SANTA CRUZ BIOTECHNOLOGY, INC.

DDA3 siRNA (h): sc-88718

BACKGROUND

DDA3, also known as PSRC1 (proline/serine-rich coiled-coil 1) or FP3214, is a 363 amino acid microtubule-associated cytoplasmic oncoprotein involved in p53-regulated growth suppression. DDA3 regulates the mitotic spindle, thereby controlling chromosome segregation and congression. Existing as four alternatively spliced isoforms designated isoform A, B, C and D, DDA3 is widely expressed but found at highest levels in fetal thymus and adult brain. DDA3 interacts with APC2 (adenomatous polyposis coli protein 2) as well as 53BP2 (tumor suppressor p53-binding protein 2), a p53 binding protein whose apoptotic signaling is inhibited by DDA3. The gene encoding DDA3 maps to human chromosome 1p13.3 and mouse chromosome 3 F3.

REFERENCES

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2. Hsieh, S.C., et al. 2002. Mouse DDA3 gene is a direct transcriptional target of p53 and p73. Oncogene 21: 3050-3057.
3. Hsieh, W.J., et al. 2008. Human DDA3 is an oncoprotein down-regulated by p53 and DNA damage. Biochem. Biophys. Res. Commun. 369: 567-572.
4. Sun, W.T., et al. 2008. p53 target DDA3 binds ASPP2 and inhibits its stimulation on p53-mediated BAX activation. Biochem. Biophys. Res. Commun. 376: 395-398.
5. Jang, C.Y., et al. 2008. DDA3 recruits microtubule depolymerase Kif2a to spindle poles and controls spindle dynamics and mitotic chromosome movement. J. Cell Biol. 181: 255-267.
6. Samani, N.J., et al. 2008. The novel genetic variant predisposing to coronary artery disease in the region of the PSRC1 and CELSR2 genes on chromosome 1 associates with serum cholesterol. J. Mol. Med. 86: 1233-1241.
7. Jang, C.Y. and Fang, G. 2009. The N-terminal domain of DDA3 regulates the spindle-association of the microtubule depolymerase Kif2a and controls the mitotic function of DDA3. Cell Cycle 8: 3165-3171.

CHROMOSOMAL LOCATION

Genetic locus: PSRC1 (human) mapping to 1p13.3.

PRODUCT

DDA3 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 DDA3 shRNA Plasmid (h): sc-88718-SH and DDA3 shRNA (h) Lentiviral Particles: sc-88718-V as alternate gene silencing products.

For independent verification of DDA3 (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-88718A, sc-88718B and sc-88718C.

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

DDA3 siRNA (h) is recommended for the inhibition of DDA3 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 DDA3 gene expression knockdown using RT-PCR Primer: DDA3 (h)-PR: sc-88718-PR (20 µl, 587 bp). 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.