

NUBP2 siRNA (m): sc-150091

BACKGROUND

NUBP2 (nucleotide binding protein 2), also known as cytosolic Fe/S cluster assembly factor NUBP2, is a 271 amino acid protein and component of cytosolic iron-sulfur (Fe/S) protein assembly machinery. Localizing to both nucleus and cytoplasm, NUBP2 is found at centrosomes during mitosis and is widely expressed, with highest levels of expression in skeletal muscle and fetal liver, lung, brain and kidney. NUBP2 is essential for extramitochondrial Fe/S protein maturation and is thought to transfer a labile 4Fe-4S cluster to various apoproteins. NUBP2 is a member of the NUBP/MRP gene subfamily of ATP-binding proteins and is encoded by a gene that maps to human chromosome 16p13.3 and mouse chromosome 17 A3.3.

REFERENCES

1. Nakashima, H., et al. 1999. Two novel mouse genes—NUBP2, mapped to the t-complex on chromosome 17, and NUBP1, mapped to chromosome 16—establish a new gene family of nucleotide-binding proteins in eukaryotes. *Genomics* 60: 152-160.
2. Roy, A., et al. 2003. A novel eukaryotic factor for cytosolic Fe-S cluster assembly. *EMBO J.* 22: 4826-4835.
3. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610779. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Stehling, O., et al. 2008. Human Nbp35 is essential for both cytosolic iron-sulfur protein assembly and iron homeostasis. *Mol. Cell. Biol.* 28: 5517-5528.
5. Hosgood, H.D., et al. 2009. PTEN identified as important risk factor of chronic obstructive pulmonary disease. *Respir. Med.* 103: 1866-1870.
6. Kaplan, R.C., et al. 2011. A genome-wide association study identifies novel loci associated with circulating IGF-I and IGFBP-3. *Hum. Mol. Genet.* 20: 1241-1251.

CHROMOSOMAL LOCATION

Genetic locus: Nubp2 (mouse) mapping to 17 A3.3.

PRODUCT

NUBP2 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 NUBP2 shRNA Plasmid (m): sc-150091-SH and NUBP2 shRNA (m) Lentiviral Particles: sc-150091-V as alternate gene silencing products.

For independent verification of NUBP2 (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-150091A, sc-150091B and sc-150091C.

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

NUBP2 siRNA (m) is recommended for the inhibition of NUBP2 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.

GENE EXPRESSION MONITORING

NUBP2 (C-12): sc-376784 is recommended as a control antibody for monitoring of NUBP2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NUBP2 gene expression knockdown using RT-PCR Primer: NUBP2 (m)-PR: sc-150091-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.