SANTA CRUZ BIOTECHNOLOGY, INC.

Epigen siRNA (h): sc-60591

BACKGROUND

Epigen is an epithelial mitogen that belongs to the EGF ligand family for ErbB receptors. Comprising 152 amino acids, the Epigen protein contains two hydrophobic regions corresponding to a putative signal sequence and transmembrane domain, which flank a core of amino acids encompassing six cysteine residues and two putative N-linked glycosylation sites. In epithelial cells, Epigen stimulates the phosphorylation of ErbB-1 and mitogen-activated protein kinases and also activates a reporter gene containing enhancer sequences present in the c-Fos promoter. Epigen also stimulates the proliferation of HaCaT cells. With its ability to promote the growth of epithelial cells, Epigen may constitute a novel molecular target for wound-healing therapy.

REFERENCES

1. Strachan, L., et al. 2001. Cloning and biological activity of Epigen, a novel member of the ep growth factor superfamily. J. Biol. Chem. 276: 18265-18271.
2. Lee, D., et al. 2004. Epiregulin is not essential for development of intestinal tumors but is required for protection from intestinal damage. Mol. Cell. Biol. 24: 8907-8916.
3. Kochupurakkal, B.S., et al. 2005. Epigen, the last ligand of ErbB receptors, reveals intricate relationships between affinity and mitogenicity. J. Biol. Chem. 280: 8503-8512.
4. Katoh, Y., et al. 2006. Canonical WNT signaling pathway and human AREG. Int. J. Mol. Med. 17: 1163-1166.
5. Amsellem-Ouazana, D., et al. 2006. Gene expression profiling of ERBB receptors and ligands in human cell carcinoma of the bladder. J. Urol. 175: 1127-1132.

CHROMOSOMAL LOCATION

Genetic locus: EPGN (human) mapping to 4q13.3.

PRODUCT

Epigen 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 Epigen shRNA Plasmid (h): sc-60591-SH and Epigen shRNA (h) Lentiviral Particles: sc-60591-V as alternate gene silencing products.

For independent verification of Epigen (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-60591A, sc-60591B and sc-60591C.

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

Epigen siRNA (h) is recommended for the inhibition of Epigen 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 Epigen gene expression knockdown using RT-PCR Primer: Epigen (h)-PR: sc-60591-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.