SANTA CRUZ BIOTECHNOLOGY, INC.

KCMF1 siRNA (m): sc-146355

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. KCMF1 (potassium channel modulatory factor 1), also known as FGF-induced ubiquitin-protein ligase in gastric cancers (FIGC), ZZ-type zinc finger-containing protein 1 (ZZZ1), differentially expressed in branching tubulogenesis 91 (DEBT91) or PCMF, is a 381 amino acid member of the KCMF1 family and consists of one C_2H_2-type zinc finger and one ZZ-type zinc finger. KCMF1 is expressed in spleen, small intestine, ovary, peripheral blood, lung, kidney and pancreas with low expression in the thymus, prostate, testis, colon, heart, brain, placenta and liver. KCMF1 has intrinsic E3 ubiquitin ligase activity and promotes ubiquitination. KCMF1 is upregulated by basic fibroblast growth factor (also designated FGF-2) in gastric cancer cells and is considered a novel gene important in the regulation of epithelial morphogenesis.

REFERENCES

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4. Li, Z., et al. 2003. Debt91, a putative zinc finger protein differentially expressed during epithelial morphogenesis. Biochem. Biophys. Res. Commun. 306: 623-628.
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CHROMOSOMAL LOCATION

Genetic locus: Kcmf1 (mouse) mapping to 6 C1.

PRODUCT

KCMF1 siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see KCMF1 shRNA Plasmid (m): sc-146355-SH and KCMF1 shRNA (m) Lentiviral Particles: sc-146355-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 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

KCMF1 siRNA (m) is recommended for the inhibition of KCMF1 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.

GENE EXPRESSION MONITORING

KCMF1 (A-3): sc-390051 is recommended as a control antibody for monitoring of KCMF1 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-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KCMF1 gene expression knockdown using RT-PCR Primer: KCMF1 (m)-PR: sc-146355-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.