SANTA CRUZ BIOTECHNOLOGY, INC.

GGH siRNA (m): sc-75128

BACKGROUND

GGH (γ-glutamyl hydrolase), also known as GH or γ-Glu-X carboxypeptidase, is a 318 amino acid protein that is secreted into the extracellular space and is also localized to both the lysosome and the melanosome. Functioning as a hydrolase, GGH contains one γ-glutamyl hydrolase domain through which it catalyzes the hydrolysis of polyglutamate sidechains from pteroylpolyglutamates, specifically hydrolyzing γ-glutamyl bonds. Via its catalytic activity, GGH may play a role in the bioavailability and metabolic activity of pteroylpolyglutamates. Polymorphisms in the gene encoding GGH are associated with rheumatoid arthritis, inflammatory bowel disease and various cancers. The gene encoding GGH maps to human chromosome 8q12.3, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies.

REFERENCES

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4. Li, H., et al. 2002. Three-dimensional structure of human γ-glutamyl hydrolase. A class I glatamine amidotransferase adapted for a complex substate. J. Biol. Chem. 277: 24522-24529.
5. He, P., et al. 2004. Identification of carboxypeptidase E and γ-glutamyl hydrolase as biomarkers for pulmonary neuroendocrine tumors by cDNA microarray. Hum. Pathol. 35: 1196-1209.
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CHROMOSOMAL LOCATION

Genetic locus: Ggh (mouse) mapping to 4 A3.

PRODUCT

GGH 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 GGH shRNA Plasmid (m): sc-75128-SH and GGH shRNA (m) Lentiviral Particles: sc-75128-V as alternate gene silencing products.

For independent verification of GGH (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-75128A, sc-75128B and sc-75128C.

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

GGH siRNA (m) is recommended for the inhibition of GGH 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 GGH gene expression knockdown using RT-PCR Primer: GGH (m)-PR: sc-75128-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.