SANTA CRUZ BIOTECHNOLOGY, INC.

Kal1 siRNA (m): sc-146338

BACKGROUND

Kal1, also known as Wfdc18 (WAP four-disulfide core domain 18), expi or Wdnm1, is a 74 amino acid secreted protein that contains one WAP domain. The WAP (whey acidic protein) domain, also referred to as the WAP-type four-disulfide core domain, is a signature protein motif that contains eight cysteine residues that form disulfide bonds and may exhibit protease inhibitor activity. WAP domain-containing proteins are thought to function in the immune defense by cleaving microbial proteolytic enzymes in order to prevent tissue penetration and infection. The gene encoding Kal1 maps to mouse chromosome 11 C. No human homolog to Kal1 has been characterized.

REFERENCES

1. Reichling, T., et al. 2005. Transcriptional profiles of intestinal tumors in Apc(Min) mice are unique from those of embryonic intestine and identify novel gene targets dysregulated in human colorectal tumors. Cancer Res. 65: 166-176.
2. Katayama, S., et al. 2005. Antisense transcription in the mammalian transcriptome. Science 309: 1564-1566.
3. Wilkinson, T.S., et al. 2011. WAP domain proteins as modulators of mucosal immunity. Biochem. Soc. Trans. 39: 1409-1415.
4. Galustian, C., et al. 2011. Immunotherapy of prostate cancer: identification of new treatments and targets for therapy, and role of WAP domain-containing proteins. Biochem. Soc. Trans. 39: 1433-1436.
5. Skarnes, W.C., et al. 2011. A conditional knockout resource for the genome-wide study of mouse gene function. Nature 474: 337-342.

CHROMOSOMAL LOCATION

Genetic locus: Wfdc18 (mouse) mapping to 11 C.

PRODUCT

Kal1 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 Kal1 shRNA Plasmid (m): sc-146338-SH and Kal1 shRNA (m) Lentiviral Particles: sc-146338-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.

PROTOCOLS

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

APPLICATIONS

Kal1 siRNA (m) is recommended for the inhibition of Kal1 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 Kal1 gene expression knockdown using RT-PCR Primer: Kal1 (m)-PR: sc-146338-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.