

Ym1 siRNA (m): sc-155411

BACKGROUND

Ym1, also known as CHI3L3 (chitinase-3-like protein 3) or ECF-L (eosinophil chemotactic factor-L), is a 398 amino acid mouse protein that is secreted and belongs to the glycosyl hydrolase 18 family. Expressed at low levels in spleen, thymus and bone marrow, Ym1 functions as a lectin (a highly specific sugar-binding protein) that is specific for saccharides with a free amino group, such as galactosamine or glucosamine, and can also bind chitin and heparin with high affinity. Ym1 exists at an optimal pH of 4.5-5 and, in addition to its role as a lectin, it displays chemotactic activity for T lymphocytes, eosinophils and bone marrow cells and is thought to be involved in allergy and inflammation responses, as well as in osteoclastogenesis.

REFERENCES

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3. Lee, E., et al. 2005. Induction of Ym1/2 in mouse bone marrow-derived mast cells by IL-4 and identification of Ym1/2 in connective tissue type-like mast cells derived from bone marrow cells cultured with IL-4 and stem cell factor. *Immunol. Cell Biol.* 83: 468-474.
4. Garcia-Palacios, V., et al. 2006. Eosinophil chemotactic factor-L (ECF-L) enhances osteoclast formation by increasing ICAM-1 expression. *Ann. N.Y. Acad. Sci.* 1068: 240-243.
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6. Arora, M., et al. 2006. Simvastatin promotes Th2-type responses through the induction of the chitinase family member Ym1 in dendritic cells. *Proc. Natl. Acad. Sci. USA* 103: 7777-7782.
7. Marchesi, F., et al. 2006. Immunohistochemical detection of Ym1/Ym2 chitinase-like lectins associated with hyalinosi and polypoid adenomas of the transitional epithelium in a mouse with acute myeloid leukemia. *Vet. Pathol.* 43: 773-776.
8. Garcia-Palacios, V., et al. 2007. Eosinophil chemotactic factor-L (ECF-L) enhances osteoclast formation by increasing in osteoclast precursors expression of LFA-1 and ICAM-1. *Bone* 40: 316-322.
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CHROMOSOMAL LOCATION

Genetic locus: Chi3l3 (mouse) mapping to 3 F2.2.

PROTOCOLS

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

PRODUCT

Ym1 siRNA (m) is a target-specific 20-25 nt siRNA designed to knock down gene expression. Each vial contains 3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Ym1 shRNA Plasmid (m): sc-155411-SH and Ym1 shRNA (m) Lentiviral Particles: sc-155411-V as alternate gene silencing 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 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

Ym1 siRNA (m) is recommended for the inhibition of Ym1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Ym1 gene expression knockdown using RT-PCR Primer: Ym1 (m)-PR: sc-155411-PR (20 μ l, 498 bp). 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.