SANTA CRUZ BIOTECHNOLOGY, INC.

IER3IP1 siRNA (m): sc-146145

BACKGROUND

IER3IP1 (immediate early response 3-interacting protein 1) is also known as HSPC039 and is an 82 amino acid protein that is highly expressed in heart, skeletal muscle and kidney tissues. IER3IP1 is a multi-pass membrane protein with two transmembrane domains, localized to the endoplasmic reticulum through its C-terminal transmembrane domain. IER3IP1 may be involved in the transportation of proteins between the endoplasmic reticulum and the Golgi apparatus. IER3IP1 has a G-patch domain which is thought to function in the binding of RNA. The G-patch domain is associated with various proteins which exhibit functions which may include tumor suppression and DNA damage repair, suggesting that IER3IP1 may be involved in cellular responses to DNA damage. Matrine is a molecule that induces erythroid cell differentiation of K562 cells and the presence of the IER3IP1 gene is thought to increase matrine function, implying a possible role for IER3IP1 in erythroid cell differentiation.

REFERENCES

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6. Zhang, C.M., Gao, J.H., Li, D.L., Li, J., Shi, Y.Q., Lin, J. and Luo, S.Q. 2008. Matrine-induced erythroid differentiation of K562 cells is associated with activation of the apoptotic pathway. Nan Fang Yi Ke Da Xue Xue Bao 28: 478-480.

CHROMOSOMAL LOCATION

Genetic locus: Ier3ip1 (mouse) mapping to 18 E3.

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.

PRODUCT

IER3IP1 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 IER3IP1 shRNA Plasmid (m): sc-146145-SH and IER3IP1 shRNA (m) Lentiviral Particles: sc-146145-V as alternate gene silencing products.

For independent verification of IER3IP1 (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-146145A, sc-146145B and sc-146145C.

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

IER3IP1 siRNA (m) is recommended for the inhibition of IER3IP1 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 IER3IP1 gene expression knockdown using RT-PCR Primer: IER3IP1 (m)-PR: sc-146145-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.