

Recombinant Furin protein ab6032

製品の詳細

製品名	Recombinant Furin protein
発現系	Mammalian
アクセッション番号	P09958
タンパク質長	Full length protein
Animal free	No
由来	Recombinant
予測される分子量	87 kDa
領域	1 to 713

特性

Our **Abpromise guarantee** covers the use of **ab6032** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション Western blot

製品の状態 Liquid

備考 This 81 kDa recombinant protein was obtained from cytoplasmic extracts by centrifugation and lysis of BSC-40 cells infected with recombinant vaccinia virus (VV:hFUR713t). The preparation was subjected to UV irradiation for 5 minutes to inactivate any residual virus. Activity of 1 U/ μ l, where 1 U (a unit of activity) is defined as the amount of furin that can release 1 pmol of AMC from the fluorogenic peptide pERTKR-MCA in 1 min.

Furin is a membrane-associated, calcium-dependent, serine protease that belongs to the subtilisin-like prohormone convertase (PC) family. Members of this family of cellular enzymes cleave most prohormones and neuropeptide precursors. Numerous other cellular proteins, some viral proteins, and bacterial toxins that are transported by the constitutive secretory pathway are also targeted for maturation by PCs. Furin and other PC family members share structural similarities which include a heterogeneous ~10 kDa amino-terminal proregion, a highly conserved ~55 kDa subtilisin-like catalytic domain, and carboxyl-terminal domain that is heterogeneous in length and sequence. These enzymes become catalytically active following proregion cleavage within the appropriate cellular compartment. Furin is the only known PC to possess a transmembrane domain. Cleavage of target proteins occurs at the carboxyl-terminus of the furin consensus sequence, RX(K/R)R. It has been shown that the acidic peptide sequence, C771PSDSEEDG780, localizes furin to the trans-Golgi-network. Phosphorylation of serine

residues within this region modulates intracellular routing of furin protein. An additional signaling domain includes the tetrapeptide sequence, Y759KGL762, which directs internalization from the cell surface.

前処理および保存

保存方法および安定性

Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Preservative: 0.05% Sodium azide

Constituent: 0.1% BSA

This product is an active protein and may elicit a biological response in vivo, handle with caution.

関連情報

機能

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.

組織特異性

Seems to be expressed ubiquitously.

配列類似性

Belongs to the peptidase S8 family. Furin subfamily.

Contains 1 homo B/P domain.

ドメイン

Contains a cytoplasmic domain responsible for its TGN localization and recycling from the cell surface.

翻訳後修飾

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.

細胞内局在

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.

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