

Recombinant Glu-C, Mass Spec Grade

Cat. No. Glu-C-42 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Description Endoproteinase rGlu-C, Mass Spec Grade, is a serine proteinase that specifically cleaves peptide bonds at C-terminal to glutamic acid residues. Enzyme specificity to glutamic acid is high in ammonium bicarbonate and ammonium acetate. In phosphate buffers, cleavage occurs at both aspartic and glutamic residues. rGlu-C activity is optimal in the pH range of 4.0-9.0. This mass spec grade enzyme can be used alone or in combination with other proteases to generate protein digests.

Form Lyophilized in the presence of trehalose (1.65 mg/vial)

Bio-activity 800 U/min/mg

Molecular Mass 24 kDa

Purity > 99.5 % peak area of rGlu-C, analyzed by HPLC at 280 nm.

Storage Store the lyophilized powder at -4 or 20 centigrade, store reconstituted enzyme solution at -20 centigrade for up to 8 weeks.

CAS No. 66676-43-5

Shelf life 36 months at -20 centigrade

Stability Maximally active in the pH range of 4-9

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Usage Notes	In-Solution Protein Digestion Protocol (recommended): 1. For maximum activity, resuspend Mass Spectrum Grade rGlu-C with the double-distilled from user. 2. Dissolve protein samples with Tris-HCl (pH 8) buffer to a final protein concentration of 50 mM prior to digestion. 3. Add rGlu-C proteinase to a protein : proteinase ratio of 20: 1(w/w). Mix well and incubate at 37 centigrade for 4 h.
Specificity	No prominent nonspecific peaks are observed by HPLC analysis after 16 hours of incubation of HSA with Glu-C compared to the 1-hour digestion
Unit Definition	One unit is the amount of Mass spectrum Grade rGlu-C will hydrolyze 1.0 μ mol of N-t-Boc--L-glutamic acid a-phenyl ester per minute at pH 7.8 at 37 centigrade, A270, and Light path=1 cm
LC-MS/MS Analysis	Human Serum Albumin (HSA) was dissolved, denatured at 37 centigrade for 1 h, diluted at pH 8.0, and incubated with rGlu-C for 4 h. The digest was analyzed by LC-MS/MS, and peptide results matched the peptides generated in a theoretical digests of HSA by rGlu-C.
Resuspension Buffer	Resuspend rGlu-C powder in double-distilled water from user.
MALDI-TOF Analysis	Impurity is not found in rGlu-C proteinase analyzed by MALDI-TOF.