SANTA CRUZ BIOTECHNOLOGY, INC.

GSTA2 siRNA (h): sc-105422

BACKGROUND

Members of the glutathione S-transferase (GST) family of proteins function in the detoxification of toxins, such as carcinogens, environmental toxins, products of oxidative stress and therapeutic drugs, and protect cells against toxicant-induced damage. GSTs are divided into different classes/families based on their primary structures. GSTA2 (glutathione S-transferase α 2), also known as GST2, GTA2, GTH2 or GSTA2-2, is a 222 amino acid protein that belongs to the GST superfamily. Eight classes of soluble cytoplasmic mammalian GSTs have been identified: α, κ, μ, ω, π, σ, θ and ζ. GSTA2 belongs to the α family. The α family is typically clustered on a region of human chromosome 6p12.2, and exhibits glutathione peroxidase activity, protecting cells from reactive oxygen species and the products of peroxidation. Containing a GST C-terminal and a GST N-terminal domain, GSTA2 localizes to the cytoplasm and is expressed primarily in liver.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GSTA2 (human) mapping to 6p12.2.

PRODUCT

GSTA2 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 GSTA2 shRNA Plasmid (h): sc-105422-SH and GSTA2 shRNA (h) Lentiviral Particles: sc-105422-V as alternate gene silencing products.

For independent verification of GSTA2 (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-105422A, sc-105422B and sc-105422C.

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

GSTA2 siRNA (h) is recommended for the inhibition of GSTA2 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 GSTA2 gene expression knockdown using RT-PCR Primer: GSTA2 (h)-PR: sc-105422-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.