

SBK1 siRNA (m): sc-153233

BACKGROUND

SBK1 (SH3-binding domain kinase 1), also known as Sbk or serine/threonine-protein kinase SBK1, is a 424 amino acid cytoplasmic protein that is thought to play a role in signal-transduction pathways during brain development. A member of the serine/threonine-protein kinase family and protein kinase superfamily, SBK1 contains one protein kinase domain and is encoded by a gene that maps to human chromosome 16p11.2. Chromosome 16 encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. 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. Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. *Nat. Genet.* 26: 370-374.
2. Nara, K., et al. 2001. Cloning and characterization of a novel serine/threonine protein kinase gene expressed predominantly in developing brain. *Eur. J. Biochem.* 268: 2642-2651.
3. Kühlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. *Neurology* 58: 1273-1276.
4. Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. *Curr. Gastroenterol. Rep.* 6: 467-473.
5. Mathew, C.G. and Lewis, C.M. 2004. Genetics of inflammatory bowel disease: progress and prospects. *Hum. Mol. Genet.* 13: R161-R168.

CHROMOSOMAL LOCATION

Genetic locus: Sbk1 (mouse) mapping to 7 F3.

PRODUCT

SBK1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SBK1 shRNA Plasmid (m): sc-153233-SH and SBK1 shRNA (m) Lentiviral Particles: sc-153233-V as alternate gene silencing products.

For independent verification of SBK1 (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-153233A, sc-153233B and sc-153233C.

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.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SBK1 siRNA (m) is recommended for the inhibition of SBK1 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 μ M in 66 μ l. 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 SBK1 gene expression knockdown using RT-PCR Primer: SBK1 (m)-PR: sc-153233-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.