SANTA CRUZ BIOTECHNOLOGY, INC.

GAGE12J siRNA (h): sc-91205

BACKGROUND

GAGE12J (G antigen 12J), also known as GAGE11, is a 117 amino acid protein belonging to the GAGE family. The GAGE family is comprised of a number of highly homologous acidic proteins involved in immunity and germ cell biology. Expressed most frequently in cancerous tissue, members of the GAGE family are considered potential targets for cancer immunotherapy. The gene encoding GAGE12J maps to human chromosome X, which consists of approximately 153 million base pairs and nearly 1,000 genes. The combination of a X and Y chromosome lead to normal male development, while two copies of X lead to normal female development. There are a number of conditions related to an unusual number and combination of sex chromosomes being inherited, including Turner's syndrome, Klinefelter's syndrome and Triple X syndrome. Color blindness, hemophilia and Duchenne muscular dystrophy are well-known X chromosome-linked conditions that affect males more frequently as males carry a single X chromosome.

REFERENCES

1. Götte, K., et al. 2002. Tumor-associated antigens as possible targets for immune therapy in head and neck cancer: comparative mRNA expression analysis of RAGE and GAGE genes. Acta Otolaryngol. 122: 546-552.
2. Nagel, H., et al. 2003. Analysis of the tumour suppressor genes, FHIT and WT-1, and the tumour rejection genes, BAGE, GAGE-1/2, HAGE, MAGE-1, and MAGE-3, in benign and malignant neoplasms of the salivary glands. Mol. Pathol. 56: 226-231.
3. Shao, J.B. and Chen, Z. 2003. Expression of MAGE, GAGE, and BAGE genes in human hepatocellular carcinoma. Zhonghua Gan Zang Bing Za Zhi. 11: 142-144.
4. Kong, U., et al. 2004. The expression of GAGE gene can predict aggressive biologic behavior of intestinal type of stomach cancer. Hepatogastroenterology 51: 1519-1523.
5. Gjerstorff, M.F., et al. 2007. MAGE-A1, GAGE and NY-ESO-1 cancer/testis antigen expression during human gonadal development. Hum. Reprod. 22: 953-960.

CHROMOSOMAL LOCATION

Genetic locus: GAGE12J (human) mapping to Xp11.23.

PRODUCT

GAGE12J 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 GAGE12J shRNA Plasmid (h): sc-91205-SH and GAGE12J shRNA (h) Lentiviral Particles: sc-91205-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

GAGE12J siRNA (h) is recommended for the inhibition of GAGE12J 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 GAGE12J gene expression knockdown using RT-PCR Primer: GAGE12J (h)-PR: sc-91205-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.