

Bovine Enterokinase

Bovine, Recombinant (rbEK)

Expressed in *E. coli*

Cat. No. CRP08116

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Enterokinase is a serine proteinase in the duodenum that plays a critical role in mammalian digestion. It is the physiological activator of pancreatic trypsinogen. It converts trypsinogen into its active form trypsin, by cleaving its aminoterminal hexapeptide Val(Asp)₄-Lys. More recently, the enterokinase has been shown to have a broad utility in cleaving fusion proteins produced in *Escherichia coli*. The enzyme is particularly suitable for this role because of its high degree of specificity, its tolerance to a wide range of reaction conditions, and the fact that its recognition sequence lies entirely on the aminoterminal side of the scissile bond. This enzymatic activity allows release of carboxyl-terminal fusion partners from fusion proteins without leaving unwanted amino acid residues on their amino termini.

Amino-Acid Sequence: 235aa. non-glycosylated

M. W. : approximately 43.0 kDa

Recombinant: Expressed in *E. coli*

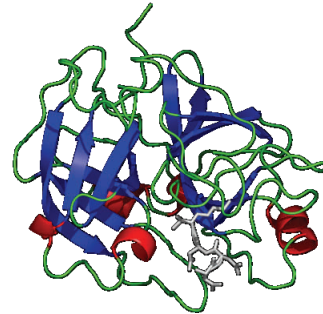
Unit Definition: One unit is defined as the amount of enzyme needed to cleave 50 ug of fusion protein in 16 hours to 95% completion at 25°C in a buffer containing 25 mM Tris-HCl, pH 7.6, 50 mM NaCl, and 2 mM CaCl₂.

Physical Appearance: Sterile liquid

Formulation: 50 mM Tris-HCl, pH 8.0, 0.5M NaCl and 50% glycerol.

Endotoxin: Less than 1EU/mg of rbEK as determined by LAL method.

Storage: One year when stored at -20°C. Avoid repeated freeze/thaw cycles.



Crystal structure of Enterokinase with an inhibitor
protease, serine, 7 (*Homo sapiens*)

GENE INFORMATION

Gene Name: [_protease, serine, 7 \(enterokinase\)](#)

Synonyms: PRSS7; EC 3.4.21.9; ENTK; Enterokinase; MGC133046; enterokinase; enteropeptidase; proenterokinase; Enteropeptidase precursor; Serine protease 7; human enterokinase; EC 3.4.21.9; protease, serine, 7; serine protease (enterokinase).

mRNA Refseq: [NM_174439](#)

Protein Refseq: [NP_776864](#)

Enzyme Commission Number: [EC 3.4.21.9](#)

UniProt ID: P98072

GeneID: [282009](#)

Chromosome Location: 1

Reaction: The reaction catalysed by Enterokinase:
trypsinogen → trypsin + octapeptide

Enterokinase cleaves after Lysine if the Lys is preceded by four Asp and not followed by a Pro.

Function: peptidase activity; scavenger receptor activity

REFERENCES

Holzinger A, Maier EM, Bück C, et al (2002). "Mutations in the proenteropeptidase gene are the molecular cause of congenital enteropeptidase deficiency". *Am. J. Hum. Genet.* 70 (1): 20–5.

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