SANTA CRUZ BIOTECHNOLOGY, INC.

GGT2 siRNA (h): sc-40632

BACKGROUND

GGT2 (γ-glutamyltranspeptidase 2), also known as GGT (γ-glutamyltransferase) or glutathione hydrolase 2, is a 569 amino acid single-pass type II membrane protein. Belonging to the γ-glutamyltransferase family, GGT2 is highly expressed in fetal and adult kidney and liver. GGT2 initiates extracellular glutathione (GSH) breakdown by cleaving γ-glutamyl peptide bonds and transferring the γ-glutamyl moiety to acceptors. Increased levels of serum GGT2 have been associated with and increase in arterial stiffness, waist girth, BMI, and blood pressure, suggesting a possible correlation to diabetes and metabolic syndrome. GGT2 exists as two isoforms due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GGT2 (human) mapping to 22q11.21.

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.

PRODUCT

GGT2 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 GGT2 shRNA Plasmid (h): sc-40632-SH and GGT2 shRNA (h) Lentiviral Particles: sc-40632-V as alternate gene silencing products.

For independent verification of GGT2 (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-40632A, sc-40632B and sc-40632C.

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

GGT2 siRNA (h) is recommended for the inhibition of GGT2 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 GGT2 gene expression knockdown using RT-PCR Primer: GGT2 (h)-PR: sc-40632-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.