequisite for subsequent GPS2 recruitment. DNA Repair 5: 32-42.


## CHROMOSOMAL LOCATION

Genetic locus: GPS2 (human) mapping to 17p13.1.

## PRODUCT

GPS2 siRNA (h) 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 GPS2 shRNA Plasmid (h): sc-93692-SH and GPS2 shRNA (h) Lentiviral Particles: sc-93692-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

GPS2 siRNA (h) is recommended for the inhibition of GPS2 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 GPS2 gene expression knockdown using RT-PCR Primer: GPS2 (h)-PR: sc-93692-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


1. Zhuang, Z., et al. 2018. G protein pathway suppressor 2 enhanced the renal large-conductance $Ca^{2+}$-activated potassium channel expression via inhibiting ERK1/2 signaling pathway. Am. J. Physiol. Renal Physiol. 315: F503-F511.


## RESEARCH USE

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