SANTA CRUZ BIOTECHNOLOGY, INC.

Epilysin siRNA (h): sc-62278

BACKGROUND

Epilysin, also known as matrix metalloproteinase-28 (MMP-28), is a secreted protein that belongs to the peptidase M10A family. Matrix metalloproteinase proteins are responsible for the breakdown of the extracellular matrix which is important for normal physiological processes such as tissue remodeling, reproduction and embryonic development. Epilysin is produced by proliferating keratinocytes and is responsible for mediating the degradation of casein. Its expression is upregulated in response to injury of the skin suggesting that Epilysin may be involved in tissue repair and homeostasis. In addition, Epilysin may function predominantly in the nervous system. Incubation of Epilysin with rat embryonic brain tissue results in the degradation of myelin proteins. In *Xenopus*, Epilysin localizes to nerves and is upregulated during neurulation. This suggests that Epilysin plays an evolutionarily conserved role in neural development and may be involved in modulating the axonal-glial extracellular environment.

REFERENCES

1. Illman, S.A., et al. 2001. Promoter characterization of the human and mouse Epilysin (MMP-28) genes. Gene 275: 185-194.
2. Lohi, J., et al. 2001. Epilysin, a novel human matrix metalloproteinase (MMP-28) expressed in testis and keratinocytes and in response to injury. J. Biol. Chem. 276: 10134-10144.
3. Saarialho-Kere, U., et al. 2002. Epilysin (MMP-28) expression is associated with cell proliferation during epithelial repair. J. Invest. Dermatol. 119: 14-21.
4. Momohara, S., et al. 2004. Matrix metalloproteinase 28/Epilysin expression in cartilage from patients with rheumatoid arthritis and osteoarthritis: comment on the article by Kevorkian et al. Arthritis Rheum. 50: 4074-4075.
5. Bister, V.O., et al. 2004. Differential expression of three matrix metalloproteinases, MMP-19, MMP-26, and MMP-28, in normal and inflamed intestine and colon cancer. Dig. Dis. Sci. 49: 653-661.

CHROMOSOMAL LOCATION

Genetic locus: MMP28 (human) mapping to 17q12.

PRODUCT

Epilysin 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 Epilysin shRNA Plasmid (h): sc-62278-SH and Epilysin shRNA (h) Lentiviral Particles: sc-62278-V as alternate gene silencing products.

For independent verification of Epilysin (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-62278A, sc-62278B and sc-62278C.

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

Epilysin siRNA (h) is recommended for the inhibition of Epilysin 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.

GENE EXPRESSION MONITORING

Epilysin (F-10): sc-515010 is recommended as a control antibody for monitoring of Epilysin 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 Epilysin gene expression knockdown using RT-PCR Primer: Epilysin (h)-PR: sc-62278-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.