SANTA CRUZ BIOTECHNOLOGY, INC.

E2ig5 siRNA (m): sc-143249

BACKGROUND

HGTD-P (human growth and transformation-dependent protein), also known as E2IG5 or FAM162A, is a 154 amino acid single-pass membrane protein belonging to the UPF0389 family. Considered a proapoptotic protein, HGTD-P is an effector of cell death induced by hypoxia-ischemia (HI) and is therefore considered a potential target in treating HI-induced brain damage. HGTD-P localizes to the mitochondria and, when overexpressed, induces the mitochondrial permeability transition by interacting with voltage dependent anion channels. HGTD-P facilitates apoptotic cell death via the mitochondrial apoptotic cascades, including permeability transition, cytochrome c release and caspase 9 activation. HGTD-P is regulated and activated by HIF-1α through a hypoxia-responsive element on the HGTD-P promoter region.

REFERENCES

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3. Kim, J.Y., Kim, S.M., Ko, J.H., Yim, J.H., Park, J.H. and Park, J.H. 2006. Interaction of pro-apoptotic protein HGTD-P with heat shock protein 90 is required for induction of mitochondrial apoptotic cascades. FEBS Lett. 580: 3270-3275.
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5. Cho, Y.E., Kim, J.Y., Kim, Y.W., Park, J.H. and Lee, S. 2009. Expression and prognostic significance of human growth and transformation-dependent protein in gastric carcinoma and gastric adenoma. Hum. Pathol. 40: 975-981.
6. Tang, B., Qu, Y., Zhao, F., Mao, M., Tang, J., Li, X., Ferriero, D. and Mu, D. 2009. *In vitro* effects of hypoxia-inducible factor 1α on the biological characteristics of the SiHa uterine cervix cancer cell line. Int. J. Gynecol. Cancer 19: 898-904.
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CHROMOSOMAL LOCATION

Genetic locus: Fam162a (mouse) mapping to 16 B3.

PRODUCT

E2ig5 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 E2ig5 shRNA Plasmid (m): sc-143249-SH and E2ig5 shRNA (m) Lentiviral Particles: sc-143249-V as alternate gene silencing 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

E2ig5 siRNA (m) is recommended for the inhibition of E2ig5 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 E2ig5 gene expression knockdown using RT-PCR Primer: E2ig5 (m)-PR: sc-143249-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.