

NAP1 siRNA (h): sc-78308

BACKGROUND

NAP1 (NFκB-activating kinase-associated protein 1), also known as AZI2 (5-azacytidine induced 2) or TILP, is a 392 amino acid cytoplasmic protein that interacts with TBK1 to influence the activation of NFκB-dependent gene expression. Existing as two alternatively spliced isoforms, NAP1 is widely expressed and is found at high levels in testis and pancreas. NAP1 contains multiple phosphorylated amino acid residues and is encoded by a gene that maps to human chromosome 3p24.1. Chromosome 3 houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. De Jonghe, P., et al. 1997. Mutilating neuropathic ulcerations in a chromosome 3q13-q22 linked Charcot-Marie-Tooth disease type 2B family. *J. Neurol. Neurosurg. Psychiatr.* 62: 570-573.
2. Maho, A., et al. 1999. Mapping of the CCXCR1, CX3CR1, CCBP2 and CCR9 genes to the CCR cluster within the 3p21.3 region of the human genome. *Cytogenet. Cell Genet.* 87: 265-268.
3. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
4. Fujita, F., et al. 2003. Identification of NAP1, a regulatory subunit of IκB kinase-related kinases that potentiates NFκB signaling. *Mol. Cell. Biol.* 23: 7780-7793.
5. Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.
6. Yue, Y., et al. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. *Genomics* 85: 36-47.

CHROMOSOMAL LOCATION

Genetic locus: AZI2 (human) mapping to 3p24.1.

PRODUCT

NAP1 siRNA (h) 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 NAP1 shRNA Plasmid (h): sc-78308-SH and NAP1 shRNA (h) Lentiviral Particles: sc-78308-V as alternate gene silencing products.

For independent verification of NAP1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-78308A, sc-78308B and sc-78308C.

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

NAP1 siRNA (h) is recommended for the inhibition of NAP1 expression in human 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 NAP1 gene expression knockdown using RT-PCR Primer: NAP1 (h)-PR: sc-78308-PR (20 μl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. El Gazzar, M., et al. 2010. Dynamic and selective nucleosome repositioning during endotoxin tolerance. *J. Biol. Chem.* 285: 1259-1271.
2. Luo, M., et al. 2013. Long non-coding RNA H19 increases bladder cancer metastasis by associating with EZH2 and inhibiting E-cadherin expression. *Cancer Lett.* 333: 213-221.

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.