

## L101

## LysN

Product name:	LysN
Source:	Recombinant
Purification:	IEC and SEC
Formulation:	20 mM HEPES 10 mM NaCl pH 6.0, sterile
Storage:	< -20 °C

### Available Product Sizes

Catalog number	Size
L101 – 0.025 mg	0.025 mg
L101 – 0.1 mg	0.1 mg
L101 – 0.5 mg	0.5 mg
Bulk	On request

### Description

LysN is a metalloendopeptidase that cleaves proteins at the amino side of lysine (Lys-N). When analyzed by electron transfer dissociation (ETD)-based mass spectrometric sequencing, Lys-N-digested peptides that contain a single lysine residue produce spectra dominated by c-type fragment ions, providing simple ladders for sequence determination. Metalloendopeptidase LysN is of valuable for *de novo* protein sequencing and the analysis of post-translational modifications.

### Use, Storage and stability

Recombinant Lys-N should be stored at -80 °C (stable for at least 4 years). The enzyme is stored in 20 mM HEPES, 10 mM NaCl pH 6.0 at a concentration of > 0.5 mg/ml. After thawing it should be stored in appropriate small aliquots at -20 °C or -80 °C (stable for at least 1 year). The enzyme is active at pH 10.0.

The Azocasein activity can be determined as follows

1. Mix 50 µl 1% azocasein, 0.1M glycine/NaOH pH 10, and 5 µl (diluted) enzyme solution.
2. Incubate for 30 minutes at 37 °C.
3. Terminate the reaction by adding 50 µl cold 3% trichloroacetic acid.
4. Remove the precipitate by centrifugation.
5. Measure the absorbance at 342 nm.

The specific activity of LysN is defined as follows: One unit of LysN activity will produce an increase in OD<sub>342</sub> by 0.001 per 1 minute at 37 °C, pH 10, and a 1 cm path length cuvet.

Refer to the reference section of this datasheet for guidelines to the use the enzyme in mass spectroscopy applications.

## Precaution

1. For professional use only.
2. There might be a reduced pressure in the vial. Before opening the vial, equilibrate at 4 °C or ambient temperature. Briefly spin to settle the contents at the bottom of the vial and carefully open the vial.
3. As with any product derived from biological sources, proper handling procedures should be used.
4. The product can be used in various applications and settings. The user should evaluate the fitness-of-use.

## References

- N. Taouatas, M.M. Drugan, A.J.R. Heck and S. Mohammed, Straightforward ladder sequencing of peptides using a Lys-N metalloendopeptidase, *Nature Methods*, 2008, 5, 405 - 407.
- P.J. Boersema, N. Taouatas, A.F.M. Altelaar, J.W. Gouw, P.L. Ross, D.J. Pappin, A.R.J. Heck and S. Mohammed, Straightforward and de novo peptide sequencing by MALDI-MS/MS using a Lys-N metalloendopeptidase, *Molecular and Cellular Proteomics*, 2009, 8 (4), 650 - 660.
- S. Kalkhof, K. Witte, C.H. Ihling, M.Q. Muller, M.V. Keller, S. Haehn, N. Smyth, M. Paulsson, and Andrea Sinz, A Novel Disulfide Pattern in Laminin-Type Epidermal Growth Factor-like (LE) Modules of Laminin  $\beta$ 1 and  $\gamma$ 1 Chains, *Biochemistry*, 2010, 49, 8359–8366.

## PRODUCT USE LIMITATIONS, WARRANTY, DISCLAIMER

The product is not for use in humans.

The product can only be used for internal research and development.

The product cannot be used in any commercial activity (commercial use includes, but is not limited to, 1) preparation of growth media with the purpose of sale, 2) R&D activities for third parties). The product cannot be resold.

Please contact [bd@immunoprecise.com](mailto:bd@immunoprecise.com) to inquire about further information.

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