SANTA CRUZ BIOTECHNOLOGY, INC.

KiSS-1 siRNA (m): sc-146490

BACKGROUND

KiSS-1 is a 145 amino acid human protein that suppresses metastases of melanomas and breast carcinomas without affecting tumorigenicity. The human KiSS-1 gene maps to chromosome 1q32.1 and consists of four exons. Transcripts for human KiSS-1 are predominantly expressed in the brain and placenta. KiSS-1 protein contains a polyproline-rich domain (SH3 ligand) and a putative protein kinase C-α phosphorylation site. KiSS-1 may regulate events downstream of cell-matrix adhesion in mechanisms involving cytoskeletal reorganization. Expression of KiSS-1 reduces the level of NFκB p50/p65 binding to the MMP-9 promoter and correlates with diminished expression of the 92 kDa type IV collagenase (MMP-9). KiSS-1 displays agonist activity on the orphan G protein-coupled receptor GPR54.

REFERENCES

1. Lee, J.H., et al. 1996. KiSS-1, a novel human malignant melanoma metastasis-suppressor gene. J. Natl. Cancer Inst. 88: 1731-1737.
2. Lee, J.H. and Welch, D.R. 1997. Suppression of metastasis in human breast carcinoma MDA-MB-435 cells after transfection with the metastasis suppressor gene, KiSS-1. Cancer Res. 57: 2384-2387.
3. West, A., et al. 1998. Chromosome localization and genomic structure of the KiSS-1 metastasis suppressor gene (KISS1). Genomics 54: 145-148.
4. Yan, C., et al. 2001. KiSS-1 represses 92 kDa type IV collagenase expression by downregulating NFκB binding to the promoter as a consequence of IκBα induced block of p65/p50 nuclear translocation. J. Biol. Chem. 276: 1164-1172.
5. Muir, A.I., et al. 2001. AXOR12, a novel human G protein-coupled receptor, activated by the peptide KiSS-1. J. Biol. Chem. 276: 28969-28975.

CHROMOSOMAL LOCATION

Genetic locus: Kiss1 (mouse) mapping to 1 E4.

PRODUCT

KiSS-1 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 KiSS-1 shRNA Plasmid (m): sc-146490-SH and KiSS-1 shRNA (m) Lentiviral Particles: sc-146490-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

KiSS-1 siRNA (m) is recommended for the inhibition of KiSS-1 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.

SELECT PRODUCT CITATIONS

1. Zhang, P., et al. 2014. Expression and function of kisspeptin during mouse decidualization. PLoS ONE 9: e97647.

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.