SANTA CRUZ BIOTECHNOLOGY, INC.

EMAP II siRNA (m): sc-61856

BACKGROUND

Endothelial monocyte-activating polypeptide (EMAP II), also known as small inducible cytokine subfamily E, member 1 (SCYE1), is a chemoattractant cytokine for monocytes and granulocytes that is inducible by apoptosis. TNFα treatment of murine meth A fibrosarcomas and B16 melanomas upregulates EMAP II mRNA production. The release of this cytokine renders the tumor-associated vasculature sensitive to tumor necrosis factor. EMAP II mRNA translates as a precursor protein, proEMAP II, which undergoes proteolysis to become the mature, biologically active cytokine. ProEMAP II may function in binding RNA as part of the tRNA synthetase complex in normal cells and in stimulating inflammatory responses after proteolytic cleavage in tumor cells.

REFERENCES

1. Knies, U.E., et al. 2000. Expression of EMAP II in the developing and adult mouse. Apoptosis 5: 141-151.
2. Brabeck, C., et al. 2002. Expression of EMAP II by activated monocytes/microglial cells in different regions of the rat hippocampus after trimethyltin-induced brain damage. Exp. Neurol. 177: 341-346.
3. Matschurat, S., et al. 2003. Regulation of EMAP II by hypoxia. Am. J. Pathol. 162: 93-103.
4. Mueller, C.A., et al. 2003. Spinal cord injury induces lesional expression of the proinflammatory and antiangiogenic cytokine EMAP II. J. Neurotrauma 20: 1007-1015.
5. Mueller, C.A., et al. 2003. Lesional expression of a proinflammatory and antiangiogenic cytokine EMAP II confined to endothelium and microglia/macrophages during secondary damage following experimental traumatic brain injury. J. Neuroimmunol. 135: 1-9.
6. Murray, J.C., et al. 2004. Endothelial monocyte-activating polypeptide-II (EMAP II): a novel inducer of lymphocyte apoptosis. J. Leukoc. Biol. 75: 772-776.
7. LocusLink Report (LocusID: 2009). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Aimp1 (mouse) mapping to 3 G3.

PRODUCT

EMAP II siRNA (m) 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 EMAP II shRNA Plasmid (m): sc-61856-SH and EMAP II shRNA (m) Lentiviral Particles: sc-61856-V as alternate gene silencing products.

For independent verification of EMAP II (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61856A, sc-61856B and sc-61856C.

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

EMAP II siRNA (m) is recommended for the inhibition of EMAP II 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.

GENE EXPRESSION MONITORING

EMAP II (A-4): sc-393228 is recommended as a control antibody for monitoring of EMAP II gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor EMAP II gene expression knockdown using RT-PCR Primer: EMAP II (m)-PR: sc-61856-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.

PROTOCOLS

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