SANTA CRUZ BIOTECHNOLOGY, INC.

PASD1 siRNA (h): sc-90848

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The Power to Question

BACKGROUND

Melanoma-associated antigens recognized by cytotoxic T lymphocytes (CTL) have been grouped into three categories: melanocyte differentiation antigens, cancer/testis-specific antigens and mutated or aberrantly expressed antigens. Many of these antigens consist of peptides that are presented to T cells by HLA molecules; they represent potential targets for cancer immunotherapy. PASD1 (PAS domain-containing protein 1), also known as CT63 (Cancer/testis antigen 63) or OX-TES-1, is a 773 amino acid nuclear protein that contains one PAS (PER-ARNT-SIM) domain and belongs to the cancer/testis-specific antigen family. Expressed in normal testis and in diffuse large B-cell lymphoma-derived cell lines, PASD1 is thought to function as a transcription factor and may be a potential multiple myeloma-associated antigen. Two isoforms of PASD1 exist due to alternative splicing events.

REFERENCES

1. Liggins, A.P., et al. 2004. A novel diffuse large B-cell lymphoma-associated cancer testis antigen encoding a PAS domain protein. Br. J. Cancer 91: 141-149.
2. Liggins, A.P., et al. 2004. Serologic detection of diffuse large B-cell lymphoma-associated antigens. Int. J. Cancer 110: 563-569.
3. Guinn, B.A., et al. 2005. Humoral detection of leukaemia-associated antigens in presentation acute myeloid leukaemia. Biochem. Biophys. Res. Commun. 335: 1293-1304.
4. Sahota, S.S., et al. 2006. PASD1 is a potential multiple myeloma-associated antigen. Blood 108: 3953-3955.
5. Cooper, C.D., et al. 2006. PASD1, a DLBCL-associated cancer testis antigen and candidate for lymphoma immunotherapy. Leukemia 20: 2172-2174.
6. Chiriva-Internati, M., et al. 2007. Advances in immunotherapy of multiple myeloma: from the discovery of tumor-associated antigens to clinical trials. Int. Rev. Immunol. 26: 197-222.
7. Kohno, T., et al. 2008. Association of KRAS polymorphisms with risk for lung adenocarcinoma accompanied by atypical adenomatous hyperplasias. Carcinogenesis 29: 957-963.

CHROMOSOMAL LOCATION

Genetic locus: PASD1 (human) mapping to Xq28.

PRODUCT

PASD1 siRNA (h) 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 PASD1 shRNA Plasmid (h): sc-90848-SH and PASD1 shRNA (h) Lentiviral Particles: sc-90848-V as alternate gene silencing products.

For independent verification of PASD1 (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-90848A, sc-90848B and sc-90848C.

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

PASD1 siRNA (h) is recommended for the inhibition of PASD1 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.

GENE EXPRESSION MONITORING

PASD1 (NB43): sc-130486 is recommended as a control antibody for monitoring of PASD1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PASD1 gene expression knockdown using RT-PCR Primer: PASD1 (h)-PR: sc-90848-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.