

**Furin**

Proprotein Convertase Subtilisin/Kexin Type 3 (PCSK3)
human, recombinant, human cell line HEK293S

Cat. No.	Amount
PR-968S	10 µg
PR-968L	5 x 10 µg

For general laboratory use.

Shipping: shipped on dry ice

Storage Conditions: store at -80 °C

Additional Storage Conditions: avoid freeze/thaw cycles

Shelf Life: 12 months

Molecular Weight: 52.3 kDa

Accession number: P09958

Purity: > 90 % (SDS-PAGE)

Form: liquid (supplied in 10 mM Hepes/NaOH pH 7.4, 100 mM NaCl, 2mM CaCl₂)

Description:

Furin (proprotein convertase subtilisin/kexin type 3, PCSK3, PACE) belongs to the proprotein convertases involved in the proteolytic maturation of many proteins in the secretory pathway. In addition to cellular substrates, furin activates the proteins of many bacterial and viral pathogens, including the Spike-protein of the severe acute respiratory virus 2 (SARS-CoV-2). Recombinant human furin is expressed in the human HEK293S cell line facilitating homogenous glycosylation. Active furin is selectively purified using inhibitor based affinity purification. The protein is suited for enzymatic assays, activation of furin's substrate proteins and protein crystallography. Ca²⁺ is crucial for activity; avoid calcium chelators like citrate, EDTA or EGTA in buffers. For dilution below 0.1 mg/ml include detergents (e.g. 0.2% Triton-X-100) in buffers. The activity is defined by the amount of furin (µg) that releases 1 pmol AMC from Pyr-Arg-Thr-Lys-Arg-AMC in 1 minute (in 100 mM Hepes/NaOH pH 7.0, 2 mM, 0.2% Triton-X-100 at 37°C with 200 µM Pyr-Arg-Thr-Lys-Arg-AMC).

Selected References:

Kuester et al. (2011) Purification of the proprotein convertase furin by affinity chromatography based on PC-specific inhibitors. *392(11)*:973-81
Dahms et al. (2014) X-ray Structures of Human Furin in Complex with Competitive Inhibitors. *ACS Chem. Biol.* **9(5)**:1113-1118
Dahms et al. (2016) OFF-State-Specific Inhibition of the Proprotein Convertase Furin. *ACS Chem. Biol.* **10.1021** acschembio.1c00411
Dahms et al. (2022) Dichlorophenylpyridine-Based Molecules Inhibit Furin through an Induced-Fit Mechanism. *ACS Chem. Biol.* **10.1021** acschembio.2c00103