SANTA CRUZ BIOTECHNOLOGY, INC.

GIMAP1 siRNA (m): sc-145398

BACKGROUND

The GTPase of the immunity-associated protein (GIMAP) family of proteins include seven members that are expressed by genes residing on human chromosome 7. GIMAP proteins have been implicated in the regulation of lymphomyeloid cell survival. GIMAP1 (GTPase, IMAP family member 1), also known as IMAP1 (immunity-associated protein 1), HIMAP1 or IMAP38, is a 306 amino acid single-pass type IV membrane protein of the endoplasmic reticulum (ER) belonging to the GIMAP family. Encoded by a gene located on human chromosome 7, GIMAP1 is expressed primarily in spleen with lower levels found in lymph node. Chromosome 7 houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Tsipouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. J. Clin. Invest. 72: 1262-1267.
2. Iwasaki, S., et al. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. Arch. Otolaryngol. Head Neck Surg. 127: 705-708.
3. Stamm, O., et al. 2002. Human ortholog to mouse gene imap38 encoding an ER-localizable G-protein belongs to a gene family clustered on chromosome 7q32-36. Gene 282: 159-167.
4. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608084. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Krücken, J., et al. 2004. Comparative analysis of the human gimap gene cluster encoding a novel GTPase family. Gene 341: 291-304.

CHROMOSOMAL LOCATION

Genetic locus: Gimap1 (mouse) mapping to 6 B2.3.

PRODUCT

GIMAP1 siRNA (m) 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 GIMAP1 shRNA Plasmid (m): sc-145398-SH and GIMAP1 shRNA (m) Lentiviral Particles: sc-145398-V as alternate gene silencing products.

For independent verification of GIMAP1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145398A, sc-145398B and sc-145398C.

PROTOCOLS

See our web site at www.scbt.com or our catalog 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

GIMAP1 siRNA (m) is recommended for the inhibition of GIMAP1 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 GIMAP1 gene expression knockdown using RT-PCR Primer: GIMAP1 (m)-PR: sc-145398-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.