SANTA CRUZ BIOTECHNOLOGY, INC.

SYAP1 siRNA (h): sc-90867

BACKGROUND

SYAP1 (synapse-associated protein 1) is a 365 amino acid protein that is ubiquitously expressed in adult tissues. SYAP1 contains one BSD domain which is a novel domain that is present in basal transcription factors, synapse-associated proteins and several hypothetical proteins. The BSD domain is characterized by three predicted α helices and by conserved tryptophan and phenylalanine residues, located at the C-terminus of the domain. The gene that encodes SYAP1 in humans is located on chromosome X. Chromosome X consists of about 153 million base pairs and nearly 1,000 genes. Color blindness, hemophilia, and Duchenne muscular dystrophy are well known X chromosome-linked conditions which affect males more frequently as males carry a single X chromosome.

REFERENCES

1. Chang, Y.C., et al. 2001. Cloning and characterization of SYAP1, a down-regulated gene in human hepatocellular carcinoma. Shi Yan Sheng Wu Xue Bao 34: 319-322.
2. Bernardino-Sgherri, J., et al. 2002. Overall DNA methylation and chromatin structure of normal and abnormal X chromosomes. Cytogenet. Genome Res. 99: 85-91.
3. Doerks, T., et al. 2002. BSD: a novel domain in transcription factors and synapse-associated proteins. Trends Biochem. Sci. 27: 168-170.
4. Huang, K.M., et al. 2004. Organization and annotation of the Xcat critical region: elimination of seven positional candidate genes. Genomics 83: 893-901.
5. Al-Dhaheri, M.H., et al. 2006. Identification of novel proteins induced by estradiol, 4-hydroxytamoxifen and acolbifene in T47D breast cancer cells. Steroids 71: 966-978.
6. Hayashi, T., et al. 2006. Novel form of a single X-linked visual pigment gene in a unique dichromatic color-vision defect. Vis. Neurosci. 23: 411-417.

CHROMOSOMAL LOCATION

Genetic locus: SYAP1 (human) mapping to Xp22.2.

PRODUCT

SYAP1 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. Suit-able for 50-100 transfections. Also see SYAP1 shRNA Plasmid (h): sc-90867-SH and SYAP1 shRNA (h) Lentiviral Particles: sc-90867-V as alternate gene silencing products.

For independent verification of SYAP1 (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-90867A, sc-90867B and sc-90867C.

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

SYAP1 siRNA (h) is recommended for the inhibition of SYAP1 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 SYAP1 gene expression knockdown using RT-PCR Primer: SYAP1 (h)-PR: sc-90867-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.