SANTA CRUZ BIOTECHNOLOGY, INC.

Aminopeptidase B siRNA (h): sc-105060

BACKGROUND

Aminopeptidase B (arginyl aminopeptidase (aminopeptidase B)), also known as RNPEP or arginine aminopeptidase, is a 650 amino acid protein belonging to the peptidase M1 family. Encoded by a gene that maps to human chromosome 1q32.1, Aminopeptidase B exhibits ubiquitous tissue expression, including both endocrine and nonendocrine cell types, and is associated with the external face of plasma membrane. Aminopeptidase B participates in aminopeptidase, epoxide hydrolase and metalloexopeptidase activities, as well as zinc ion binding, whereby binding one zinc ion per subunit. Functioning as an exopeptidase, Aminopeptidase B selectively removes arginine and lysine residues from the N-terminus of several peptides. Structurally similar to Leukotriene A4 hydrolase (LTA4H), Aminopeptidase B also functions to hydrolyze Leukotriene A4 (LTA4) into Leukotriene B4 (LTB4).

REFERENCES

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2. Ishiura, S., et al. 1987. Human skeletal muscle contains two major aminopeptidases: an anion-activated Aminopeptidase B and an aminopeptidase M-like enzyme. J. Biochem. 102: 1023-1031.
3. Cadel, S., et al. 1995. Aminopeptidase-B in the rat testes: isolation, functional properties and cellular localization in the seminiferous tubules. Mol. Cell. Endocrinol. 110: 149-160.
4. Aurich-Costa, J., et al. 1997. Assignment of the Aminopeptidase B gene (RNPEP) to human chromosome 1 band q32 by *in situ* hybridization. Cytogenet. Cell Genet. 79: 143-144.
5. Cadel, S., et al. 1997. Aminopeptidase B from the rat testis is a bifunctional enzyme structurally related to Leukotriene-A4 hydrolase. Proc. Natl. Acad. Sci. USA 94: 2963-2968.
6. Balogh, A., et al. 1998. Aminopeptidase B: a processing enzyme secreted and associated with the plasma membrane of rat pheochromocytoma (PC12) cells. J. Cell Sci. 111: 161-169.
7. Foulon, T., et al. 1999. Aminopeptidase B (EC 3.4.11.6). Int. J. Biochem. Cell Biol. 31: 747-750.

CHROMOSOMAL LOCATION

Genetic locus: RNPEP (human) mapping to 1q32.1.

PRODUCT

Aminopeptidase B 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 Aminopeptidase B shRNA Plasmid (h): sc-105060-SH and Aminopeptidase B shRNA (h) Lentiviral Particles: sc-105060-V as alternate gene silencing products.

For independent verification of Aminopeptidase B (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-105060A, sc-105060B and sc-105060C.

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

Aminopeptidase B siRNA (h) is recommended for the inhibition of Aminopeptidase B 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 Aminopeptidase B gene expression knockdown using RT-PCR Primer: Aminopeptidase B (h)-PR: sc-105060-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.