



Aminopeptidase P3 siRNA (h): sc-105061

BACKGROUND

Aminopeptidases comprise a family of enzymatic proteins that are widely distributed in both eukaryotes and prokaryotes and function to catalyze the removal of amino acids from the N-termini of proteins. Aminopeptidase P3, also known as APP3 or XPNPEP3, is a 507 amino acid protein that belongs to the aminopeptidase family. Expressed throughout the body, Aminopeptidase P3 uses manganese as a cofactor to catalyze the release of any proline-linked N-terminal amino acid, including those that exist in di- or tripeptides. Aminopeptidase P3 exists as three alternatively spliced isoforms which are encoded by a gene that maps to chromosome 22. Chromosome 22 houses over 500 genes, some of which are involved in Phelan-McDermid syndrome, schizophrenia and Neurofibromatosis type 2.

REFERENCES

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3. Dunham, I., et al. 1999. The DNA sequence of human chromosome 22. *Nature* 402: 489-495.
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CHROMOSOMAL LOCATION

Genetic locus: XPNPEP3 (human) mapping to 22q13.2.

PRODUCT

Aminopeptidase P3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Aminopeptidase P3 shRNA Plasmid (h): sc-105061-SH and Aminopeptidase P3 shRNA (h) Lentiviral Particles: sc-105061-V as alternate gene silencing products.

For independent verification of Aminopeptidase P3 (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-105061A, sc-105061B and sc-105061C.

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

Aminopeptidase P3 siRNA (h) is recommended for the inhibition of Aminopeptidase P3 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 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

Aminopeptidase P3 (C-5): sc-393796 is recommended as a control antibody for monitoring of Aminopeptidase P3 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 Aminopeptidase P3 gene expression knockdown using RT-PCR Primer: Aminopeptidase P3 (h)-PR: sc-105061-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.

PROTOCOLS

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