

XRCC6BP1 siRNA (m): sc-155393

BACKGROUND

XRCC6BP1, also known as mitochondrial inner membrane protease ATP23 homolog or KUB3, is a 246 amino acid protein. As a member of the peptidase M76 family, XRCC6BP1 interacts with XRCC6. The gene encoding XRCC6BP1 maps to human chromosome 12 and encodes Ku70 binding protein. Ku70 is a part of the DNA-dependent protein kinase complex and is involved in double-strand break repair. It is suggested that XRCC6BP1 gene amplification affects double-strand break repair in glioblastoma cell lines. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

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2. Gwynn, B., et al. 1996. Genetic localization of Cd63, a member of the transmembrane 4 superfamily, reveals two distinct loci in the mouse genome. *Genomics* 35: 389-391.
3. Yang, C.R., et al. 1999. Isolation of Ku70-binding proteins (KUBs). *Nucleic Acids Res.* 27: 2165-2174.
4. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). *Genome Res.* 14: 2121-2127.
5. Scherer, S.E., et al. 2006. The finished DNA sequence of human chromosome 12. *Nature* 440: 346-351.
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CHROMOSOMAL LOCATION

Genetic locus: *Xrcc6bp1* (mouse) mapping to 10 D3.

PRODUCT

XRCC6BP1 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 XRCC6BP1 shRNA Plasmid (m): sc-155393-SH and XRCC6BP1 shRNA (m) Lentiviral Particles: sc-155393-V as alternate gene silencing products.

For independent verification of XRCC6BP1 (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-155393A, sc-155393B and sc-155393C.

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

XRCC6BP1 siRNA (m) is recommended for the inhibition of XRCC6BP1 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 XRCC6BP1 gene expression knockdown using RT-PCR Primer: XRCC6BP1 (m)-PR: sc-155393-PR (20 μ l). 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.