SANTA CRUZ BIOTECHNOLOGY, INC.

ECOP siRNA (m): sc-143288

BACKGROUND

ECOP (EGFR-coamplified and overexpressed protein), also known as VOPP1 (vesicular, overexpressed in cancer, prosurvival protein 1) or GASP (glioblastoma-amplified secreted protein), is a 172 amino acid protein that is coamplified with EGFR and overexpressed in multiple glioblastomas. Highly expressed in ovary and thymus, ECOP is found at moderate levels in testis, colon, small intestine, and spleen, and at low levels in liver, placenta and prostate. ECOP regulates NFκB signaling and may have a role in resistance to apoptosis. The gene encoding ECOP maps to human chromosome 7, which houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to osteogenesis imperfecta, pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Tsipouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. J. Clin. Invest. 72: 1262-1267.
2. Collins, V.P. 1995. Gene amplification in human gliomas. Glia 15: 289-296.
3. Iwasaki, S., et al. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. Arch. Otolaryngol. Head Neck Surg. 127: 705-708.
4. Eley, G.D., et al. 2002. A chromosomal region 7p11.2 transcript map: its development and application to the study of EGFR amplicons in glioblastoma. Neurooncology 4: 86-94.
5. Park, S., et al. 2005. ECop (EGFR-coamplified and overexpressed protein), a novel protein, regulates NFκB transcriptional activity and associated apoptotic response in an IκBα-dependent manner. Oncogene 24: 2495-2502.
6. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. Neuromolecular Med. 8: 547-565.

CHROMOSOMAL LOCATION

Genetic locus: Vopp1 (mouse) mapping to 6 B3.

PRODUCT

ECOP 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 ECOP shRNA Plasmid (m): sc-143288-SH and ECOP shRNA (m) Lentiviral Particles: sc-143288-V as alternate gene silencing products.

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

ECOP siRNA (m) is recommended for the inhibition of ECOP 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 ECOP gene expression knockdown using RT-PCR Primer: ECOP (m)-PR: sc-143288-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.