

GP2 siRNA (h): sc-93477

BACKGROUND

GP2 (glycoprotein 2), also known as ZAP75, is a 537 amino acid secreted protein that is expressed in pancreatic secretory (zymogen) granules, and is cleaved then released into the pancreatic duct along with exocrine secretions. GP2 interacts with syncollin and to type 1 fimbria of bacteria, a bacterial adhesin that is commonly expressed by members of the Enterobacteriaceae family. Containing an EGF-like domain and a ZP domain, GP2 is also expressed on the apical plasma membrane of specialized microfold (M) cells among enterocytes and serves as a transcytotic receptor for mucosal antigens. M cells are considered a promising target for oral vaccination against various infectious diseases, and the GP2-dependent transcytotic pathway may provide a new target for the development of M-cell-targeted mucosal vaccines. GP2 exists as four alternatively spliced isoforms that are designated isoform 1, isoform β , isoform α and isoform 2.

REFERENCES

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6. Yang, H., et al. 2004. Identification and characterization of D8C, a novel domain present in liver-specific LZP, uromodulin and glycoprotein 2, mutated in familial juvenile hyperuricaemic nephropathy. *FEBS Lett.* 578: 236-238.
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CHROMOSOMAL LOCATION

Genetic locus: GP2 (human) mapping to 16p12.3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

GP2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GP2 shRNA Plasmid (h): sc-93477-SH and GP2 shRNA (h) Lentiviral Particles: sc-93477-V as alternate gene silencing products.

For independent verification of GP2 (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-93477A, sc-93477B and sc-93477C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

GP2 siRNA (h) is recommended for the inhibition of GP2 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 μ M in 66 μ 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 GP2 gene expression knockdown using RT-PCR Primer: GP2 (h)-PR: sc-93477-PR (20 μ l). 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.