SANTA CRUZ BIOTECHNOLOGY, INC.

DC-LAMP siRNA (h): sc-77099

BACKGROUND

DC-LAMP (DC-lysosome-associated membrane glycoprotein), also known as LAMP-3 (lysosomal-associated membrane protein 3), TSC403 or CD208, is a 416 amino acid lysosome membrane protein that belongs to the LAMP family. DC-LAMP is expressed in lung, lymphoid organs and dendritic cells, and is upregulated in carcinomas of the esophagus, colon, rectum, ureter, stomach, breast, fallopian tube, thyroid and parotid tissues. It is suggested that DC-LAMP may be responsible for changing lysosomal function after the transfer of peptide-MHC class II molecules to the surface of dendritic cells. DC-LAMP is thought to play an important part in enhancing metastasic potential and may be a prognostic factor for cervical cancer.

REFERENCES

1. Kanao, H., et al. 2005. Overexpression of LAMP3/TSC403/DC-LAMP promotes metastasis in uterine cervical cancer. Cancer Res. 65: 8640-8645.
2. Arruda, L.B., et al. 2006. Dendritic cell-lysosomal-associated membrane protein (LAMP) and LAMP-1-HIV-1 gag chimeras have distinct cellular trafficking pathways and prime T and B cell responses to a diverse repertoire of epitopes. J. Immunol. 177: 2265-2275.
3. Kolla, V., et al. 2007. Thyroid transcription factor in differentiating type II cells: regulation, isoforms, and target genes. Am. J. Respir. Cell Mol. Biol. 36: 213-225.
4. Bodineau, A., et al. 2007. Do Langerhans cells behave similarly in elderly and younger patients with chronic periodontitis? Arch. Oral Biol. 52: 189-194.
5. Ladányi, A., et al. 2007. Density of DC-LAMP+ mature dendritic cells in combination with activated T lymphocytes infiltrating primary cutaneous melanoma is a strong independent prognostic factor. Cancer Immunol. Immunother. 56: 1459-1469.

CHROMOSOMAL LOCATION

Genetic locus: LAMP3 (human) mapping to 3q27.1.

PRODUCT

DC-LAMP 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 DC-LAMP shRNA Plasmid (h): sc-77099-SH and DC-LAMP shRNA (h) Lentiviral Particles: sc-77099-V as alternate gene silencing products.

For independent verification of DC-LAMP (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-77099A, sc-77099B and sc-77099C.

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.

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

DC-LAMP siRNA (h) is recommended for the inhibition of DC-LAMP 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DC-LAMP gene expression knockdown using RT-PCR Primer: DC-LAMP (h)-PR: sc-77099-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.