SANTA CRUZ BIOTECHNOLOGY, INC.

EF-CBP2 siRNA (m): sc-77242

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-CBP2, also known as NECAB2 (N-terminal EF-hand calcium binding protein 2), neuronal calcium-binding protein 2 or synaptotagmin-interacting protein 2 (Stip-2), is a 386 amino acid cytoplasmic protein that contains one antibiotic biosynthesis monooxygenase (ABM) domain and two EF-hand domains. Expressed in brain, EF-CBP2 is suggested to bind metabotropic glutamate receptor 5 (mGluR-5) in a calcium-regulated manner. The gene encoding EF-CBP2 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. Clin. Genet. 23: 318-320.
2. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. Am. J. Hum. Genet. 52: 249-254.
3. 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.
4. Mathew, C.G. and Lewis, C.M. 2004. Genetics of inflammatory bowel disease: progress and prospects. Hum. Mol. Genet. 13: R161-R168.
5. 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.
6. Canela, L., et al. 2009. The association of metabotropic glutamate receptor type 5 with the neuronal Ca^{2+}-binding protein 2 modulates receptor function. J. Neurochem. 111: 555-567.

CHROMOSOMAL LOCATION

Genetic locus: Necab2 (mouse) mapping to 8 E1.

PRODUCT

EF-CBP2 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-CBP2 shRNA Plasmid (m): sc-77242-SH and EF-CBP2 shRNA (m) Lentiviral Particles: sc-77242-V as alternate gene silencing products.

For independent verification of EF-CBP2 (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-77242A, sc-77242B and sc-77242C.

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

EF-CBP2 siRNA (m) is recommended for the inhibition of EF-CBP2 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-CBP2 gene expression knockdown using RT-PCR Primer: EF-CBP2 (m)-PR: sc-77242-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.