

Lysyl Endopeptidase[®], recombinant, Biopharmaceutical Analysis Grade (rLys-C)

This product is a recombinant Lysyl Endopeptidase[®] expressed in *E. coli*. Lysyl endopeptidase[®] is a serine protease that cleaves peptide bonds at the carboxy-terminus of lysine residues with high specificity.

Taking advantage of its excellent specificity, Lysyl Endopeptidase[®] is used for peptide fragmentation and peptide mapping for analysis of the primary structure of proteins.

This product is checked residual DNA and Host cell protein for biopharmaceutical analysis.

Features

- Expressed in *E. coli*
- Checked residual DNA / Host cell protein
- Missed cleavage rate is lower than competitor's Lys-C



Specification

Requirement	Specification
Appearance	Lyophilisate
Activity	≥2.0AU/mg
DNA residual test	≤10ng/mg
HCP assay	≤1.0μg/mg
Endotoxin testing	<20EU/mg
Electrophoresis test (SDS-PAGE)	to pass test

Cat. No.	Product Name	Grade	Pkg. Size	Storage
124-06871	Lysyl Endopeptidase [®] , recombinant, Biopharmaceutical Analysis Grade	for Cell Culture	20 μg/vial	Keep at -20°C.

BSA Digestion Analysis

We incubated BSA with each protease for 1 hour and 18 hours.
After incubations, we analyzed the missed cleavage rate and number of peptides.

	Our Product	Competitor's Product
Specificity (Missed cleavage rate after 1 hour's incubation)	0%	0%
Specificity (Missed cleavage rate after 18 hours' incubation)	10%	20%
Activity (Number of peptides after 18 hours' incubation)	41	35

➔ The data suggested that our rLys-C have higher activity and specificity in long time reaction than the competitor's product.

Procedure

1. Sample preparation

- ① Dissolve or dilute the protein sample to be digested with 25 mmol/L Tris-HCl, 1 mmol/L EDTA, pH 8.5~9.0.
- ② Add Disulfide threitol (DTT) or β -mercaptoethanol to the solubilized protein at the final concentration of 5 mmol/L.
- ③ Incubate for 30 min at room temperature.
- ④ Add iodoacetamide to the solubilized protein at the final concentration of 10 mmol/L.
- ⑤ Incubate in dark for 30 min at room temperature.

2. rLys-C preparation

- ① Dissolve lyophilized powder of rLys-C with 100 μ l 12.5 mmol/L Tris-HCl, pH 8.5~9.0.

3. Sample digestion

- ① Add the prepared rLys-C to sample solution according to the enzyme : protein mass ratio of 1:20~1:100, and incubate at 35°C~37°C for 2~18 hours.
- ② The final concentration of 0.5~1.0v/v% trifluoroacetic acid is added to stop the reaction.

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