SANTA CRUZ BIOTECHNOLOGY, INC.

YY1AP1 siRNA (h): sc-78797

BACKGROUND

YY1AP1 (YY1 associated protein 1), also known as HCCA2 (hepatocellular carcinoma-associated protein 2) or YY1AP, is a 796 amino acid protein that localizes to both the nucleus and the cytoplasm and exists as seven alternatively spliced isoforms. Expressed ubiquitously with notable expression in lung, brain, spleen, pancreas, small intestine, heart, colon and skeletal muscle, YY1AP1 interacts with and enhances the transcriptional activation activity of YY1. YY1AP1 is expressed at high levels in liver carcinomas, suggesting a role in tumor transformation and metastasis. The gene encoding YY1AP1 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Wang, Z.X., et al. 2001. Identification and characterization of a novel human hepatocellular carcinoma-associated gene. Br. J. Cancer 85: 1162-1167.
2. Zeng, J.Z., et al. 2002. Molecular cloning and characterization of a novel gene which is highly expressed in hepatocellular carcinoma. Oncogene 21: 4932-4943.
3. Wang, C.Y., et al. 2004. YY1AP, a novel co-activator of YY1. J. Biol. Chem. 279: 17750-17755.
4. Kuryshev, V.Y., et al. 2006. An anthropoid-specific segmental duplication on human chromosome 1q22. Genomics 88: 143-151.
5. Ohtomo, T., et al. 2007. Molecular cloning of a structural homolog of YY1AP, a coactivator of the multifunctional transcription factor YY1. Amino Acids 33: 645-652.
6. Li, L., et al. 2007. Hepatocellular carcinoma-associated gene 2 interacts with MAD2L2. Mol. Cell. Biochem. 304: 297-304.
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CHROMOSOMAL LOCATION

Genetic locus: YY1AP1 (human) mapping to 1q22.

PRODUCT

YY1AP1 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 YY1AP1 shRNA Plasmid (h): sc-78797-SH and YY1AP1 shRNA (h) Lentiviral Particles: sc-78797-V as alternate gene silencing products.

For independent verification of YY1AP1 (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-78797A, sc-78797B and sc-78797C.

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

YY1AP1 siRNA (h) is recommended for the inhibition of YY1AP1 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 YY1AP1 gene expression knockdown using RT-PCR Primer: YY1AP1 (h)-PR: sc-78797-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Huang, J., et al. 2021. Inhibition of Drp1 SUMOylation by ALR protects the liver from ischemia-reperfusion injury. Cell Death Differ. 28: 1174-1192.

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.