SANTA CRUZ BIOTECHNOLOGY, INC.

Staf-50 siRNA (h): sc-76582

BACKGROUND

The tripartite motif (TRIM) family of proteins are characterized by a conserved TRIM domain that includes a coiled-coil region, a B-box type zinc finger, one RING finger and three zinc-binding domains. Staf-50 (50 kDa-stimulated *trans*-acting factor), also known as TRIM22 (tripartite motif-containing 22), RNF94 or GPSTAF50, is a 498 amino acid cytoplasmic protein that belongs to the TRIM family and, characteristic of TRIM family members, contains one RING-type zinc finger, one B box-type zinc finger and one SPRY domain. Induced by IFN-α and IFN-β, Staf-50 is strongly expressed in ovary, spleen, thymus and peripheral blood leukocytes where it is thought to mediate the antiviral effects of IFN proteins. Additionally, Staf-50 is present in leukemic cells, suggesting a role in cancer formation and metastasis. Staf-50 exists as two alternatively spliced isoforms which are encoded by a gene that maps to human chromosome 11.

REFERENCES

1. Tissot, C. and Mechti, N. 1995. Molecular cloning of a new interferon-induced factor that represses human immunodeficiency virus type 1 long terminal repeat expression. J. Biol. Chem. 270: 14891-14898.
2. Tissot, C., et al. 1996. Localization of Staf-50, a member of the RING finger family, to 11p15 by fluorescence *in situ* hybridization. Genomics 34: 151-153.
3. Gongora, C., et al. 2000. The interferon-inducible Staf-50 gene is down-regulated during T cell costimulation by CD2 and CD28. J. Interferon Cytokine Res. 20: 955-961.
4. Reymond, A., et al. 2001. The tripartite motif family identifies cell compartments. EMBO J. 20: 2140-2151.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606559. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Obad, S., et al. 2004. Staf-50 is a novel p53 target gene conferring reduced clonogenic growth of leukemic U-937 cells. Oncogene 23: 4050-4059.

CHROMOSOMAL LOCATION

Genetic locus: TRIM22 (human) mapping to 11p15.4.

PRODUCT

Staf-50 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 Staf-50 shRNA Plasmid (h): sc-76582-SH and Staf-50 shRNA (h) Lentiviral Particles: sc-76582-V as alternate gene silencing products.

For independent verification of Staf-50 (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-76582A, sc-76582B and sc-76582C.

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

Staf-50 siRNA (h) is recommended for the inhibition of Staf-50 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 Staf-50 gene expression knockdown using RT-PCR Primer: Staf-50 (h)-PR: sc-76582-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.