SANTA CRUZ BIOTECHNOLOGY, INC.

CMTM8 siRNA (h): sc-78113

BACKGROUND

CMTM8 (CKLF-like MARVEL transmembrane domain containing 8), also known as CKLFSF8 (chemokine-like factor superfamily member 8), is a 173 amino acid member of the chemokine-like factor family. Members of the chemokine-like factor family share similarity with the chemokine and the transmembrane four superfamilies. CMTM8 is a multi-pass membrane protein containing one MARVEL domain. MARVEL domain-containing proteins are usually associated with specialized membrane microdomains. Through these specialized membrane microdomains, MARVEL proteins can influence a variety of cellular processes (ie., vesicular transport carriers or tight junction regulation). CMTM8 is thought to effect ligand-induced clearance of EGFR from cell membranes. This decrease in EGFR signal leads to caspase-dependent and -independent apoptosis. An alternate splice variant that does not contain the entire full-length MARVEL domain, CMTM8-v2, can still induce apoptosis without internalizing the EGFR. CMTM8 is predominantly expressed in liver and pancreas. Human CMTM8 shares 92% similarity with its mouse homolog.

REFERENCES

1. Han, W., et al. 2003. Identification of eight genes encoding chemokine-like factor superfamily members 1-8 (CKLFSF1-8) by in silico cloning and experimental validation. Genomics 81: 609-617.
2. Jin, C., et al. 2005. Regulation of EGF receptor signaling by the MARVEL domain-containing protein CKLFSF8. FEBS Lett. 579: 6375-6382.
3. Shi, S., et al. 2005. CKLFSF2 is highly expressed in testis and can be secreted into the seminiferous tubules. Int. J. Biochem. Cell Biol. 37: 1633-1640.
4. Huang, Y.M., et al. 2006. Effect of novel human chemokine-like factor superfamily 8 on proliferation and EGFR expression of tumor cells. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi 22: 466-468.

CHROMOSOMAL LOCATION

Genetic locus: CMTM8 (human) mapping to 3p22.3.

PRODUCT

CMTM8 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CMTM8 shRNA Plasmid (h): sc-78113-SH and CMTM8 shRNA (h) Lentiviral Particles: sc-78113-V as alternate gene silencing products.

For independent verification of CMTM8 (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-78113A, sc-78113B and sc-78113C.

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.

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

CMTM8 siRNA (h) is recommended for the inhibition of CMTM8 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 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 CMTM8 gene expression knockdown using RT-PCR Primer: CMTM8 (h)-PR: sc-78113-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.