Corin (D-15): sc-47849



The Power to Question

BACKGROUND

Corin, also designated atrial natriuretic peptide-converting enzyme, localizes to the membrane as a single-pass type II membrane protein. Corin acts as a serine protease that utilizes atrial and brain natriuretic peptides (ANP and BNP) as substrates, which play a role in blood coagulation, platelet activation, fibrinolysis and thrombosis. The extracellular domain of Corin contains two frizzled-like cysteine-rich domains, eight low density lipoprotein receptor (LDLR) repeats, a macrophage scavenger receptor-like domain and a trypsin-like protease domain at the C-terminus. The frizzled 1 domain and LDLR repeats 1-4 are responsible for substrate recognition. Corin converts Pro-ANP to ANP by cleaving between arginine 123 and serine 124. Corin is highly expressed in cardiomyocytes, and mice deficient in the Corin protein exhibit hypertension and have cardiac hypertrophy.

REFERENCES

- Knappe, S., Wu, F., Madlansacay, M.R. and Wu, Q. 2004. Identification of domain structures in the propeptide of Corin essential for the processing of proatrial natriuretic peptide. J. Biol. Chem. 279: 34464-34471.
- Langenickel, T.H., Pagel, I., Buttgereit, J., Tenner, K., Lindner, M., Dietz, R., Willenbrock, R. and Bader, M. 2004. Rat Corin gene: molecular cloning and reduced expression in experimental heart failure. Am. J. Physiol. Heart Circ. Physiol 287: H1516-H1521.
- Tran, K.L., Lu, X., Lei, M., Feng, Q. and Wu, Q. 2004. Upregulation of Corin gene expression in myocardium. Am. J. Physiol. Heart Circ. Physiol 287: H1625-H1631.
- 4. Dries, D.L., Victor, R.G., Rame, J.E., Cooper, R.S., Wu, X., Zhu, X., Leonard, D., Ho, S.I., Wu, Q., Post, W. and Drazner, M.H. 2005. Corin gene minor allele defined by 2 missense mutations is common in blacks and associated with high blood pressure and hypertension. Circulation 112: 2403-2410.
- 5. Wu, Q., Kuo, H.C. and Deng, G.G. 2005. Serine proteases and cardiac function. Biochim. Biophys. Acta 1751: 82-94.
- Chan, J.C., Knudson, O., Wu, F., Morser, J., Dole, W.P. and Wu, Q. 2005.
 Hypertension in mice lacking the proatrial natriuretic peptide convertase Corin. Proc. Natl. Acad. Sci. USA 102: 785-790.
- 7. Jiang, W., Cai, D.Y., Pan, C.S., Qi, Y.F., Jiang, H.F., Geng, B. and Tang, C.S. 2005. Changes in production and metabolism of brain natriuretic peptide in rats with myocardial necrosis. Eur. J. Pharmacol. 507: 153-162.
- 8. Uchiyama, S. and lijima, N. 2005. Partial purification and characterization of pro-phospholipas proteases from gill membranes of the red sea bream, Chrysophrys major. Comp. Biochem. Physiol. B, Biochem. Mol. Biol. 141: 121-127.

CHROMOSOMAL LOCATION

Genetic locus: CORIN (human) mapping to 4p12; Corin (mouse) mapping to 5 C3.2.

SOURCE

Corin (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Corin 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-47849 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Corin (D-15) is recommended for detection of Corin of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Corin (D-15) is also recommended for detection of Corin in additional species, including canine.

Suitable for use as control antibody for Corin siRNA (h): sc-60432, Corin siRNA (m): sc-60433, Corin shRNA Plasmid (h): sc-60432-SH, Corin shRNA Plasmid (m): sc-60433-SH, Corin shRNA (h) Lentiviral Particles: sc-60432-V and Corin shRNA (m) Lentiviral Particles: sc-60433-V.

Molecular Weight of Corin: 125-135 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.



Try **Corin (5B6): sc-293360**, our highly recommended monoclonal alternative to Corin (D-15).