SANTA CRUZ BIOTECHNOLOGY, INC.

P311 siRNA (h): sc-91944

BACKGROUND

P311, also known as C5orf13 (chromosome 5 open reading frame 13), D4S114, PTZ17 or PRO1873, is a 68 amino acid cytoplasmic protein involved in cellular differentiation, neural function and axonal regeneration. Found in the granular layer of the cerebellum, P311 is expressed at lower levels in hippocampus, olfactory bulb, kidney, liver and heart and when expressed ectopically, P311 augments giloma motility. P311 is enriched in mice within the superficial cortical layers and striatum at E20 and the germinal zones at E17. Known to interact with Filamin 1, P311 regulates retinoic-acid lipid-droplet biogenesis, induces myofibroblast ameboid migration and the differentiation of fibroblasts into myofibroblasts. Ser 59 phosphorylation decreases P311 stability; the gene encoding P311 maps to human chromosome 5q22.1.

REFERENCES

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2. Miura, N. and Naganuma, A. 2000. Metallothionein mediates gene expression of 3.1 mRNA (PTZ17) related to epileptic seizure. FEBS Lett. 479: 146-148.
3. Taylor, G.A., et al. 2000. Regulation of P311 expression by Met-hepatocyte growth factor/scatter factor and the ubiquitin/proteasome system. J. Biol. Chem. 275: 4215-4219.
4. Pan, D., et al. 2002. P311 induces a TGF-β1-independent, nonfibrogenic myofibroblast phenotype. J. Clin. Invest. 110: 1349-1358.
5. McDonough, W.S., et al. 2005. Regulation of glioma cell migration by serine-phosphorylated P311. Neoplasia 7: 862-872.
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CHROMOSOMAL LOCATION

Genetic locus: NREP (human) mapping to 5q22.1.

PRODUCT

P311 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 P311 shRNA Plasmid (h): sc-91944-SH and P311 shRNA (h) Lentiviral Particles: sc-91944-V as alternate gene silencing products.

For independent verification of P311 (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-91944A, sc-91944B and sc-91944C.

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 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

P311 siRNA (h) is recommended for the inhibition of P311 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 P311 gene expression knockdown using RT-PCR Primer: P311 (h)-PR: sc-91944-PR (20 µl). 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 for detailed protocols and support products.