

Advanced Proteomics with Arg-C Ultra

Precision in Every Slice

Superior Cleavage Specificity for Data You Can Trust

Arg-C Ultra

Introduction

Arg-C Ultra is the improved version of the classic Arg-C enzyme. It specifically cleaves at the C-terminus of arginine residues, including the sites next to proline. Misdigestions at lysine residues have been completely removed. The enzyme can be used alone or in combination with other proteases to enhance protein sequence coverage as well as PTM identifications by mass spectrometry.

- ✓ **Specific:** Cleaves only C-terminal to arginine (only <5% miss cleavage rate)
- ✓ **Efficient:** Digests samples in 2 hrs at enzyme:substrate ratios of up to 1:500 while maintaining excellent specificity
- ✓ **Versatile:** Exhibits high activity in up to 6 M urea, with a broad pH adaptability ranging from 5.0–9.0

Outstanding Cleavage Specificity

Conventional Arg-C proteases have low but detectable non-specific cleavage activity at Lysine residues that interferes with protein analysis. With Arg-C Ultra, no non-specific cleavages are generated.

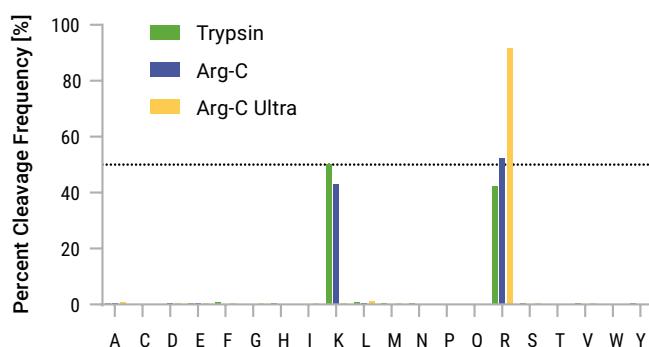


Fig. 1: Human K562 cell extract was digested overnight at 1:50 enzyme:substrate ratio. Data were analyzed on an Orbitrap Exploris 240 and searched with Byonic (no enzyme specified).

Superior Performance at Short Protein Digestion Times

Taking advantage of the exceptional enzymatic activity of Arg-C Ultra, its synergy with Lys-C even outperforms the efficiency of Trypsin or Trypsin/Lys-C, at short digestion times.

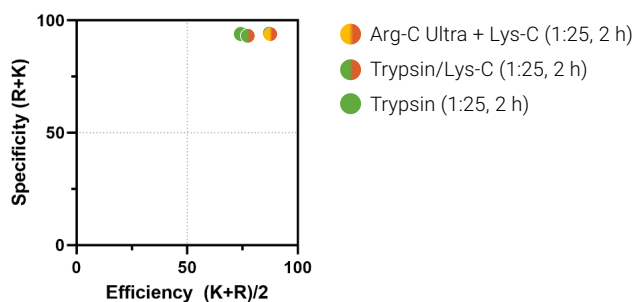


Fig. 2: Human K562 cell extract was digested with either Trypsin, Trypsin/Lys-C or a mixture of Lys-C and Arg-C Ultra. Data were searched with Byonic (no enzyme specified).

Robust Digestion at Broad pH Range and up to 6 M Urea

Maintaining remarkable performance over a wide range of various conditions, Arg-C Ultra allows for a broad array of experimental set-ups like peptide mapping of therapeutic antibodies at low pH.

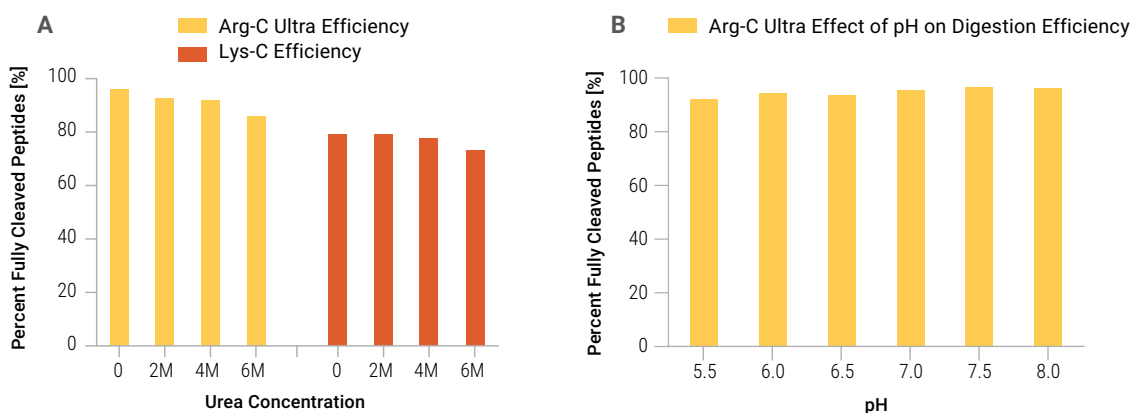


Fig. 3: Human K562 cell extract was digested with Arg-C Ultra or Lys-C at 1:100 for 2 hours at 37°C at various concentrations (A) or pH values (B). Data were searched with Byonic (no enzyme specified).

Applications

- ✓ Protein Identification
- ✓ Peptide Mapping
- ✓ *De novo* Peptide Sequencing
- ✓ Characterization of PTMs, particularly on lysines
- ✓ Characterization and QC of Biotherapeutics

Ordering Information

Product	Size	Cat. #
Arg-C Ultra	5 µg	VA1831
Arg-C Ultra	20 µg	VA1832
Related Products	Size	Cat. #
rAsp-N, Mass Spec Grade	10 µg	VA1160
Asp-N, Sequencing Grade	2 µg	V1621
Glu-C, Sequencing Grade	50 µg (5 × 10 µg)	V1651
rLys-C	15 µg	V1671
Lys-C	20 µg	V1170
ProAlanase, Mass Spec Grade	5 µg	VA2161
ProAlanase PI, Mass Spec Grade	15 µg	VA2171
Chymotrypsin, Sequencing Grade	25 µg	V1061
Chymotrypsin, Sequencing Grade	100 µg	V1062
Elastase	5 mg	V1891
Pepsin	250 mg	V1959
Endoglycosidase H	10.000 U	V4871
Endoglycosidase H	50.000 U	V4875
PNGaseF	500 U	V4831
Trypsin Platinum, Mass Spec Grade	100 µg	VA9000
Trypsin Gold, Mass Spectrometry Grade	100 µg	V5280
Sequencing Grade Modified Trypsin	100 µg (5 × 20 µg)	V5111
Sequencing Grade Modified Trypsin	100 µg	V5117
Trypsin/Lys-C Mix, Mass Spec Grade	20 µg	V5071
Trypsin/Lys-C Mix, Mass Spec Grade	100 µg	V5072
Trypsin/Lys-C Mix, Mass Spec Grade	100 µg (5 × 20 µg)	V5073
Rapid digestion Trypsin	100 µg	V1060
Rapid digestion Trypsin/Lys-C	100 µg	V1061



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