SANTA CRUZ BIOTECHNOLOGY, INC.

E-Syt2 siRNA (h): sc-89470

BACKGROUND

Synaptotagmins are a large gene family that function as regulators of both exocytosis and endocytosis and are involved in neurotransmitter secretion from small secretory vesicles. E-Syt1, E-Syt2 and E-Syt3 are Ca^{2+}-regulated intrinsic membrane proteins that belong to the Extended Synaptotagmins (E-Syts) family. Primary structures and biochemical properties of the E-Syts family are highly conserved from yeast to human and consist of multiple C2 domains, which mediate lipid and calcium binding. Ubiquitously expressed with highest expression in brain, members of the E-Syts family form heteromeric complexes and are thought to play a role in the formation of junctions between endoplasmic reticulum and plasma membrane. E-Syt2 (extended synaptotagmin-like protein 2), also known as FAM62B or CHR2SYT, is a 921 amino acid protein that exists as five alternatively spliced isoforms. The gene encoding E-Syt2 is located on human chromosome 7q36.3

REFERENCES

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5. Herdman, C., Tremblay, M.G., Mishra, P.K. and Moss, T. 2014. Loss of Extended Synaptotagmins ESyt2 and ESyt3 does not affect mouse development or viability, but *in vitro* cell migration and survival under stress are affected. Cell Cycle 13: 2616-2625.
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CHROMOSOMAL LOCATION

Genetic locus: ESYT2 (human) mapping to 7q36.3.

PROTOCOLS

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

PRODUCT

E-Syt2 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 E-Syt2 shRNA Plasmid (h): sc-89470-SH and E-Syt2 shRNA (h) Lentiviral Particles: sc-89470-V as alternate gene silencing products.

For independent verification of E-Syt2 (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-89470A, sc-89470B and sc-89470C.

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

E-Syt2 siRNA (h) is recommended for the inhibition of E-Syt2 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 E-Syt2 gene expression knockdown using RT-PCR Primer: E-Syt2 (h)-PR: sc-89470-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.