SANTA CRUZ BIOTECHNOLOGY, INC.

nardilysin (N-20): sc-18587

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Aspartyl, serine, thiol and metalloenzyme proteases can be endoproteases, which activate protein precursors by cleavage at basic residues. Human nardilysin, also designated N-arginine dibasic convertase, NRD1 or NRD convertase, is a 1,147 amino acid metalloendopeptidase that cleaves propeptide and proprotein substrates at the amino-terminus of arginine residues in dibasic moieties. The nardilysin gene maps to chromosome 1p32.2 and is expressed as a 3.6 kb transcript primarily in adult heart, skeletal muscle and testis. In the testis, nardilysin appears to be restricted to germ cells. As a member of the Insulinase family, nardilysin is a specific receptor for heparin-binding epidermal growth factor-like growth factor (HB-EGF) that modulates HB-EGF-induced cell migration via ErbB1. Nardilysin exhibits a significant degree of similarity to Insulinase and to two yeast processing enzymes, Axl1 and Ste2. Defects in the gene encoding nardilysin are linked to inherited neuromuscular disorders.

REFERENCES

1. Pierotti, A.R., et al. 1994. N-arginine dibasic convertase, a metalloendopeptidase as a prototype of a class of processing enzymes. Proc. Natl. Acad. Sci. USA 91: 6078-6082.
2. Chesneau, V., et al. 1996. NRD convertase: a putative processing endoprotease associated with the axoneme and the manchette in late spermatids. J. Cell. Sci. 109: 2737-2745.
3. Hospital, V., et al. 1997. Human and rat testis express two mRNA species encoding variants of NRD convertase, a metalloendopeptidase of the Insulinase family. Biochem. J. 327: 773-779.
4. Fumagalli, P., et al. 1998. Human NRD convertase: a highly conserved metalloendopeptidase expressed at specific sites during development and in adult tissues. Genomics 47: 238-245.
5. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602651. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Nishi, E., et al. 2001. N-arginine dibasic convertase is a specific receptor for heparin-binding EGF-like growth factor that mediates cell migration. EMBO J. 20: 3342-3350.

CHROMOSOMAL LOCATION

Genetic locus: NRD1 (human) mapping to 1p32.3; Nrd1 (mouse) mapping to 4 C7.

SOURCE

nardilysin (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of nardilysin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18587 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

nardilysin (N-20) is recommended for detection of nardilysin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

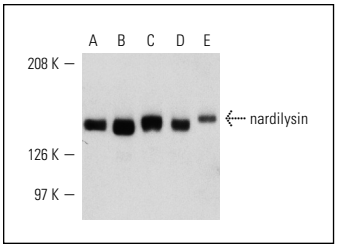
nardilysin (N-20) is also recommended for detection of nardilysin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for nardilysin siRNA (h): sc-41550, nardilysin siRNA (m): sc-41551, nardilysin shRNA Plasmid (h): sc-41550-SH, nardilysin shRNA Plasmid (m): sc-41551-SH, nardilysin shRNA (h) Lentiviral Particles: sc-41550-V and nardilysin shRNA (m) Lentiviral Particles: sc-41551-V.

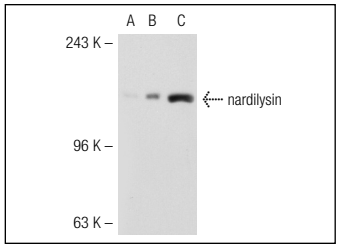
Molecular Weight of nardilysin: 140 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or nardilysin (m): 293T Lysate: sc-125687.

DATA



nardilysin (N-20): sc-18587. Western blot analysis of nardilysin expression in K-562 (**A**), HeLa (**B**), MIA PaCa-2 (**C**) and LNCaP (**D**) whole cell lysates and rat testis extract (**E**).



nardilysin (N-20): sc-18587. Western blot analysis of nardilysin expression in non-transfected 293T: sc-117752 (**A**), mouse nardilysin transfected 293T: sc-125687 (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bernstein, H.G., et al. 2007. Histochemical evidence for wide expression of the metalloendopeptidase nardilysin in human brain neurons. Neuroscience 146: 1513-1523.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.