SignalChem
Specialists in Signaling Proteins
1-866-9 KINASE (54-6273)

Catalog #	Aliquot Size
E535-31H-5	5 ug
E535-31H-10	10 µg
E535-31H-100	100 µg
E535-31H-500	500 µg

EK (enterokinase), Active

Recombinant swine protein expressed in yeast cells

Catalog # E535-31H

Lot # L2146-3

Product Description

Recombinant swine EK (800-end) was expressed in yeast cells using an N-terminal His tag. The enzyme commission number is EC 3.4.21.9.

Gene Aliases

Enteropeptidase; TMPRSS15; PRSS7; Serine protease 7; ENTK; MGC133046.

Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 8, 200mM NaCl, 30% glycerol.

Storage and Stability

Store product at –20°C for up to 1 year. Aliquot enzymes to avoid freeze / thaw cycles.

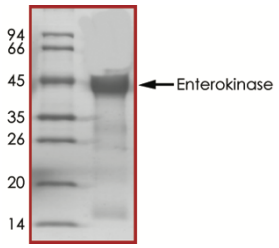
Digestion Conditions

Catalytic pH Range: 4.5 ~ 9.5
Catalytic Temperature Range: 4 ~ 45°C

Scientific Background

Enterokinase (EK) is a member of the trypsin family of serine proteases, which cleaves proteins following the Lys at the Asp-Asp-Asp-Asp-Lys recognition sequence. In the stomach, EK converts trypsinogen into trypsin. EK has high specificity and high hydrolytic efficiency, making it a widely used biochemical tool for cleaving recombinant fusion proteins. EK can tolerate a variety of detergents and some denaturing agents. EK's activity is reduced by > 250 mM NaCl, > 2 M urea, > 20 mM, β-ME, > 0.1% SDS and > 250 mM imidazole.

Purity

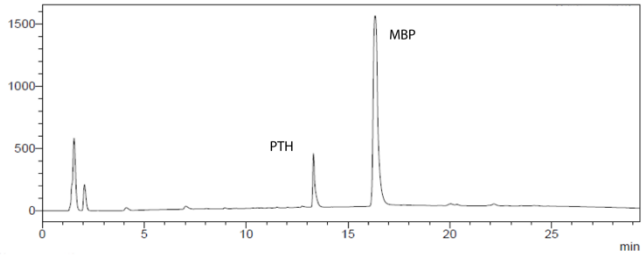


The purity of EK (enterokinase) was determined to be **>85%** by densitometry, approx. MW **44kDa**.

Specific Activity

The specific activity of EK was determined to be **>10,000 units/mg** as per the activity assay protocol.

Sample Data:



HPLC results for digestion of the parathyroid hormone - maltose binding protein (MBP-PTH) fusion protein by Enterokinase at an enzyme : substrate mass ratio of 1:250 for 8 hr at 25°C. The digestion products are: PTH and MBP.

EK (enterokinase), Active

Recombinant swine protein expressed in yeast cells

Catalog Number	E535-31H
Specific Activity	10,000 units/mg
Lot #	L2146-3
Purification	Affinity purification; his tagged
Purity	>85%
Concentration	0.1 mg/ml
Stability	1yr at –20°C from date of shipment
Storage & Shipping	Store as supplied at –20°C for up to 1 year.

To place your order, please contact us by phone 1-(604)-232-4600, fax 1-604-232-4601 or by email: orders@signalchem.com
www.signalchem.com

Assay Protocol

Reaction Components

Active EK Protease (Catalog #: E535-31H)

Active EK protease.

EK Digestion Buffer (User Prepared)

20 mM Tris-HCl pH 8, 200 mM NaCl, 2mM $CaCl_2$

Reaction Optimization Protocol

The following conditions may be different for different proteins. Optimize the protocol for each specific protein.

Step 1. Dissolve fusion protein in EK Digestion Buffer

Step 2. Add EK to fusion protein solution at a mass ratio of 1:50 and mix

Step 3. Incubate reaction mixture at room temperature for 2-16 hours

Step 4. Monitor the cleavage products by SDS-PAGE. Run an undigested sample of the target fusion protein as a control

Activity Definition (units/mg)

SignalChem's Enterokinase activity is defined by the following:
One unit equals the amount of EK required to produce 1 nmole of trypsin from trypsinogen per minute at pH 8.0 at 25 °C.

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