

Recombinant Lys-C, Mass Spec Grade

Cat. No. Lys-C-38 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Description	rLys-C, Mass Spec Grade, specifically hydrolyzes peptide bonds at the carboxyl side of lysine residues. 8 M urea solution is recommended for denaturation. rLys-C can efficiently cleave difficult-to-digest proteins because rLys-C remains its activity under denaturation conditions.
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Form	Lyophilized powder
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Bio-activity	25 units/min/mg
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Molecular Mass	27 kDa
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Purity	> 99.9 % rLys-C peak area analyzed by HPLC at 280nm.
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Storage	Store the lyophilized powder at -20 centigrade, store reconstituted enzyme at -80 centigrade.
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CAS No.	78642-25-8
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Shelf life	24 months at -20 centigrade
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Stability	rLys-C is maximally active in the pH 8 and reversibly inactivated at pH 3.
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Usage Notes	Standard In-Solution Protein Digestion: 1. For maximum activity, resuspend Mass
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	Spectrum Grade rLys-C in resuspension buffer provided. 2. Recommend using 6-8 M urea and 50 mM Tris-HCl (pH 8) to denature protein or protein mixture prior to digestion. 3. Add rLys-C to the mixture to reach a protein: protease ratio of 25: 1 (w/w). Mix well and incubate at 37 centigrade for 3-4 hours.
Specificity	< 5 % nonspecific cleavage of Escherichia Coli digests with incubation at 37 centigrade for 4 h, analyzed by LC-MS/MS.
Unit Definition	One unit is the amount of Mass spectrum Grade rLys-C will hydrolyze 1.0 umol of N-p-Tosyl-Gly-Pro-Lysp-Nitroanilide per minute at pH7.7 at 25 centigrade, A405, Light path=1cm.
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 rLys-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 rLys-C.
Resuspension Buffer	rLys C Resuspension Buffer is composed of 50 mM Acetic acid buffer.
MALDI-TOF Analysis	rLys-C is analyzed by MALDI-TOF, impurity peak is not found.