SANTA CRUZ BIOTECHNOLOGY, INC.

EDARADD siRNA (m): sc-143290

BACKGROUND

EDARADD (EDAR-associated death domain), also known as ectodysplasin-A receptor-associated adapter protein, ED3 or EDA3, is a 215 amino acid cytoplasmic adapter protein that links the death domain of EDAR (ectodysplasin A receptor), a protein required for development of ectodermal derivatives, to signaling pathways. Existing as two alternatively spliced isoforms, EDARADD is able to associate with itself, TRAF1, 2 and 3 and mediates NFκB activation. EDARADD is expressed in epithelial cells during the formation of hair follicles and teeth, as well as in placenta, pancreas and fetal skin. Defects in the gene encoding EDARADD are the cause of a genetic disorder known as ectodermal dysplasia anhidrotic (EDA), which is characterized by deficits in the development of teeth, eccrine sweat glands and hair.

REFERENCES

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2. Aswegan, A.L., et al. 1997. Autosomal dominant hypohidrotic ectodermal dysplasia in a large family. Am. J. Med. Genet. 72: 462-467.
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4. Kumar, A., et al. 2001. The ectodermal dysplasia receptor activates the nuclear factor-κB, JNK, and cell death pathways and binds to ectodysplasin-A. J. Biol. Chem. 276: 2668-2677.
5. Headon, D.J., et al. 2001. Gene defect in ectodermal dysplasia implicates a death domain adapter in development. Nature 414: 913-916.
6. Yan, M., et al. 2002. Identification of a novel death domain-containing adaptor molecule for ectodysplasin-A receptor that is mutated in crinkled mice. Curr. Biol. 12: 409-413.
7. Thesleff, I. and Mikkola, M.L. 2002. Death receptor signaling giving life to ectodermal organs. Sci. STKE 2002: pe22.
8. Bal, E., et al. 2007. Autosomal dominant anhidrotic ectodermal dysplasias at the EDARADD locus. Hum. Mutat. 28: 703-709.

CHROMOSOMAL LOCATION

Genetic locus: Edaradd (mouse) mapping to 13 A1.

PRODUCT

EDARADD siRNA (m) 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 EDARADD shRNA Plasmid (m): sc-143290-SH and EDARADD shRNA (m) Lentiviral Particles: sc-143290-V as alternate gene silencing products.

For independent verification of EDARADD (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-143290A, sc-143290B and sc-143290C.

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

EDARADD siRNA (m) is recommended for the inhibition of EDARADD 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 EDARADD gene expression knockdown using RT-PCR Primer: EDARADD (m)-PR: sc-143290-PR (20 µl, 579 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.