SANTA CRUZ BIOTECHNOLOGY, INC.

CGI-121 siRNA (m): sc-142305

BACKGROUND

CGI-121, also known as TP53RK-binding protein and PRPK-binding protein, is a 175 amino acid protein that is widely expressed. Localizing to the cytoplasm and nucleus, CGI-121 interacts with PRPK, a protein kinase that phosphorylates Ser15 of p53. PRPK phosphorylation of p53 causes increased stabilization and activity of p53. CGI-121 may act as an inhibitor of the PRPK-p53 interaction, thus preventing the phosphorylation of p53. The gene encoding CGI-121 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. There are three isoforms of CGI-121 that are produced as a result of alternative splicing events.

REFERENCES

1. Lai, C.H., et al. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. Genome Res. 10: 703-713.
2. Miyoshi, A., et al. 2003. Identification of CGI-121, a novel PRPK (p53-related protein kinase)-binding protein. Biochem. Biophys. Res. Commun. 303: 399-405.
3. Facchin, S., et al. 2003. Functional homology between yeast piD261/Bud32 and human PRPK: both phosphorylate p53 and PRPK partially complements piD261/Bud32 deficiency. FEBS Lett. 549: 63-66.
4. Abe, Y., et al. 2006. A Small Ras-like protein Ray/Rab1c modulates the p53-regulating activity of PRPK. Biochem. Biophys. Res. Commun. 344: 377-385.
5. Wang, X.F., et al. 2006. Identification of differentially expressed genes induced by angiotensin II in rat cardiac fibroblasts. Clin. Exp. Pharmacol. Physiol. 33: 41-46.
6. Oppermann, F.S., et al. 2009. Large-scale proteomics analysis of the human kinome. Mol. Cell Proteomics 8: 1751-1764.

CHROMOSOMAL LOCATION

Genetic locus: Tprkb (mouse) mapping to 6 C3.

PRODUCT

CGI-121 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CGI-121 shRNA Plasmid (m): sc-142305-SH and CGI-121 shRNA (m) Lentiviral Particles: sc-142305-V as alternate gene silencing products.

For independent verification of CGI-121 (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-142305A, sc-142305B and sc-142305C.

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

CGI-121 siRNA (m) is recommended for the inhibition of CGI-121 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 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 CGI-121 gene expression knockdown using RT-PCR Primer: CGI-121 (m)-PR: sc-142305-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.