SANTA CRUZ BIOTECHNOLOGY, INC.

PTAG siRNA (h): sc-76284

BACKGROUND

PTAG (pituitary tumor derived apoptosis gene), also known as RHBDD3 (rhomboid domain containing 3), is a novel 386 amino acid multi-pass membrane protein that contains one UBA domain and augments drug-induced apoptosis. Cells lacking PTAG have a reduced apoptotic response, thereby causing a predisposition to cell malignancy and resistance to chemotherapeutic interventions, and PTAG plays a role in colorectal tumorigenesis as the majority of primary colorectal tumors lack the PTAG gene. Encoded by a gene located on human chromosome 22, PTAG is often co-expressed with EWS (ewing sarcoma breakpoint region 1), a gene located directly downstream of PTAG.

REFERENCES

1. Collins, J.E., et al. 2003. Reevaluating human gene annotation: a second-generation analysis of chromosome 22. Genome Res. 13: 27-36.
2. Bahar, A., et al. 2004. Isolation and characterization of a novel pituitary tumor apoptosis gene. Mol. Endocrinol. 18: 1827-1839.
3. Farrell, W.E. 2005. Epigenetic mechanisms of tumorigenesis. Horm. Metab. Res. 37: 361-368.
4. Farrell, W.E. 2006. A novel apoptosis gene identified in the pituitary gland. Neuroendocrinology 84: 217-221.
5. Bahar, A., et al. 2007. Primary colorectal tumors fail to express the proapoptotic mediator PTAG and its reexpression augments drug-induced apoptosis. Genes Chromosomes Cancer 46: 202-212.

CHROMOSOMAL LOCATION

Genetic locus: RHBDD3 (human) mapping to 22q12.2.

PRODUCT

PTAG 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 PTAG shRNA Plasmid (h): sc-76284-SH and PTAG shRNA (h) Lentiviral Particles: sc-76284-V as alternate gene silencing 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.

PROTOCOLS

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

APPLICATIONS

PTAG siRNA (h) is recommended for the inhibition of PTAG 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 PTAG gene expression knockdown using RT-PCR Primer: PTAG (h)-PR: sc-76284-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.