SANTA CRUZ BIOTECHNOLOGY, INC.

IGSF8 siRNA (m): sc-105564

BACKGROUND

IGSF8 (immunoglobulin superfamily, member 8), also known as EWI2, PGRL, CD316 or CD81P3, is a 613 amino acid single-pass membrane protein that contains four Ig-like C2-type domains and exists as multiple alternatively spliced isoforms. Expressed in testis, brain, liver, kidney and placenta, IGSF8 interacts with KAI 1 and is thought to play a role in oocyte fertilization and hepatitis C viral function. IGSF8 may also be involved in keratinocyte differentiation, cell motility and the outgrowth and maintenance of neural networks in the adult brain. The gene encoding IGSF8 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Stipp, C.S., et al. 2001. EWI-2 is a major CD9 and CD81 partner and member of a novel Ig protein subfamily. J. Biol. Chem. 276: 40545-40554.
2. Clark, K.L., et al. 2001. PGRL is a major CD81-associated protein on lymphocytes and distinguishes a new family of cell surface proteins. J. Immunol. 167: 5115-5121.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606644. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Charrin, S., et al. 2003. EWI-2 is a new component of the tetraspanin web in hepatocytes and lymphoid cells. Biochem. J. 373: 409-421.
5. Bonkobara, M., et al. 2003. Identification of novel genes for secreted and membrane-anchored proteins in human keratinocytes. Br. J. Dermatol. 148: 654-664.
6. Zhang, X.A., et al. 2003. EWI2/PGRL associates with the metastasis suppressor KAI1/CD82 and inhibits the migration of prostate cancer cells. Cancer Res. 63: 2665-2674.

CHROMOSOMAL LOCATION

Genetic locus: Igsf8 (mouse) mapping to 1 H3.

PRODUCT

IGSF8 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 IGSF8 shRNA Plasmid (m): sc-105564-SH and IGSF8 shRNA (m) Lentiviral Particles: sc-105564-V as alternate gene silencing products.

For independent verification of IGSF8 (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-105564A, sc-105564B and sc-105564C.

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

IGSF8 siRNA (m) is recommended for the inhibition of IGSF8 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 IGSF8 gene expression knockdown using RT-PCR Primer: IGSF8 (m)-PR: sc-105564-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Cohen, J., et al. 2022. Oocyte ERM and EWI proteins are involved in mouse fertilization. Front. Cell Dev. Biol. 10: 863729.

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.