SANTA CRUZ BIOTECHNOLOGY, INC.

nardilysin (G-9): sc-166876

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., Prat, A., Chesneau, V., Gaudoux, F., Leseney, A.M., Foulon, T. and Cohen, P. 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., Prat, A., Segretain, D., Hospital, V., Dupaix, A., Foulon, T., Jegou, B. and Cohen, P. 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., Prat, A., Joulie, C., Cherif, D., Day, R. and Cohen, P. 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.

CHROMOSOMAL LOCATION

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

SOURCE

nardilysin (G-9) is a mouse monoclonal antibody raised against a peptide mapping near the N-terminus of nardilysin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166876 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

nardilysin (G-9) 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.

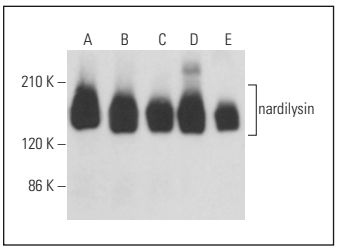
Molecular Weight of nardilysin: 140 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or Caki-1 cell lysate: sc-2224.

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 (G-9): sc-166876. Western blot analysis of nardilysin expression in HeLa (**A**), K-562 (**B**), Caki-1 (**C**), NTERA-2 cl.D1 (**D**) and PANC-1 (**E**) whole cell lysates.

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.