

# nardilysin (A-6): sc-137199

## 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 1p32.3 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

nardilysin (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 58-96 near the N-terminus of nardilysin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

nardilysin (A-6) is available conjugated to agarose (sc-137199 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137199 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137199 PE), fluorescein (sc-137199 FITC), Alexa Fluor® 488 (sc-137199 AF488), Alexa Fluor® 546 (sc-137199 AF546), Alexa Fluor® 594 (sc-137199 AF594) or Alexa Fluor® 647 (sc-137199 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137199 AF680) or Alexa Fluor® 790 (sc-137199 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-137199 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

nardilysin (A-6) is recommended for detection of nardilysin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

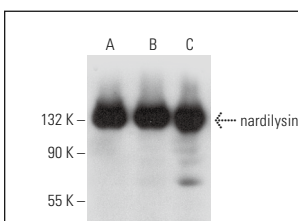
Molecular Weight of nardilysin: 140 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, LNCaP cell lysate: sc-2231 or MIA PaCa-2 cell lysate: sc-2285.

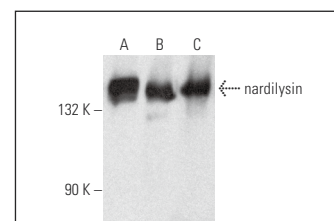
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



nardilysin (A-6): sc-137199. Western blot analysis of nardilysin expression in K-562 (A), MIA PaCa-2 (B) and LNCaP (C) whole cell lysates.



nardilysin (A-6): sc-137199. Western blot analysis of nardilysin expression in MIA PaCa-2 (A), K-562 (B) and LNCaP (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Fu, J., et al. 2024. Nardilysin-regulated scission mechanism activates polo-like kinase 3 to suppress the development of pancreatic cancer. *Nat. Commun.* 15: 3149.

## STORAGE

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

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