SANTA CRUZ BIOTECHNOLOGY, INC.

MGC29506 siRNA (h): sc-91924

BACKGROUND

MGC29506, also known as MZB1 (marginal zone B and B1 cell-specific protein), PACAP (proapoptotic caspase adapter protein) or plasma cell-induced resident endoplasmic reticulum protein, is a 189 amino acid protein that exists as five alternatively spliced isoforms. MGC29506 isoform 1 has been found to localize to the endoplasmic reticulum, while isoform 2 localizes to the cytoplasm surrounding the nucleus. A member of the PERP1 family, MGC29506 promotes IgM assembly and secretion and is widely expressed, with highest levels found in brain, thymus, spleen and small intestine. The gene encoding MGC29506 maps to human chromosome 5q31.2.

REFERENCES

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2. Bonfoco, E., et al. 2001. Characterization of a novel proapoptotic caspase-2- and caspase-9-binding protein. J. Biol. Chem. 276: 29242-29250.
3. Vaudry, D., et al. 2002. Pituitary adenylate cyclase-activating polypeptide protects rat cerebellar granule neurons against ethanol-induced apoptotic cell death. Proc. Natl. Acad. Sci. USA 99: 6398-6403.
4. Katoh, M. and Katoh, M. 2003. MGC29506 gene, frequently down-regulated in intestinal-type gastric cancer, encodes secreted-type protein with conserved cysteine residues. Int. J. Oncol. 23: 235-241.
5. 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.
6. 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.
7. Flach, H., et al. 2010. Mzb1 protein regulates calcium homeostasis, antibody secretion, and integrin activation in innate-like B cells. Immunity 33: 723-735.

CHROMOSOMAL LOCATION

Genetic locus: MZB1 (human) mapping to 5q31.2.

PRODUCT

MGC29506 siRNA (h) 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 MGC29506 shRNA Plasmid (h): sc-91924-SH and MGC29506 shRNA (h) Lentiviral Particles: sc-91924-V as alternate gene silencing products.

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

MGC29506 siRNA (h) is recommended for the inhibition of MGC29506 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 MGC29506 gene expression knockdown using RT-PCR Primer: MGC29506 (h)-PR: sc-91924-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.