

# PLEKHA6 siRNA (m): sc-152307

## BACKGROUND

PLEKHA6 (pleckstrin homology domain containing, family A member 6), also known as PEPP3 (phosphoinositol 3-phosphate-binding protein 3), is a 1,048 amino acid protein that contains one N-terminal pleckstrin homology (PH) domain. PLEKHA6 shares significant homology with PLEKHA4 and PLEKHA5 solely in the PH domain, indicating that it may likewise interact with PtdIns3P. PLEKHA6 likely functions as an adaptor molecule and may play a role in the pathophysiology of schizophrenia. Ubiquitously expressed, with highest expression in heart, kidney and brain, PLEKHA6 exhibits phosphoinositide-binding specificity and participates in lipid-binding activities. Although PLEKHA6 is not known to be involved in signaling related to EGF receptors, which are expressed by many tumors, it is differentially phosphorylated between EGF receptor mutant and WT cell lines. The gene that encodes PLEKHA6 maps to human chromosome 1q32.1.

## REFERENCES

1. Mandrek, K. 1991. Diameter and wall thickness recording of canine pylorus with implantable miniature ultrasonic transducers. *Dig. Dis.* 9: 325-331.
2. Dowler, S., Currie, R.A., Campbell, D.G., Deak, M., Kular, G., Downes, C.P. and Alessi, D.R. 2000. Identification of pleckstrin-homology-domain-containing proteins with novel phosphoinositide-binding specificities. *Biochem. J.* 351: 19-31.
3. Riemenschneider, M.J., Knobbe, C.B. and Reifenberger, G. 2003. Refined mapping of 1q32 amplicons in malignant gliomas confirms MDM4 as the main amplification target. *Int. J. Cancer* 104: 752-757.
4. Zhou, W., Shirabe, K. and Kuwada, J.Y. 2006. Molecular cloning and expression of two small leucine-rich proteoglycan (SLRP) genes, dspg3l and optcl, in zebrafish. *Gene Expr. Patterns* 6: 482-488.
5. Zhou, X., Davis, D.R. and Sigmund, C.D. 2006. The human renin kidney enhancer is required to maintain base-line renin expression but is dispensable for tissue-specific, cell-specific, and regulated expression. *J. Biol. Chem.* 281: 35296-35304.
6. Rodenburg, W., Keijer, J., Kramer, E., Vink, C., van der Meer, R. and Bovee-Oudenhoven, I.M. 2008. Impaired barrier function by dietary fructo-oligosaccharides (FOS) in rats is accompanied by increased colonic mitochondrial gene expression. *BMC Genomics* 9: 144.
7. Guo, A., Villen, J., Kornhauser, J., Lee, K.A., Stokes, M.P., Rikova, K., Possemato, A., Nardone, J., Innocenti, G., Wetzel, R., Wang, Y., MacNeill, J., Mitchell, J., Gygi, S.P., Rush, J., Polakiewicz, R.D. and Comb, M.J. 2008. Signaling networks assembled by oncogenic EGFR and c-Met. *Proc. Natl. Acad. Sci. USA* 105: 692-697.
8. Um, H.N., Han, J.M., Hwang, J.I., Hong, S.I., Vaudry, H. and Seong, J.Y. 2010. Molecular coevolution of kisspeptins and their receptors from fish to mammals. *Ann. N.Y. Acad. Sci.* 1200: 67-74.

## PROTOCOLS

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

## CHROMOSOMAL LOCATION

Genetic locus: *Plekha6* (mouse) mapping to 1 E4.

## PRODUCT

PLEKHA6 siRNA (m) 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 PLEKHA6 shRNA Plasmid (m): sc-152307-SH and PLEKHA6 shRNA (m) Lentiviral Particles: sc-152307-V as alternate gene silencing products.

For independent verification of PLEKHA6 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152307A, sc-152307B and sc-152307C.

## 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

PLEKHA6 siRNA (m) is recommended for the inhibition of PLEKHA6 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  $\mu$ 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 PLEKHA6 gene expression knockdown using RT-PCR Primer: PLEKHA6 (m)-PR: sc-152307-PR (20  $\mu$ l). 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.