SANTA CRUZ BIOTECHNOLOGY, INC.

APXL siRNA (m): sc-72526

BACKGROUND

APXL, also known as SHROOM2 or HSAPXL, is a 1,616 amino acid protein that localizes to a variety of locations within the cell, including the cytoplasm, the cytoskeleton, the cell junction and the apical cell membrane. Containing one ASD1 domain, one ASD2 domain and one PDZ domain, APXL interacts with F-Actin and is thought to mediate endothelial cell morphology during cell spreading, possibly regulating melanosome biogenesis and inducing γ Tubulin redistribution. APXL is expressed in kidney, brain, lung, pancreas and placenta and is overexpressed in melanomas, suggesting a role in tumor transformation and metastasis. The gene encoding APXL maps to human chromosome Xp22.2, which contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

REFERENCES

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2. Dinulos, M.B., Bassi, M.T., Rugarli, E.I., Chapman, V., Ballabio, A. and Disteche, C.M. 1996. A new region of conservation is defined between human and mouse X chromosomes. Genomics 35: 244-247.
3. Hagens, O., Ballabio, A., Kalscheuer, V., Kraehenbuhl, J.P., Schiaffino, M.V., Smith, P., Staub, O., Hildebrand, J. and Wallingford, J.B. 2006. A new standard nomenclature for proteins related to APX and SHROOM. BMC Cell Biol. 7: 18.
4. Dietz, M.L., Bernaciak, T.M., Vendetti, F., Kielec, J.M. and Hildebrand, J.D. 2006. Differential Actin-dependent localization modulates the evolutionarily conserved activity of SHROOM family proteins. J. Biol. Chem. 281: 20542-20554.

CHROMOSOMAL LOCATION

Genetic locus: Shroom2 (mouse) mapping to X F3.

PRODUCT

APXL 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 APXL shRNA Plasmid (m): sc-72526-SH and APXL shRNA (m) Lentiviral Particles: sc-72526-V as alternate gene silencing products.

For independent verification of APXL (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-72526A, sc-72526B and sc-72526C.

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

APXL siRNA (m) is recommended for the inhibition of APXL 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 APXL gene expression knockdown using RT-PCR Primer: APXL (m)-PR: sc-72526-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.