

## Product Information

### Furin human, recombinant expressed in *Sf9* cells

Catalog Number **F2677**  
Storage Temperature  $-70^{\circ}\text{C}$

#### Product Description

Recombinant, human furin is extracted from *spodoptera frugiperda* (*Sf9*) cells infected with recombinant baculovirus carrying the DNA sequence encoding truncated human furin.<sup>1</sup> The calculated molecular mass of truncated human furin is 52.7 kDa. The apparent molecular mass by SDS-PAGE is 57 kDa.

Furin is a membrane bound protease localized in the Golgi apparatus.<sup>2</sup> It is a dibasic endopeptidase responsible for the proteolytic maturation of many precursor proteins in the secretory and endocytic pathways of mammalian cells.<sup>3</sup> Structurally and functionally, it resembles the prohormone-processing enzyme, kexin (EC 3.4.21.61).<sup>4</sup> Enzymatic studies show furin is a calcium-dependent ( $K_{0.5} = 200\ \mu\text{M}$ ) serine endoprotease, that has greater than 50% of maximal activity between pH 6.0 and 8.5.<sup>5</sup> Furin is capable of cleaving precursors of a wide variety of proteins, including growth factors, serum proteins, including proteases of the blood-clotting and complement systems, matrix metalloproteinases, receptors, viral-envelope glycoproteins, and bacterial exotoxins, typically at sites marked by the consensus sequence Arg-Xaa-(Lys/Arg)-Arg.<sup>6</sup>

This product is supplied in a solution in 10 mM MES, pH 7.0, with 1 mM  $\text{CaCl}_2$  and 50% glycerol.

Activity:  $\geq 2,000$  units/ml

Unit Definition: One unit is defined as the amount of enzyme required to cleave 25  $\mu\text{g}$  of a MBP-FN-paramyosin- $\Delta\text{Sal}$  substrate to 95% completion in 6 hours at  $25^{\circ}\text{C}$  in a total reaction volume of 25  $\mu\text{l}$ .

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

The product ships on dry ice and storage at  $-70^{\circ}\text{C}$  is recommended.

#### References

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2. Vidricaire, G., *et al.*, Biochem. Biophys. Res. Commun., **195**, 1011-1018 (1993).
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4. Van de Ven, W.J., *et al.*, Enzyme, **45**, 257-270 (1991).
5. Molloy, S.S., *et al.*, J. Biol. Chem., **267**, 16396-16402 (1992).
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