SANTA CRUZ BIOTECHNOLOGY, INC.

# MADD siRNA (m): sc-75727

## BACKGROUND

MADD (MAP-kinase activating death domain), also known as DENN, IG20 or KIAA0358, is a 1,647 amino acid multi-pass membrane protein that contains one DENN domain and one death domain and belongs to the MADD family. Expressed at high levels in adult testis, heart and ovary, as well as in fetal brain and kidney, MADD interacts with TNF-R1 and plays an important role in cell proliferation, survival and death, specifically by regulating alternative splicing events. Overexpression of MADD stimulates the mitogen-activated protein (MAP) kinase extracellular signal-regulated kinase (ERK), thereby influencing MAP kinase signaling cascades. Multiple isoforms of MADD exist due to alternative splicing events.

## REFERENCES


1. Chow, V.T., et al. 1996. DENN, a novel human gene differentially expressed in normal and neoplastic cells. DNA Seq. 6: 263-273.
2. Schievella, A.R., et al. 1997. MADD, a novel death domain protein that interacts with the type 1 tumor necrosis factor receptor and activates mitogen-activated protein kinase. J. Biol. Chem. 272: 12069-12075.
3. Chow, V.T., et al. 1998. The human DENN gene: genomic organization, alternative splicing, and localization to chromosome 11p11.21-p11.22. Genome 41: 543-552.
4. Telliez, J.B., et al. 2000. LRDD, a novel leucine rich repeat and death domain containing protein. Biochim. Biophys. Acta 1478: 280-288.
5. Al-Zoubi, A.M., et al. 2001. Contrasting effects of IG20 and its splice isoforms, MADD and DENN-SV, on tumor necrosis factor $\alpha$-induced apoptosis and activation of caspase-8 and -3. J. Biol. Chem. 276: 47202-47211.
6. Lim, K.M., et al. 2002. Induction of marked apoptosis in mammalian cancer cell lines by antisense DNA treatment to abolish expression of DENN (differentially expressed in normal and neoplastic cells). Mol. Carcinog. 35: 110-126.
7. Efimova, E., et al. 2003. IG20, a MADD splice variant, increases cell susceptibility to gamma-irradiation and induces soluble mediators that suppress tumor cell growth. Cancer Res. 63: 8768-8776.


## CHROMOSOMAL LOCATION

Genetic locus: Madd (mouse) mapping to 2 E1.

## PRODUCT

MADD siRNA (m) 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 MADD shRNA Plasmid (m): sc-75727-SH and MADD shRNA (m) Lentiviral Particles: sc-75727-V as alternate gene silencing products.

For independent verification of MADD (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75727A, sc-75727B and sc-75727C.

## 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

MADD siRNA (m) is recommended for the inhibition of MADD expression in mouse 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 MADD gene expression knockdown using RT-PCR Primer: MADD (m)-PR: sc-75727-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.