SANTA CRUZ BIOTECHNOLOGY, INC.

GPBP siRNA (m): sc-62396

BACKGROUND

GPBP, also known as COL4A3BP (collagen, type IV, α 3 (Goodpasture antigen) binding protein), CERT or STARD11, is a 624 amino acid protein that localizes to the cytoplasm, as well as to the Golgi apparatus and the endoplasmic reticulum, and contains one PH domain and one START domain. Expressed in a variety of tissues, GPBP interacts with COL4A3 and is thought to mediate the intracellular trafficking of ceramides (lipid molecules composed of a sphingosine and a fatty acid), possibly regulating lipid function throughout the cell. In addition, GPBP acts as a kinase that is able to phosphorylate the N-terminal region of COL4A3, an event which may play a role in the development of Goodpasture disease, a rare syndrome that can lead to severe kidney and lung damage. Two isoforms of GPBP exist due to alternative splicing events.

REFERENCES

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8. Kawano, M., et al. 2006. Efficient trafficking of ceramide from the endoplasmic reticulum to the Golgi apparatus requires a VAMP-associated protein-interacting FFAT motif of CERT. J. Biol. Chem. 281: 30279-30288.
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CHROMOSOMAL LOCATION

Genetic locus: Col4a3bp (mouse) mapping to 13 D1.

PROTOCOLS

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

PRODUCT

GPBP 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 GPBP shRNA Plasmid (m): sc-62396-SH and GPBP shRNA (m) Lentiviral Particles: sc-62396-V as alternate gene silencing products.

For independent verification of GPBP (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-62396A, sc-62396B and sc-62396C.

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

GPBP siRNA (m) is recommended for the inhibition of GPBP 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 GPBP gene expression knockdown using RT-PCR Primer: GPBP (m)-PR: sc-62396-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.