

# hepcidin siRNA (h): sc-97892

## BACKGROUND

Hepcidin, also known as HAMP, HEPC, LEAP1 or HFE2B, is an 84 amino acid secreted protein that regulates iron-related signaling events. Highly expressed in liver, with lower expression in heart, brain, lung, prostate and thyroid, hepcidin is thought to maintain iron homeostasis and, in conjunction with the HFE protein (a protein that is defective in hereditary hemochromatosis), may mediate both iron storage in macrophages and intestinal iron absorption. Additionally, hepcidin has strong antimicrobial activity against Gram-positive and Gram-negative bacteria, as well as certain yeast strains, suggesting that hepcidin may play a crucial role in staving off bacterial infections. Defects in the gene encoding hepcidin are the cause of hemochromatosis type 2B (also known as juvenile hemochromatosis), an early-onset autosomal recessive disorder that results in severe iron overload and is characterized by hepatic fibrosis, hypogonadotrophic hypogonadism and cardiomyopathy.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: HAMP (human) mapping to 19q13.12.

## PRODUCT

hepcidin siRNA (h) is a target-specific 19-25 nt siRNA 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 hepcidin shRNA Plasmid (h): sc-97892-SH and hepcidin shRNA (h) Lentiviral Particles: sc-97892-V as alternate gene silencing products.

## 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

hepcidin siRNA (h) is recommended for the inhibition of hepcidin 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  $\mu$ 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.

## GENE EXPRESSION MONITORING

hepcidin (56-Z): sc-100277 is recommended as a control antibody for monitoring of hepcidin 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## 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.