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KLK8 siRNA (h): sc-41535

BACKGROUND

Kallikreins (KLKs) belong to the serine protease family of proteolytic enzymes. Kallikrein-8 (KLK8), also called neuropsin precursor, ovasin or serine protease 19, is a 260 amino acid secreted protein involved in hippocampal plasticity. Two isoforms exist for this protein. Isoform 1 is the primary form of KLK8 found predominantly in the pancreas. Isoform 2 contains an additional 46 amino acids after amino acid 23 and is predominantly expressed in adult brain and hippocampus. Isoform 2 is not common to the mouse homolog or other primate homologs. In humans, the T to A mutation (c.71-127T>A) leads to the splice variant seen in the human brain. Both isoforms are detected in fetal brain and placenta. In some cancer cells, KLK8 expression can suppress tumor cell invasiveness and lead to a favorable clinical outcome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: KLK8 (human) mapping to 19q13.41.

PRODUCT

KLK8 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 KLK8 shRNA Plasmid (h): sc-41535-SH and KLK8 shRNA (h) Lentiviral Particles: sc-41535-V as alternate gene silencing products.

For independent verification of KLK8 (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-41535A, sc-41535B and sc-41535C.

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

KLK8 siRNA (h) is recommended for the inhibition of KLK8 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KLK8 gene expression knockdown using RT-PCR Primer: KLK8 (h)-PR: sc-41535-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.