SANTA CRUZ BIOTECHNOLOGY, INC.

SBF2 siRNA (m): sc-61496

BACKGROUND

SET binding factor 2 (SBF2) is a pseudophosphatase that co-localizes with the myotubularin-related protein-2 (Mtmr2) forming a tetrameric complex in the cytoplasm of various tissues. SBF2 most likely plays a role in cellular communication or the signaling network that is necessary for myelin production, as well as in the development of the meshlike drainage canals surrounding the iris. Mutations the SBF2 gene have been identified as cause of Charcot-Marie-Tooth disease type 4B2 (CMT4B2), an autosomal recessive demyelinating disease. Patients with CMT4B2 due to nonsense or truncating mutations in the SBF2 gene tend to develop early-onset open-angle glaucoma because of the complete absence of SBF2.

REFERENCES

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4. Conforti, F.L., et al. 2004. A new SBF2 mutation in a family with recessive demyelinating Charcot-Marie-Tooth (CMT4B2). Neurology 63: 1327-1328.
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6. Robinson, F.L. and Dixon, J.E. 2005. The phosphoinositide-3-phosphatase MTMR2 associates with MTMR13, a membrane-associated pseudophosphatase also mutated in type 4B Charcot-Marie-Tooth disease. J. Biol. Chem. 280: 31699-31707.
7. Berger, P., et al. 2006. Multi-level regulation of myotubularin-related protein-2 phosphatase activity by myotubularin-related protein-13/SET-binding factor 2. Hum. Mol. Genet. 15: 569-579.
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CHROMOSOMAL LOCATION

Genetic locus: Sbf2 (mouse) mapping to 7 F1.

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

SBF2 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 SBF2 shRNA Plasmid (m): sc-61496-SH and SBF2 shRNA (m) Lentiviral Particles: sc-61496-V as alternate gene silencing products.

For independent verification of SBF2 (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-61496A, sc-61496B and sc-61496C.

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

SBF2 siRNA (m) is recommended for the inhibition of SBF2 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 SBF2 gene expression knockdown using RT-PCR Primer: SBF2 (m)-PR: sc-61496-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.