SANTA CRUZ BIOTECHNOLOGY, INC.

TDAG8 siRNA (h): sc-40198

BACKGROUND

TDAG8 (for T cell death-associated gene 8) is a seven transmembrane G protein-coupled receptor (GPCR) that was originally identified from a human thyroid cDNA library and subsequently shown to be expressed predominantly in thymus, lymph nodes, peripheral blood leukocytes and spleen. TDAG8, which is alternatively designated GPCR25, is grouped collectively with other GPCRs that are induced during T cell receptor engagement-mediated apoptosis and T cell activation, which also include G2A (for G2 accumulation) and P2Y2 (for P2 nucleotide) receptor. TDAG8 expression is highest during T cell death that is mediated by T cell receptors, phorbol esters or glucocorticoids, suggesting that TDAG8 may participate in activation-induced cell death or differentiation of T cells. Human TDAG8 maps to chromosome 14q31.3. Abnormalities of this region have been associated with human T cell lymphomas and leukemia.

REFERENCES

1. Choi, J.W., et al. 1996. Identification of a putative G protein-coupled receptor induced during activation-induced apoptosis of T cells. Cell. Immunol. 168: 78-84.
2. Koshiba, M., et al. 1997. Transient up-regulation of P2Y2 nucleotide receptor mRNA expression is an immediate early gene response in activated thymocytes. Proc. Natl. Acad. Sci. USA 94: 831-836.
3. Kyaw, H., et al. 1998. Cloning, characterization and mapping of human homolog of mouse T cell death-associated gene. DNA Cell Biol. 17: 493-500.
4. Weng, Z., et al. 1998. A DNA damage and stress inducible G protein-coupled receptor blocks cells in G_2/M. Proc. Natl. Acad. Sci. USA 95: 12334-12339.
5. Tomer, Y., et al. 1998. Linkage analysis of candidate genes in autoimmune thyroid disease. III. Detailed analysis of chromosome 14 localizes Graves' disease-1 (GD-1) close to multinodular goiter-1 (MNG-1). International consortium for the genetics of autoimmune Thyroid Disease. J. Clin. Endocrinol. Metab. 83: 4321-4327.

CHROMOSOMAL LOCATION

Genetic locus: GPR65 (human) mapping to 14q31.3.

PRODUCT

TDAG8 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 TDAG8 shRNA Plasmid (h): sc-40198-SH and TDAG8 shRNA (h) Lentiviral Particles: sc-40198-V as alternate gene silencing products.

For independent verification of TDAG8 (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-40198A, sc-40198B and sc-40198C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

TDAG8 siRNA (h) is recommended for the inhibition of TDAG8 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 TDAG8 gene expression knockdown using RT-PCR Primer: TDAG8 (h)-PR: sc-40198-PR (20 µl, 557 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.