SANTA CRUZ BIOTECHNOLOGY, INC.

DAPL1 siRNA (h): sc-94956

BACKGROUND

In contrast to growth factors which promote cell proliferation, FAS ligand (FAS-L) and the tumor necrosis factors (TNFs) rapidly induce apoptosis. Cellular response to FAS-L and TNF is mediated by structurally related receptors containing a conserved cytoplasmic region called the "death domain". DAP1 (death associated protein 1) is a basic, proline-rich protein expressed in γ interferon (IFN-γ)-induced HeLa cells. DAP1 is a member of the ubiquitin homology (UbH) family which also includes SUMO-1. DAP1 interacts with the death domain of TNF-R1 and can trigger programmed cell death in a variety of cell lines, as well as suppress NFκB/Rel activity. DAPL1 (death-associated protein-like 1), also known as EEDA (early epithelial differentiation-associated protein), is a 107 amino acid protein that is expressed in hair follicles and is thought to function in a similar manner to DAP1, possibly participating in the early stages of epithelial differentiation and/or apoptosis.

REFERENCES

1. Deiss, L.P., et al. 1995. Identification of a novel serine/threonine kinase and a novel 15 kDa protein as potential mediators of the γ interferon-induced cell death. Genes Dev. 9: 15-30.
2. Feinstein, E., et al. 1995. Assignment of DAP1 and DAPK—genes that positively mediate programmed cell death triggered by IFN-γ—to chromosome regions 5p12.2 and 9q34.1, respectively. Genomics 29: 305-307.
3. Levy-Strumpf, N., et al. 1998. Death associated proteins (DAPs): from gene identification to the analysis of their apoptotic and tumor suppressive functions. Oncogene 17: 3331-3340.
4. Sun, L., et al. 2006. EEDA: a protein associated with an early stage of stratified epithelial differentiation. J. Cell. Physiol. 206: 103-111.
5. Zougman, A., et al. 2006. Beyond linker histones and high mobility group proteins: global profiling of perchloric acid soluble proteins. J. Proteome Res. 5: 925-934.
6. Hudson, A.O., et al. 2008. Biochemical and phylogenetic characterization of a novel diaminopimelate biosynthesis pathway in prokaryotes identifies a diverged form of LL-diaminopimelate aminotransferase. J. Bacteriol. 190: 3256-3263.

CHROMOSOMAL LOCATION

Genetic locus: DAPL1 (human) mapping to 2q24.1.

PRODUCT

DAPL1 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 DAPL1 shRNA Plasmid (h): sc-94956-SH and DAPL1 shRNA (h) Lentiviral Particles: sc-94956-V as alternate gene silencing products.

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

DAPL1 siRNA (h) is recommended for the inhibition of DAPL1 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 DAPL1 gene expression knockdown using RT-PCR Primer: DAPL1 (h)-PR: sc-94956-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.