SANTA CRUZ BIOTECHNOLOGY, INC.

PAGE-4 siRNA (h): sc-91096

BACKGROUND

PAGE-4 (P antigen family, member 4), also known as JM27, CT16.7, GAGE-9, GAGEC1 and PAGE-1, is a 102 amino acid cytoplasmic protein belonging to the GAGE family of cancer/testis associated antigens. PAGE-4 is strongly expressed in prostate and prostate cancer cells, but also expressed in normal male and female reproductive tissues, testis, fallopian tube, uterus and placenta, as well as in testicular and uterine cancer cells. It is suggested that PAGE-4 may be an important target for therapeutic intervention of benign prostatic hyperplasia and prostate cancer. The gene encoding PAGE-4 maps to human chromosome X. Chromosome X, one of the two human sex chromosomes, contains nearly 153 million base pairs and encodes over 1,000 genes.

REFERENCES

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2. Iavarone, C., et al. 2002. PAGE4 is a cytoplasmic protein that is expressed in normal prostate and in prostate cancers. Mol. Cancer Ther. 1: 329-335.
3. Bera, T.K., et al. 2002. PATE, a gene expressed in prostate cancer, normal prostate, and testis, identified by a functional genomic approach. Proc. Natl. Acad. Sci. USA 99: 3058-3063.
4. Prikler, L., et al. 2004. Adaptive immunotherapy of the advanced prostate cancer-cancer testis antigen (CTA) as possible target antigens. Aktuelle Urol. 35: 326-330.
5. Shah, U.S., et al. 2004. Androgen regulation of JM-27 is associated with the diseased prostate. J. Androl. 25: 618-624.
6. Minnery, C.H. and Getzenberg, R.H. 2005. Benign prostatic hyperplasia cell line viability and modulation of jm-27 by doxazosin and ibuprofen. J. Urol. 174: 375-379.
7. Yokokawa, J., et al. 2007. Identification of cytotoxic T-lymphocyte epitope(s) and its agonist epitope(s) of a novel target for vaccine therapy (PAGE-4). Int. J. Cancer 121: 595-605.
8. Cannon, G.W., et al. 2007. A preliminary study of JM-27: a serum marker that can specifically identify men with symptomatic benign prostatic hyperplasia. J. Urol. 177: 610-614.

CHROMOSOMAL LOCATION

Genetic locus: PAGE4 (human) mapping to Xp11.23.

PRODUCT

PAGE-4 siRNA (h) is a pool of 2 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 PAGE-4 shRNA Plasmid (h): sc-91096-SH and PAGE-4 shRNA (h) Lentiviral Particles: sc-91096-V as alternate gene silencing products.

For independent verification of PAGE-4 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-91096A and sc-91096B.

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

PAGE-4 siRNA (h) is recommended for the inhibition of PAGE-4 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.

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.