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Rabbit Anti-Furin antibody

SL13228R

Product Name:	Furin
Chinese Name:	弗林蛋白酶抗体
Alias:	Dibasic processing enzyme; Dibasic-processing enzyme; FES upstream region; FUR; FURIN; FURIN_HUMAN; PACE; Paired basic amino acid residue cleaving enzyme; Paired basic amino acid residue-cleaving enzyme; PCSK3; Proprotein convertase subtilisin/kexin type 3; SPC1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,Rabbit,Sheep,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	74kDa
Cellular localization:	cytoplasmicThe cell membraneExtracellular matrix
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Furin:401-500/794
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Furin 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 ttrans-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 NH2 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.

Function:
Furin is likely to represent the ubiquitous endoprotease activity within constitutive secretory pathways and capable of cleavage at the RX(K/R)R consensus motif.

Subunit:
Interacts with FLNA (By similarity). Binds to PACS1 which mediates TGN localization and connection to clathrin adapters.

Subcellular Location:
Golgi apparatus > trans-Golgi network membrane. Cell membrane. Shuttles between the trans-Golgi network and the cell surface. Propeptide cleavage is a prerequisite for exit of furin molecules out of the endoplasmic reticulum (ER). A second cleavage within the propeptide occurs in the trans Golgi network (TGN), followed by the release of the propeptide and the activation of furin.

Tissue Specificity:
Seems to be expressed ubiquitously.

Post-translational modifications:
The inhibition peptide, which plays the role of an intramolecular chaperone, is autocatalytically removed in the endoplasmic reticulum (ER) and remains non-covalently bound to furin as a potent autoinhibitor. Following transport to the trans Golgi, a second cleavage within the inhibition propeptide results in propeptide dissociation and furin activation.
Phosphorylation is required for TGN localization of the endoprotease. In vivo, exists as di-, mono- and non-phosphorylated forms.

Similarity:
Belongs to the peptidase S8 family. Furin subfamily.
Contains 1 homo B/P domain.

SWISS:
P09958

Gene ID:
5045

Database links:

Entrez Gene: 5045 Human

Entrez Gene: 18550 Mouse

Entrez Gene: 54281 Rat

Omim: 136950 Human

SwissProt: P09958 Human

SwissProt: P23188 Mouse

SwissProt: P23377 Rat

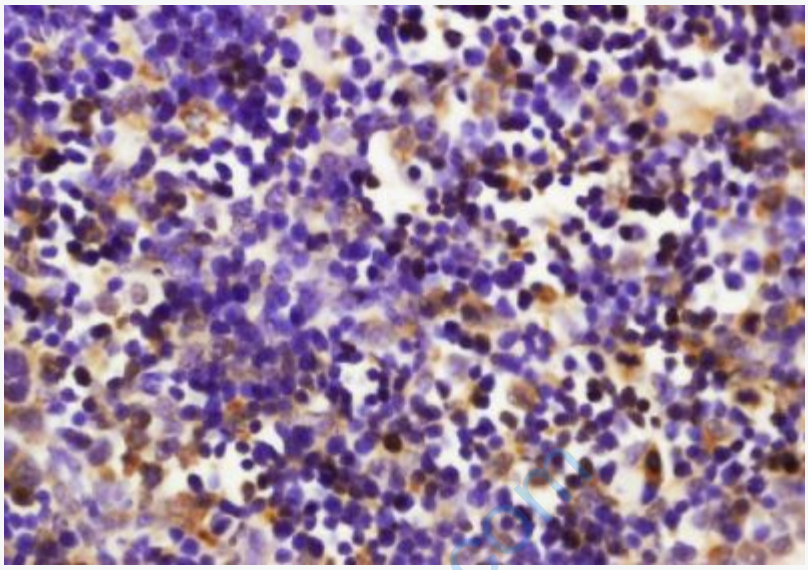
Unigene: 513153 Human

Unigene: 5241 Mouse

Unigene: 3220 Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

在真核生物细胞中,许多具有生物活性的多肽和蛋白是在其分泌过程中由前体蛋白经内切蛋白酶切割后激活形成的.弗林蛋白酶(Furin)就是这个内切蛋白酶家族重要成员之一,它可以识别剪切多种蛋白质,如生长医子、血清蛋白、基质金属蛋白酶、受体、病毒囊膜蛋白和细菌外毒素等.近年来Furin得到了迅速而广泛的研究,本文简介了它的表达与加工运输、生物学功能、与病毒侵染的关系,以及它的抑制剂.

Picture:	 Tissue/cell: mouse spleen tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min; Incubation: Anti-Furin Polyclonal Antibody, Unconjugated(SL13228R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining