



## HYI siRNA (m): sc-146120

### BACKGROUND

Chromosome 1 is the largest human chromosome, spanning about 260 million base pairs and making up 8% of the human genome. Several disorders, including Stickler syndrome, Parkinsons, Gaucher disease, malignant melanoma and Usher syndrome, are caused by defects in the genes that localize to chromosome 1. HYI (hydroxypyruvate isomerase), also known as HT036 or SB156, is a 277 amino acid homolog of the *E. coli* hyi protein and is encoded by a gene that is located on chromosome 1. Functioning as an isomerase that enzymatically interconverts ketoses and aldoses, HYI catalyzes the reversible conversion of hydroxypyruvate to 2-hydroxy-3-oxopropanoate, a reaction that is inhibited by copper and iron. HYI is expressed as four isoforms due to alternative splicing events.

### REFERENCES

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### CHROMOSOMAL LOCATION

Genetic locus: Hyi (mouse) mapping to 4 D2.1.

### PRODUCT

HYI siRNA (m) is a pool of 2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HYI shRNA Plasmid (m): sc-146120-SH and HYI shRNA (m) Lentiviral Particles: sc-146120-V as alternate gene silencing products.

For independent verification of HYI (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-146120A and sc-146120B.

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

### APPLICATIONS

HYI siRNA (m) is recommended for the inhibition of HYI 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  $\mu$ M in 66  $\mu$ 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 HYI gene expression knockdown using RT-PCR Primer: HYI (m)-PR: sc-146120-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.