SANTA CRUZ BIOTECHNOLOGY, INC.

IER2 siRNA (h): sc-97322

BACKGROUND

IER2 (immediate early response protein 2), also known as ETR101, is a 223 amino acid protein belonging to the immediate early response (IER) family. IER proteins are the first gene products to be induced during growth stimulation and/or arrest. IER2 expression can be induced by growth factors,12-O-tetradecanoylphorbol-13-acetate (TPA) or Okadaic acid. The coding region of IER2 contains regions of similarity to the transcription factor proteins that are encoded by the Jun oncogene family, possibly indicating a role for IER2 in transcription regulation. Further evidence for this role includes a GUUUG sequence in the 3' flanking region of IER2, which is believed to be a mRNA degradation signal similar to those found in transcription regulators.

REFERENCES

1. Shimizu, N., et al. 1991. Expression of a novel immediate early gene during 12-O-tetradecanoylphorbol-13-acetate-induced macrophagic differentiation of HL-60 cells. J. Biol. Chem. 266: 12157-12161.
2. Slapak, C.A., et al. 1993. Defective translocation of protein kinase C in multidrug-resistant HL-60 cells confers a reversible loss of phorbol ester-induced monocytic differentiation. J. Biol. Chem. 268: 12267-12273.
3. Scott, J.L., et al. 1994. Phorbol ester-induced transcription of an immediate-early response gene by human T cells is inhibited by co-treatment with calcium ionophore. J. Cell. Biochem. 54: 135-144.
4. Kondratyev, A.D., et al. 1996. Identification and characterization of a radiation-inducible glycosylated human early-response gene. Cancer Res. 56: 1498-1502.
5. Wang, Y., et al. 1998. Identification of immediate early genes during TPA-induced human myeloblastic leukemia ML-1 cell differentiation. Gene 216: 293-302.
6. Wu, M.X., et al. 1998. IEX-1L, an apoptosis inhibitor involved in NFκB-mediated cell survival. Science 281: 998-1001.
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CHROMOSOMAL LOCATION

Genetic locus: IER2 (human) mapping to 19p13.13.

PRODUCT

IER2 siRNA (h) 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 IER2 shRNA Plasmid (h): sc-97322-SH and IER2 shRNA (h) Lentiviral Particles: sc-97322-V as alternate gene silencing products.

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

IER2 siRNA (h) is recommended for the inhibition of IER2 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 IER2 gene expression knockdown using RT-PCR Primer: IER2 (h)-PR: sc-97322-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.