

Neprilysin-2 (2D2H5): sc-517235

BACKGROUND

Neprilysin-2, also known as NL1, NL2, SEP, NEP2, MMEL2, NEPII or MMEL1 (membrane metalloendopeptidase-like 1), is a 779 amino acid single-pass type II membrane protein that belongs to the peptidase M13 family of zinc-dependent metalloproteases. Neprilysin-2 is predominantly expressed in testis and weakly expressed in brain, kidney and heart. Members of the M13 family play critical roles in pain perception, arterial pressure regulation, phosphate metabolism and homeostasis. Neprilysin-2 may be involved in modulating the processes of fertilization, early embryonic development and in the inactivation of endogenous messenger peptides, such as enkephalins and tachykinins. Diseases such as motor sensory neuropathy 2A, Schwartz-Jampel-Aberfeld syndrome, or neuroblastoma, which map to the same locus, may be associated with defects in Neprilysin-2. Three isoforms exist due to alternative splicing events.

REFERENCES

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- Voisin, S. and Ouimet, T. 2005. The ultimate tryptophan residue of Neprilysin-2 is not involved in protein maturation and enzymatic activity. *Biochem. Biophys. Res. Commun.* 335: 356-360.
- Ogawa, T., et al. 2005. Altered expression of neprilysin family members in the pituitary gland of sleep-disturbed rats, an animal model of severe fatigue. *J. Neurochem.* 95: 1156-1166.
- Whyteside, A.R. and Turner, A.J. 2008. Human Neprilysin-2 (NEP2) and NEP display distinct subcellular localisations and substrate preferences. *FEBS Lett.* 582: 2382-2386.
- Oh-hashii, K., et al. 2008. Biosynthesis, processing, trafficking, and enzymatic activity of mouse neprilysin 2. *Mol. Cell. Biochem.* 313: 103-111.
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CHROMOSOMAL LOCATION

Genetic locus: MMEL1 (human) mapping to 1p36.32.

SOURCE

Neprilysin-2 (2D2H5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-107 of Neprilysin-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

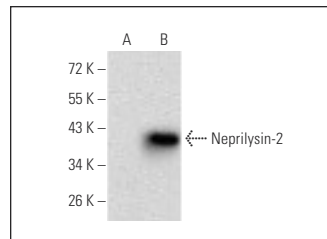
Neprilysin-2 (2D2H5) is recommended for detection of Neprilysin-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for Neprilysin-2 siRNA (h): sc-88604, Neprilysin-2 shRNA Plasmid (h): sc-88604-SH and Neprilysin-2 shRNA (h) Lentiviral Particles: sc-88604-V.

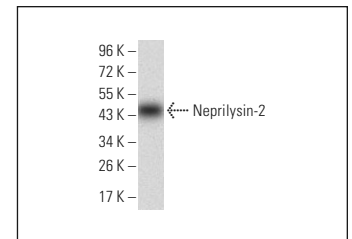
Molecular Weight of Neprilysin-2: 110 kDa.

Positive Controls: human Neprilysin-2 (1-107)-hlgGfc transfected HEK293 whole cell lysate.

DATA



Neprilysin-2 (2D2H5): sc-517235. Western blot analysis of Neprilysin-2 expression in non-transfected (A) and human Neprilysin-2 (1-107)-hlgGfc transfected (B) HEK293 whole cell lysates.



Neprilysin-2 (2D2H5): sc-517235. Western blot analysis of human recombinant Neprilysin-2 (1-107) fusion protein.

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.

PROTOCOLS

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