

# Furin Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP55098

## Product Information

---

<b>Application</b>	IHC-P, IHC-F, IF, ICC, E
<b>Primary Accession</b>	<a href="#">P09958</a>
<b>Reactivity</b>	Rat, Pig, Dog, Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	86678
<b>Physical State</b>	Liquid
<b>Immunogen</b>	KLH conjugated synthetic peptide derived from human Furin
<b>Epitope Specificity</b>	401-500/794
<b>Isotype</b>	IgG
<b>Purity</b>	affinity purified by Protein A
<b>Buffer</b>	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
<b>SUBCELLULAR LOCATION</b>	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.
<b>SIMILARITY</b>	Belongs to the peptidase S8 family. Furin subfamily. Contains 1 homo B/P domain.
<b>SUBUNIT</b>	Interacts with FLNA (By similarity). Binds to PACS1 which mediates TGN localization and connection to clathrin adapters.
<b>Post-translational modifications</b>	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.
<b>Important Note</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>Background Descriptions</b>	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 parathyroid hormone, transforming growth factor $\beta$ 1 precursor, proalbumin, pro- $\beta$ -secretase, membrane type-1 matrix metalloproteinase, $\beta$ 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 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.

## Additional Information

---

Gene ID	5045
Other Names	Furin, 3.4.21.75, Dibasic-processing enzyme, Paired basic amino acid residue-cleaving enzyme, PACE, FURIN, FUR, PACE, PCSK3
Target/Specificity	Seems to be expressed ubiquitously.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

## Protein Information

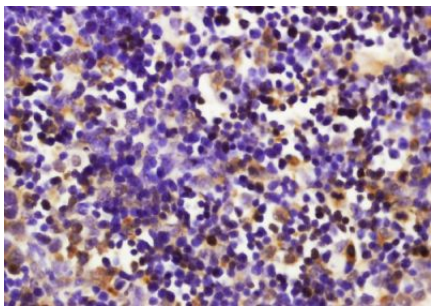
---

Name	FURIN {ECO:0000303   PubMed:7690548, ECO:0000312   HGNC:HGNC:8568}
Function	Ubiquitous endoprotease within constitutive secretory pathways capable of cleavage at the RX(K/R)R consensus motif (PubMed: <a href="#">11799113</a> , PubMed: <a href="#">1629222</a> , PubMed: <a href="#">1713771</a> , PubMed: <a href="#">2251280</a> , PubMed: <a href="#">24666235</a> , PubMed: <a href="#">25974265</a> , PubMed: <a href="#">7592877</a> , PubMed: <a href="#">7690548</a> , PubMed: <a href="#">9130696</a> ). Mediates processing of TGFB1, an essential step in TGF-beta-1 activation (PubMed: <a href="#">7737999</a> ). Converts through proteolytic cleavage the non-functional Brain natriuretic factor prohormone into its active hormone BNP(1-32) (PubMed: <a href="#">20489134</a> , PubMed: <a href="#">21763278</a> ). By mediating processing of accessory subunit ATP6AP1/Ac45 of the V-ATPase, regulates the acidification of dense-core secretory granules in islets of Langerhans cells (By similarity).
Cellular Location	Golgi apparatus, trans-Golgi network membrane; Single-pass type I membrane protein. Cell membrane; Single-pass type I membrane protein. Secreted. Endosome membrane; Single-pass type I membrane protein. Note=Shuttles between the trans-Golgi network and the cell surface (PubMed:11799113, PubMed:9412467). 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 (PubMed:11799113)
Tissue Location	Seems to be expressed ubiquitously.

## Images

---

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°C for 20 min;  
Incubation: Anti-Furin Polyclonal Antibody,  
Unconjugated(AP55098) 1:200, overnight at 4°C, followed  
by conjugation to the secondary antibody(SP-0023) and  
DAB(C-0010) staining

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.