SANTA CRUZ BIOTECHNOLOGY, INC.

Furin (H-220): sc-20801

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Furin (FUR, PACE, PCSK3, SPC1, Kex2p) is a calcium-dependent serine endoprotease that belongs to the subtilisin-like proprotein convertase family. The members of this family process latent precursor proteins into their biologically active products. Furin cleaves at paired basic amino acid processing sites within proparathyroid hormone, transforming growth factor β 1 precursor, proalbumin, pro-β-secretase, membrane type-1 matrix metalloproteinase, β subunit of pro-nerve growth factor and von Willebrand factor. Furin can directly cleave proMMP-2 within the *trans*-Golgi network leading to an inactive form of matrix metalloproteinase-2 (MMP-2). Furin is synthesized as an inactive zymogen that may minimize the occurrence of premature enzymatic activity that would lead to alternative protein activation or degradation. The inhibitory mechanism is based on the presence of an inactivating prosegment at the NH_2 terminal of the Furin. After initial autocatalytic cleavage, the prosegment remains tightly associated until it reaches the *trans*-Golgi network where the dissociation of the prosegment and activation of Furin occurs.

CHROMOSOMAL LOCATION

Genetic locus: FURIN (human) mapping to 15q26.1; Furin (mouse) mapping to 7 D3.

SOURCE

Furin (H-220) is a rabbit polyclonal antibody raised against epitope corresponding to amino acids 575-794 mapping at the C-terminus of Furin of human origin of Furin 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.

APPLICATIONS

Furin (H-220) is recommended for detection of Furin 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Furin (H-220) is also recommended for detection of Furin in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Furin siRNA (h): sc-40595, Furin siRNA (m): sc-40596, Furin shRNA Plasmid (h): sc-40595-SH, Furin shRNA Plasmid (m): sc-40596-SH, Furin shRNA (h) Lentiviral Particles: sc-40595-V and Furin shRNA (m) Lentiviral Particles: sc-40596-V.

Molecular Weight of Furin precursor: 96 kDa.

Molecular Weight of mature Furin: 90 kDa.

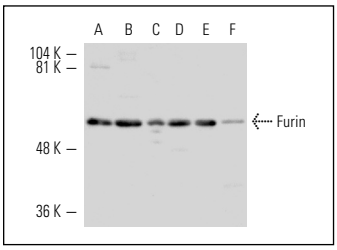
Molecular Weight of Furin splice variant: 60 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

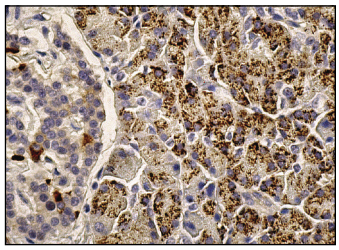
STORAGE

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

DATA



Furin (H-220): sc-20801. Western blot analysis of Furin expression in HeLa (**A**), MDCK (**B**), Hep G2 (**C**), C6 (**D**) and c4 (**E**) whole cell lysates and mouse liver tissue extract (**F**).



Furin (H-220): sc-20801. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Authier, F., et al. 2003. Endosomal proteolysis of glucagon at neutral pH generates the bioactive degradation product miniglucagon-(19-29). Endocrinology 144: 5353-5364.
2. Sisto, M., et al. 2010. Expression of pro-inflammatory TACE-TNF-α-amphiregulin axis in Sjögren's syndrome salivary glands. Histochem. Cell Biol. 134: 345-353.
3. Dogar, A.M., et al. 2011. Suppression of latent transforming growth factor (TGF)-β1 restores growth inhibitory TGF-β signaling through microRNAs. J. Biol. Chem. 286: 16447-16458.
4. Burgermeister, E., et al. 2011. The Ras inhibitors caveolin-1 and docking protein 1 activate peroxisome proliferator-activated receptor γ through spatial relocalization at helix 7 of its ligand-binding domain. Mol. Cell. Biol. 31: 3497-3510.
5. Prade, E., et al. 2012. Bile acids down-regulate caveolin-1 in esophageal epithelial cells through sterol responsive element-binding protein. Mol. Endocrinol. 26: 819-832.
5. Magnacca, A., et al. 2012. Characterization of a proteasome and TAP-independent presentation of intracellular epitopes by HLA-B27 molecules. J. Biol. Chem. 287: 30358-30367.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **Furin (B-6): sc-133142** or **Furin (G-6): sc-133141**, our highly recommended monoclonal alternatives to Furin (H-220).