SANTA CRUZ BIOTECHNOLOGY, INC.

EF-CBP1 siRNA (m): sc-77240

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the EF-CBP (N-terminal EF-hand calcium binding protein)/NECAB (neuronal calcium-binding protein) family participate in neuronal calcium signaling. EF-CBP1 (N-terminal EF-hand calcium binding protein 1), also known as STIP-1 or neuronal calcium-binding protein 1 (NECAB1), is a 351 amino acid cytoplasmic protein that contains one antibiotic biosynthesis monooxygenase (ABM) domain and two EF-hand domains. Expressed in brain, EF-CBP1 interacts with copine 6 and Syntaxin, and exists as two alternatively spliced isoforms. The gene encoding EF-CBP1 maps to human chromosome 8, which consists of nearly 146 million base pairs, encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that map to chromosome 8.

REFERENCES

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2. Sugita, S., et al. 2002. NECABs: a family of neuronal Ca^{2+}-binding proteins with an unusual domain structure and a restricted expression pattern. Neuroscience 112: 51-63.
3. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. Am. J. Hum. Genet. 77: 582-595.
4. Mossafa, H., et al. 2006. Non-Hodgkin's lymphomas with Burkitt-like cells are associated with c-Myc amplification and poor prognosis. Leuk. Lymphoma 47: 1885-1893.
5. Agrelo, R., et al. 2006. Epigenetic inactivation of the premature aging Werner syndrome gene in human cancer. Proc. Natl. Acad. Sci. USA 103: 8822-8827.
6. Wu, H., et al. 2007. EFCBP1/NECAB1, a brain-specifically expressed gene with highest abundance in temporal lobe, encodes a protein containing EF-hand and antibiotic biosynthesis monooxygenase domains. DNA Seq. 18: 73-79.

CHROMOSOMAL LOCATION

Genetic locus: Necab1 (mouse) mapping to 4 A2.

PRODUCT

EF-CBP1 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 EF-CBP1 shRNA Plasmid (m): sc-77240-SH and EF-CBP1 shRNA (m) Lentiviral Particles: sc-77240-V as alternate gene silencing products.

For independent verification of EF-CBP1 (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-77240A, sc-77240B and sc-77240C.

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

EF-CBP1 siRNA (m) is recommended for the inhibition of EF-CBP1 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 EF-CBP1 gene expression knockdown using RT-PCR Primer: EF-CBP1 (m)-PR: sc-77240-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.