

γ S-crystallin siRNA (h): sc-40464

BACKGROUND

Crystallins are water soluble structural proteins found in the vertebrate eye. Mammalian crystallins are classified in three forms, designated α , β and γ . Crystallins, as the principal components of the lens, function to increase the refractive index of the eye during accommodation by forming high-molecular weight aggregates which maintain transparency. γ S-crystallin (γ -crystallin S), also known as β -crystallin S, is a 178 amino acid protein that exists as a monomer which does not aggregate. γ S-crystallin contains a two-domain β structure and belongs to the β/γ -crystallin gene family mapping to human chromosome 3. γ S-crystallin has been linked to congenital cataract development, a disorder signified by increasing levels of lens opacity.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CRYGS (human) mapping to 3q27.3.

PRODUCT

γ S-crystallin 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 γ S-crystallin shRNA Plasmid (h): sc-40464-SH and γ S-crystallin shRNA (h) Lentiviral Particles: sc-40464-V as alternate gene silencing products.

For independent verification of γ S-crystallin (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-40464A, sc-40464B and sc-40464C.

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

γ S-crystallin siRNA (h) is recommended for the inhibition of γ S-crystallin 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.

GENE EXPRESSION MONITORING

γ S-crystallin (A-3): sc-374265 is recommended as a control antibody for monitoring of γ S-crystallin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor γ S-crystallin gene expression knockdown using RT-PCR Primer: γ S-crystallin (h)-PR: sc-40464-PR (20 μ l). 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.