SANTA CRUZ BIOTECHNOLOGY, INC.

EHZF siRNA (h): sc-77245

BACKGROUND

EHZF (early hematopoietic zinc finger protein), also known as zinc finger protein 521 or LYST-interacting protein 3, is a 1,311 amino acid transcription factor that can act as a repressor or an activator of gene transcription. Predominantly expressed in progenitor hematopoietic cells and organs with reduced expression during differentiation, this nuclear protein contains 30 C_2H_2 Krüppel-type zinc fingers that are distributed in clusters throughout its sequence. As a member of the BMP (bone morphogenetic protein) signaling pathway, EHZF interacts with SMAD proteins to activate transcription of BMP target genes. Through interaction with EBF1 (early B-cell factor 1), EHZF represses transcription by preventing EBF-DNA binding. With high expression observed in most acute myelogenous leukemias, medulloblastomas and other brain tumors, it is suspected the EHZF may play a role in oncogenesis.

REFERENCES

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2. Warming, S., et al. 2003. Evi3, a common retroviral integration site in murine B-cell lymphoma, encodes an EBFAZ-related Krüppel-like zinc finger protein. Blood 101: 1934-1940.
3. Bond, H.M., et al. 2004. Early hematopoietic zinc finger protein (EHZF), the human homolog to mouse Evi3, is highly expressed in primitive human hematopoietic cells. Blood 103: 2062-2070.
4. Warming, S., et al. 2004. Early B-cell factor-associated zinc-finger gene is a frequent target of retroviral integration in murine B-cell lymphomas. Oncogene 23: 2727-2731.
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6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610974. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Bond, H.M., et al. 2008. Early hematopoietic zinc finger protein-zinc finger protein 521: a candidate regulator of diverse immature cells. Int. J. Biochem. Cell Biol. 40: 848-854.

CHROMOSOMAL LOCATION

Genetic locus: ZNF521 (human) mapping to 18q11.2.

PRODUCT

EHZF 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 EHZF shRNA Plasmid (h): sc-77245-SH and EHZF shRNA (h) Lentiviral Particles: sc-77245-V as alternate gene silencing products.

For independent verification of EHZF (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-77245A, sc-77245B and sc-77245C.

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

EHZF siRNA (h) is recommended for the inhibition of EHZF 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 EHZF gene expression knockdown using RT-PCR Primer: EHZF (h)-PR: sc-77245-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.