SANTA CRUZ BIOTECHNOLOGY, INC.

2010001M09Rik siRNA (m): sc-108589

BACKGROUND

2010001M09Rik, also known as pERp1 or Pacap (plasma cell-induced resident endoplasmic reticulum protein), is a 188 amino acid endoplasmic reticulum protein that belongs to the PERP1 family. Associating with immunoglobulin M (IgM) heavy and light chains, 2010001M09Rik promotes IgM assembly and secretion. While it may exert its effect by acting as a molecular chaperone or as an oxidoreductase, 2010001M09Rik displays a low level of oxidoreductase activity. 2010001M09Rik is part of the ER chaperone complex, a multiprotein complex in the endoplasmic reticulum containing a large number of molecular chaperones. These chaperones associate with unassembled incompletely folded immunoglobulin heavy chains. Although it is expressed at high levels in spleen, 2010001M09Rik is expressed at low levels in thymus, lung and uterus. The gene that encodes 2010001M09Rik maps to mouse chromosome 18 B2 and human chromosome 5.

REFERENCES

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2. Anindya, R., et al. 2007. Damage-induced ubiquitylation of human RNA polymerase II by the ubiquitin ligase Nedd4, but not Cockayne syndrome proteins or BRCA1. Mol. Cell 28: 386-397.
3. Vera-Carbonell, A., et al. 2009. Characterization of a *de novo* complex chromosomal rearrangement in a patient with cri-du-chat and trisomy 5p syndromes. Am. J. Med. Genet. A 149A: 2513-2521.
4. Ravandi, F., et al. 2009. Superior outcome with hypomethylating therapy in patients with acute myeloid leukemia and high-risk myelodysplastic syndrome and chromosome 5 and 7 abnormalities. Cancer 115: 5746-5751.
5. Tumes, D.J., et al. 2009. Expression of survivin in lung eosinophils is associated with pathology in a mouse model of allergic asthma. Int. Immunol. 21: 633-644.
6. Shimizu, Y., et al. 2009. pERp1 is significantly up-regulated during plasma cell differentiation and contributes to the oxidative folding of immunoglobulin. Proc. Natl. Acad. Sci. USA 106: 17013-17018.
7. van Anken, E., et al. 2009. Efficient IgM assembly and secretion require the plasma cell induced endoplasmic reticulum protein pERp1. Proc. Natl. Acad. Sci. USA 106: 17019-17024.

CHROMOSOMAL LOCATION

Genetic locus: Mzb1 (mouse) mapping to 18 B2.

PRODUCT

2010001M09Rik siRNA (m) is a target-specific 19-25 nt siRNA 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 2010001M09Rik shRNA Plasmid (m): sc-108589-SH and 2010001M09Rik shRNA (m) Lentiviral Particles: sc-108589-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 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

2010001M09Rik siRNA (m) is recommended for the inhibition of 2010001M09Rik 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor 2010001M09Rik gene expression knockdown using RT-PCR Primer: 2010001M09Rik (m)-PR: sc-108589-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.