Active Recombinant Staphylococcus aureus V8 Glu-C

Cat. No. Glu-C-18S **Lot. No.** (See product label)

SPECIFICATION

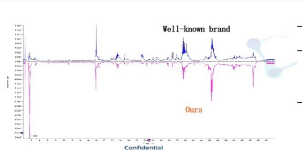
Product Overview	Glu-C protease, derived from Staphylococcus aureus V8 (S. aureus V8) and also known as V8 protease, is expressed in E.coli. Residual Host Cell Protein: <50 ppm
Species	Staphylococcus aureus V8
Source	E.coli
Description	This enzyme specifically hydrolyzes the peptide bonds at the carboxyl terminus of glutamic acid (Glu) or aspartic acid (Asp) residues. Its specificity is directly influenced by the components of the buffer. In an NH_4HCO_3 buffer at pH 7.8 and a CH_3COONH_4 buffer at pH 4.0, it recognizes and cleaves the peptide bonds at the carboxyl terminus of Glu. In a phosphate buffer at pH 7.8, it recognizes and cleaves the peptide bonds at the carboxyl terminus of either Glu or Asp, and the hydrolysis rate for Glu is higher than that for Asp. The pH range for the enzyme's activity is 4.0-9.0. It can be used alone or in combination with other specific proteases for the enzymatic hydrolysis of protein solutions.
Form	Lyophilized
Purity	≥ 95% by SDS-PAGE
Bio-activity	≥ 7.0 U/mg
Protein Content	≥ 20 μg

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Unit definition	One unit (U) is defined as the amount of enzyme required to catalyze the substrate (Z-Phe-Leu-Glu-4-pNA) to generate 1 μmol of p-nitroaniline (pNA) per minute under the conditions of 25 centigrade and pH 7.8.
Usage	1. This product can be reconstituted with ultrapure water to a final concentration of 1 mg/mL and directly applied to protein digestion. Incubate the protein with Glu-C at a protease: protein ratio of 1: 100 to 1: 20. 2. Digest at 37 centigrade for 2 hours to overnight.
Applications	1. Peptide mapping analysis 2. Protein identification
Note	1. After reconstitution, try to avoid repeated freeze-thaw cycles for this product; 2. Please wear lab coat and disposable gloves when using; 3. This product should not be used directly for clinical diagnosis and treatment.
Stability	This product should be stored at 2-8 centigrade, where it can be preserved for at least 12 months. After reconstitution, it can be stored at 2-8 centigrade for 2 months.
Storage	Store at -20 centigrade.
Storage Buffer	50 mM Hepes, pH 7.8
Shipping	Ice pack

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Performance Tests



Brand	Sequence coverage
Well-known brand	82.20%
Ours	82.10%

Sample	Type of PTMs	Well-known brand	Ours	△
C1	N+Asu	0.5	0.49	-0.01
C2	N+Asu	6.71	6.59	-0.12
	D+Isomerization	22.53	22.68	0.15
	N+Deamidation	0.26	0.23	-0.03
	M+Oxidation	0.95	0.91	-0.04
	D+H_2O loss on D	0.19	0.21	0.02
C3	M+Oxidation	1.21	1.29	0.08
	N+Asu	4.53	4.39	-0.14
	D+Isomerization	4.29	4.19	-0.1

Compared with the peptide maps resulting, sequence coverage and PTM analysis from digestion by Glu-C of a well-known brand, those from our Glu-C are essentially the same.

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