SANTA CRUZ BIOTECHNOLOGY, INC.

Klkb1 siRNA (m): sc-146550

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The Power to Question

BACKGROUND

Klkb1 (Kallikrein 1-related peptidase b1), also known as mGK-1 (glandular kallikrein K1), TK or mK1, is a 261 amino acid glandular kallikreins that belongs to the peptidase S1 family and Kallikrein subfamily. Glandular kallikreins are thought to function in the cleavage of Met-Lys and Arg-Ser bonds in kininogen to release Lys-bradykinin. Human pancreatic/renal KLK encodes for the KLK1 enzyme, which is involved in post-translational processing of polypeptide precursors. The function of the other members of KLK gene family is currently unknown, but evidence suggests that many KLKs are implicated in carcinogenesis. The human KLK gene family consists of 15 serine proteases. The human KLK genes are clustered on chromosome 19q13. The gene encoding Klkb1 maps to mouse chromosome 7 B4.

REFERENCES

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2. Evans, B.A., et al. 1987. Mouse glandular kallikrein genes. Structure and partial sequence analysis of the kallikrein gene locus. J. Biol. Chem. 262: 8027-8034.
3. Yousef, G.M., et al. 2000. Genomic organization of the human kallikrein gene family on chromosome 19q13.3-q13.4. Biochem. Biophys. Res. Commun. 276: 125-133.
4. Diamandis, E.P., et al. 2000. The new human kallikrein gene family: implications in carcinogenesis. Trends Endocrinol. Metab. 11: 54-60.
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CHROMOSOMAL LOCATION

Genetic locus: Klk1b1 (mouse) mapping to 7 B4.

PRODUCT

Klkb1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Klkb1 shRNA Plasmid (m): sc-146550-SH and Klkb1 shRNA (m) Lentiviral Particles: sc-146550-V as alternate gene silencing products.

For independent verification of Klkb1 (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-146550A and sc-146550B.

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

Klkb1 siRNA (m) is recommended for the inhibition of Klkb1 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 Klkb1 gene expression knockdown using RT-PCR Primer: Klkb1 (m)-PR: sc-146550-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.

PROTOCOLS

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