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SANTA CRUZ BIOTECHNOLOGY, INC.

PAPP-A2 siRNA (m): sc-152017

BACKGROUND

PAPP-A2 (pregnancy-associated plasma protein-A2), also known as Pappalysin-2, PAPP-E or PLAC3, is a 1,791 amino acid secreted protein that contains five sushi domains and belongs to the peptidase M43B family. Expressed at high levels in placental and mammary gland tissue and at lower levels in pancreas, kidney and fetal brain, PAPP-A2 functions as a metalloproteinase that uses zinc as a cofactor to cleave the 143-serine-lysine-144 bond of human IGFBP5 (Insulin-like growth factor binding protein 5), thereby releasing IGF. In addition, PAPP-A2 exhibits catalytic cleavage activity toward IGFBP3 and is thought to play an important role in postnatal growth. Due to alternative splicing events, PAPP-A2 is expressed as two isoforms whose presence may be an indication of chromosomal trisomies, such as Down's syndrome.

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CHROMOSOMAL LOCATION

Genetic locus: Pappa2 (mouse) mapping to 1 H1.

PRODUCT

PAPP-A2 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 PAPP-A2 shRNA Plasmid (m): sc-152017-SH and PAPP-A2 shRNA (m) Lentiviral Particles: sc-152017-V as alternate gene silencing products.

For independent verification of PAPP-A2 (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-152017A, sc-152017B and sc-152017C.

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

PAPP-A2 siRNA (m) is recommended for the inhibition of PAPP-A2 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 PAPP-A2 gene expression knockdown using RT-PCR Primer: PAPP-A2 (m)-PR: sc-152017-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.