SANTA CRUZ BIOTECHNOLOGY, INC.

HAL siRNA (m): sc-145892

BACKGROUND

HAL (histidine ammonia-lyase), also known as histidase, HIS or HSTD, is a 657 amino acid protein that belongs to the PAL/histidase family. Considered a cytosolic enzyme, HAL catalyzes the first reaction in histidine catabolism, the non-oxidative deamination of L-histidine to *trans*-urocanic acid. Urocanic acid is the main ultraviolet (UV) light absorption factor of the stratum corneum of the skin. Defects in the gene encoding HAL causes histidinemia, also referred to as histidinuria. Histidinemia is an autosomal recessive disease characterized by increased levels of histidine, histamine and imidazole in blood, urine and cerebrospinal fluid. Histidinemia also results in decreased levels of the metabolite urocanic acid in blood, urine, and skin cells. Tryptophan and 1-methyltryptophan are strong inhibitors of HAL.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Hal (mouse) mapping to 10 C2.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

HAL 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 HAL shRNA Plasmid (m): sc-145892-SH and HAL shRNA (m) Lentiviral Particles: sc-145892-V as alternate gene silencing products.

For independent verification of HAL (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-145892A, sc-145892B and sc-145892C.

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

HAL siRNA (m) is recommended for the inhibition of HAL 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 HAL gene expression knockdown using RT-PCR Primer: HAL (m)-PR: sc-145892-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.