SANTA CRUZ BIOTECHNOLOGY, INC.

BAGE siRNA (h): sc-91415

BACKGROUND

Members of the BAGE gene family encode antigens that are recognized by cytotoxic T lymphocytes and are also known as CT (cancer/testis) antigens. Generated by juxtacentromeric shuffling of the MLL3 gene, the ancestral BAGE gene was expanded by acrocentric exchanges and/or juxtacentromeric movements. BAGE, also known as B melanoma antigen 1 or cancer/testis antigen 2.1, is a 43 amino acid member of the BAGE family. Generally, BAGE proteins are not expressed in normal tissues, except in testis, but are expressed highly in melanomas, bladder carcinomas, head and neck squamous cell carcinomas, and lung and breast cancer carcinomas. BAGE proteins are not expressed in renal, colorectal and prostatic carcinomas, leukemias and lymphomas.

REFERENCES

1. Boël, P., et al. 1995. BAGE: a new gene encoding an antigen recognized on human melanomas by cytolytic T lymphocytes. Immunity 2: 167-175.
2. Ruault, M., et al. 2002. New BAGE (B melanoma antigen) genes mapping to the juxtacentromeric regions of human chromosomes 13 and 21 have a cancer/testis expression profile. Eur. J. Hum. Genet. 10: 833-840.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605167. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Ruault, M., et al. 2003. BAGE genes generated by juxtacentromeric reshuffling in the Hominidae lineage are under selective pressure. Genomics 81: 391-399.
5. Segal, N.H., et al. 2005. Identification of cancer-testis genes expressed by melanoma and soft tissue sarcoma using bioinformatics. Cancer Immun. 5: 2.
6. Grunau, C., et al. 2005. Frequent DNA hypomethylation of human juxtacentromeric BAGE loci in cancer. Genes Chromosomes Cancer. 43: 11-24.

CHROMOSOMAL LOCATION

Genetic locus: BAGE (human) mapping to 21p11.2.

PRODUCT

BAGE 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 BAGE shRNA Plasmid (h): sc-91415-SH and BAGE shRNA (h) Lentiviral Particles: sc-91415-V as alternate gene silencing products.

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.

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

BAGE siRNA (h) is recommended for the inhibition of BAGE 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 BAGE gene expression knockdown using RT-PCR Primer: BAGE (h)-PR: sc-91415-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.