

EMMPRIN siRNA (m): sc-35299

BACKGROUND

Extracellular matrix metalloproteinase inducer (EMMPRIN), also designated basigin or CD147, is involved in the regulation of matrix remodeling at the epidermal-dermal interface. EMMPRIN stimulates the production of interstitial collagenase, gelatinase A, stromelysin-1 and various metalloproteinases (MMPs) by fibroblasts. These enzymes, which are typically increased during tissue degradation and wound healing, are important factors in cancer invasion and metastasis.

CHROMOSOMAL LOCATION

Genetic locus: Bsg (mouse) mapping to 10 C1.

PRODUCT

EMMPRIN 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see EMMPRIN shRNA Plasmid (m): sc-35299-SH and EMMPRIN shRNA (m) Lentiviral Particles: sc-35299-V as alternate gene silencing products.

For independent verification of EMMPRIN (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-35299A, sc-35299B and sc-35299C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

EMMPRIN siRNA (m) is recommended for the inhibition of EMMPRIN 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 μ M in 66 μ l. 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.

PROTOCOLS

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

GENE EXPRESSION MONITORING

EMMPRIN (B-5): sc-46700 is recommended as a control antibody for monitoring of EMMPRIN 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 EMMPRIN gene expression knockdown using RT-PCR Primer: EMMPRIN (m)-PR: sc-35299-PR (20 μ l, 523 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

- Jia, L., et al. 2007. CD147 depletion down-regulates matrix metalloproteinase-11, vascular endothelial growth factor-A expression and the lymphatic metastasis potential of murine hepatocarcinoma Hca-F cells. *Int. J. Biochem. Cell Biol.* 39: 2135-2142.
- Jia, L., et al. 2008. CD147 regulates vascular endothelial growth factor-A expression, tumorigenicity, and chemosensitivity to curcumin in hepatocellular carcinoma. *IUBMB Life* 60: 57-63.
- Jia, L., et al. 2009. Silencing CD147 inhibits tumor progression and increases chemosensitivity in murine lymphoid neoplasm P388D1 cells. *Ann. Hematol.* 88: 753-760.
- Xie, M., et al. 2010. EMMPRIN (basigin/CD147) is involved in the morphogenesis of tooth germ in mouse molars. *Histochem. Cell Biol.* 133: 585-594.
- Ozeki, N., et al. 2015. α 2 Integrin, extracellular matrix metalloproteinase inducer, and matrix metalloproteinase-3 act sequentially to induce differentiation of mouse embryonic stem cells into odontoblast-like cells. *Exp. Cell Res.* 331: 21-37.
- Ozeki, N., et al. 2016. Autophagy-related gene 5 and Wnt5 signaling pathway requires differentiation of embryonic stem cells into odontoblast-like cells. *Exp. Cell Res.* 341: 92-104.
- Kaushik, D.K., et al. 2019. Enhanced glycolytic metabolism supports transmigration of brain-infiltrating macrophages in multiple sclerosis. *J. Clin. Invest.* 130 pii: 124012.

RESEARCH USE

For research use only, not for use in diagnostic procedures.