SANTA CRUZ BIOTECHNOLOGY, INC.

NAA25 siRNA (h): sc-96173

BACKGROUND

NAA25 (N_α-acetyltransferase 25, NatB auxiliary subunit), also known as NAP1, MDM20 (mitochondrial distribution and morphology 20), N-terminal acetyltransferase B complex subunit NAA25, N-terminal acetyltransferase B complex subunit MDM20 or p120, is a 972 amino acid protein belonging to the MDM20/NAA25 family. NAA25 is a component of the N-terminal acetyltransferase B (NatB) complex, which is composed of NAT-5 and NAA25, and is encoded by a gene located on human chromosome 12q24.13. NAA25 acetylates methionine residues that are followed by acidic or asparagine residues and plays a role in cell cycle progression. NAA25 is a conserved and widespread protein in eukaryotes and exists as two alternatively spliced isoforms. NAA25 is expressed in various human cell lines including HeLa and HEK293 cells. Essential for normal cell proliferation, NAA25 is linked to cancer development by inducing growth inhibition in HeLa cells and the thyroid cancer cell line CAL-62. NAA25 may also be associated with type 1 diabetes and juvenile idiopathic arthritis.

REFERENCES

1. Polevoda, B., et al. 2003. Composition and function of the eukaryotic N-terminal acetyltransferase subunits. Biochem. Biophys. Res. Commun. 308: 1-11.
2. Wenzlau, J.M., et al. 2006. Embryonic growth-associated protein is one subunit of a novel N-terminal acetyltransferase complex essential for embryonic vascular development. Circ. Res. 98: 846-855.
3. Todd, J.A., et al. 2007. Robust associations of four new chromosome regions from genome-wide analyses of type 1 diabetes. Nat. Genet. 39: 857-864.
4. Starheim, K.K., et al. 2008. Identification of the human N_α-acetyltransferase complex B (hNatB): a complex important for cell-cycle progression. Biochem. J. 415: 325-331.
5. Cooper, J.D., et al. 2008. Meta-analysis of genome-wide association study data identifies additional type 1 diabetes risk loci. Nat. Genet. 40: 1399-1401.
6. Prahalad, S., et al. 2009. Variants in TNFAIP3, STAT4, and C12orf30 loci associated with multiple autoimmune diseases are also associated with juvenile idiopathic arthritis. Arthritis Rheum. 60: 2124-2130.

CHROMOSOMAL LOCATION

Genetic locus: NAA25 (human) mapping to 12q24.13.

PRODUCT

NAA25 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 NAA25 shRNA Plasmid (h): sc-96173-SH and NAA25 shRNA (h) Lentiviral Particles: sc-96173-V as alternate gene silencing products.

For independent verification of NAA25 (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-96173A, sc-96173B and sc-96173C.

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

NAA25 siRNA (h) is recommended for the inhibition of NAA25 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 NAA25 gene expression knockdown using RT-PCR Primer: NAA25 (h)-PR: sc-96173-PR (20 µl). 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.