

QUANTUM SI™

Proteus™

**The Future of Single-molecule
Protein Sequencing**

World HUPO 2026



Disclaimer and Other Information

Forward-looking Statements

This presentation includes “forward-looking statements” within the meaning of the “safe harbor” provisions of the United States Private Securities Litigation Reform Act of 1995. The actual results of the Company may differ from its expectations, estimates, and projections and, consequently, you should not rely on these forward-looking statements as predictions of future events. Words such as “expect,” “estimate,” “project,” “budget,” “forecast,” “anticipate,” “intend,” “plan,” “may,” “will,” “could,” “should,” “believes,” “predicts,” “potential,” “continue,” and similar expressions (or the negative versions of such words or expressions) are intended to identify such forward-looking statements. These forward-looking statements include, without limitation, the Company’s expectations with respect to future performance and development and commercialization of products, services and applications, its anticipated cash runway, the anticipated timing of product launches and product capabilities, including the expected amino acid detection capabilities of Proteus at launch, the Company’s current belief regarding remaining technical challenges associated with Proteus commercialization, the expected timing and successful completion of system integration, optimization, verification, validation and launch-readiness activities, the expected benefits of the Company’s development-process, organizational and cost-control actions, including the reduction in force, and any financial guidance.

These forward-looking statements involve significant risks and uncertainties that could cause the actual results to differ materially from those discussed in the forward-looking statements. Many of these factors are outside the Company’s control and are difficult to predict. Factors that may cause such differences include, but are not limited to: the inability to maintain the listing of the Company’s Class A common stock on The Nasdaq Stock Market; the ability of the Company to grow and manage growth and retain its key employees; the Company’s ongoing leadership transitions and succession planning; the Company’s ability to successfully implement organizational changes, including workforce reductions, cost-control actions and development-process improvements, without disrupting product development, launch readiness, employee retention or customer engagement; the possibility that additional technical, integration, performance, reliability, verification, validation or launch-readiness challenges may arise or take longer or cost more to address than expected; changes in applicable laws or regulations; the ability of the Company to raise financing in the future; the success, cost and timing of the Company’s product development and commercialization activities, including the use and benefit of artificial intelligence in these and other activities; the commercialization and adoption of the Company’s existing products and the success of any product the Company may offer in the future, including Proteus; the potential attributes and benefits of the Company’s commercialized Platinum protein sequencing instruments and kits and the Company’s other products (including Proteus) once commercialized; the Company’s ability to obtain and maintain regulatory approval for its products, and any related restrictions and limitations of any approved product; the Company’s ability to identify, in-license or acquire additional technology; the Company’s ability to maintain its existing lease, license, manufacture and supply agreements; the Company’s ability to compete with other companies currently marketing or engaged in the development or commercialization of products and services that serve customers engaged in proteomic analysis, many of which have greater financial and marketing resources than the Company; the size and growth potential of the markets for the Company’s products and services, and its ability to serve those markets once commercialized, either alone or in partnership with others; the Company’s estimates regarding future expenses, future revenue, capital requirements and needs for additional financing; the Company’s financial performance; the Company’s defense and initiation of litigation matters; and other risks and uncertainties described under “Risk Factors” in the Company’s most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q and in the Company’s other filings with the SEC. The Company cautions that the foregoing list of factors is not exclusive. The Company cautions readers not to place undue reliance upon any forward-looking statements, which speak only as of the date made. The Company does not undertake or accept any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements to reflect any change in its expectations or any change in events, conditions, or circumstances on which any such statement is based.

Proteus Next-generation Architecture

Platinum[®] Pro & 2M Chip

- Integrated semiconductor consumable with **2 million** wells
- Benchtop instrument with manual workflow



Proteus[™] & Nanowell Array

- Simple, passive consumable with estimated **80 million wells** at launch
- Benchtop instrument with imaging system
- Superior sequencing performance
- Workflow automation



Proteus System Overview



Nanowell Array



Tips



Reagents



Proteus*: 17.8" wide, 27.1" tall, 27.3" deep

The Proteus Nanowell Array Enables a Broad Range of Applications



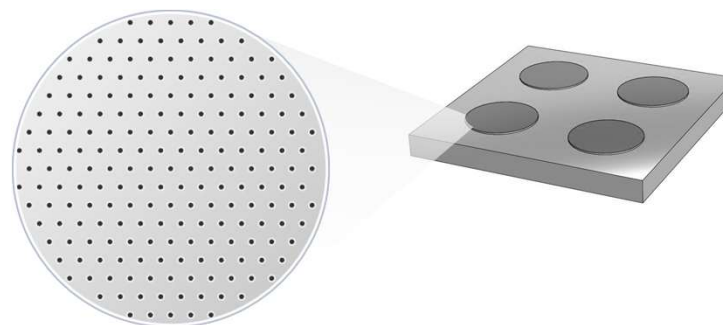
More samples per run with 40× more nanowell capacity per consumable compared to Platinum Pro



Deep analysis of a single sample to address complex mixtures or rare events like protein variants or post-translational modifications (PTMs)



Multiplexing samples to achieve higher throughput and lower costs per sample for cost sensitive applications like protein identification (ID)





Proteus vs Platinum

Interim Development Results

Platform Background Information



Platinum Pro is a commercially available system, used here as the reference



Proteus instrument, consumables, loading protocol and analysis software are in development and will continue to be improved.

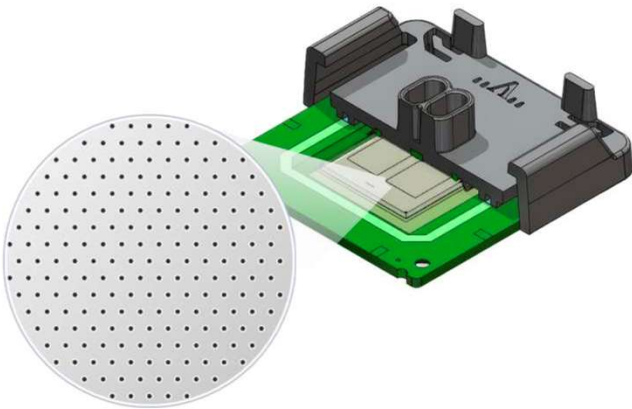
Data generated uses a developmental kit that detects 18 Amino Acids

Consumable Configuration & Definitions

Platinum[®] Pro Chip

2 chambers

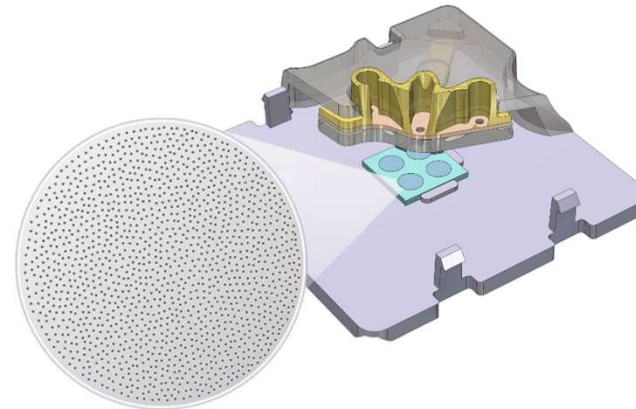
1M wells/chamber



Proteus[™] Chip

4 chambers

20M wells/chamber



All studies compared using ~1M Platinum Pro chamber to a ~20M Proteus chamber

Study Design & Purpose

Control Peptide Mix

Purpose

- Evaluate fundamental performance characteristics of platform independent of sample preparation

Materials

- 6 unique control peptides
- Each 25 amino acids (AA) in length
- Pooled into a single “sample” with equal concentration per peptide
- N = 4 instruments

10-Plex Protein Mix

Purpose

- Evaluate interim platform performance (incl library prep) using a panel of proteins highly characterized on Platinum

Materials

- 10 proteins mixed in equal concentration
- Prepped using commercial library prep kit
- N = 2

24-Plex Protein Mix

Purpose

- Evaluate interim platform performance (incl library prep) using a panel of proteins not previously sequenced by either platform

Materials

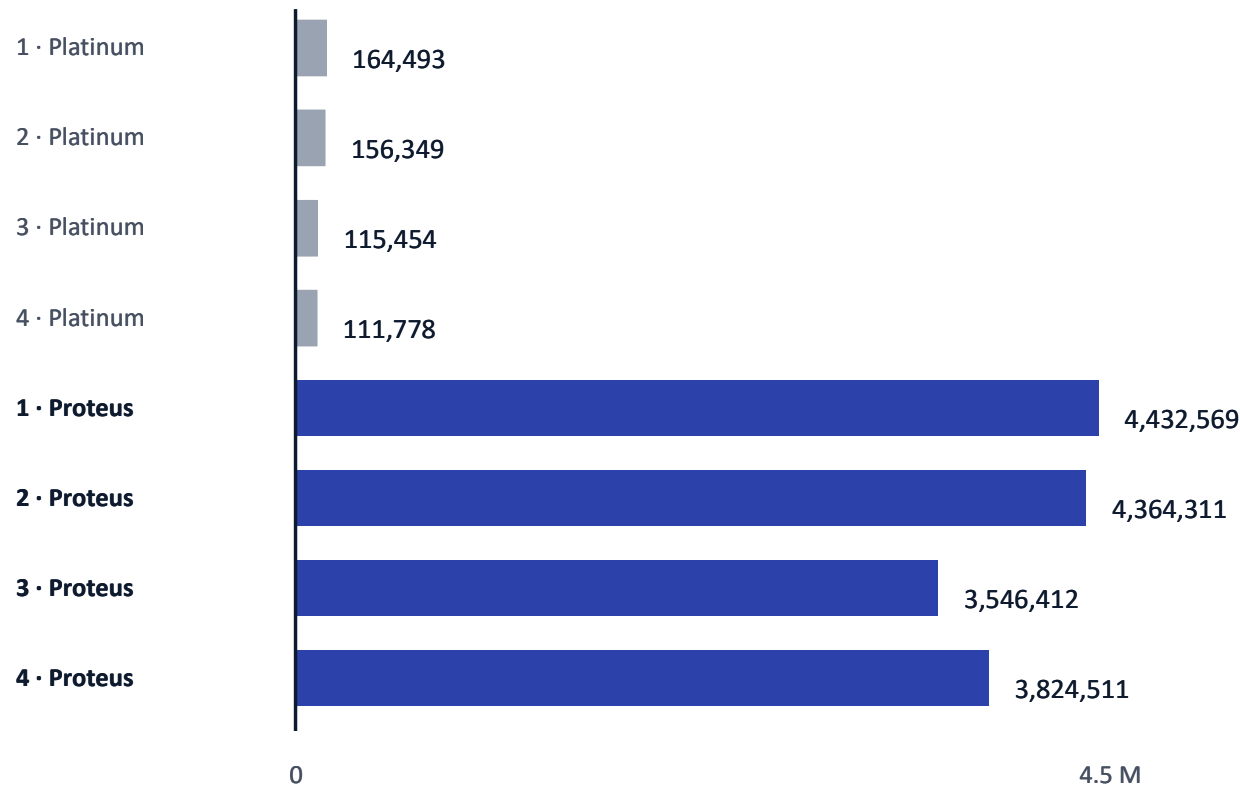
- 24 proteins mixed in equal concentration
- Prepped using commercial library prep kit
- N = 2



Control Peptides

Interim Development Results

Proteus delivers 30× more alignments from a single chamber run



30.1×

median reported alignments

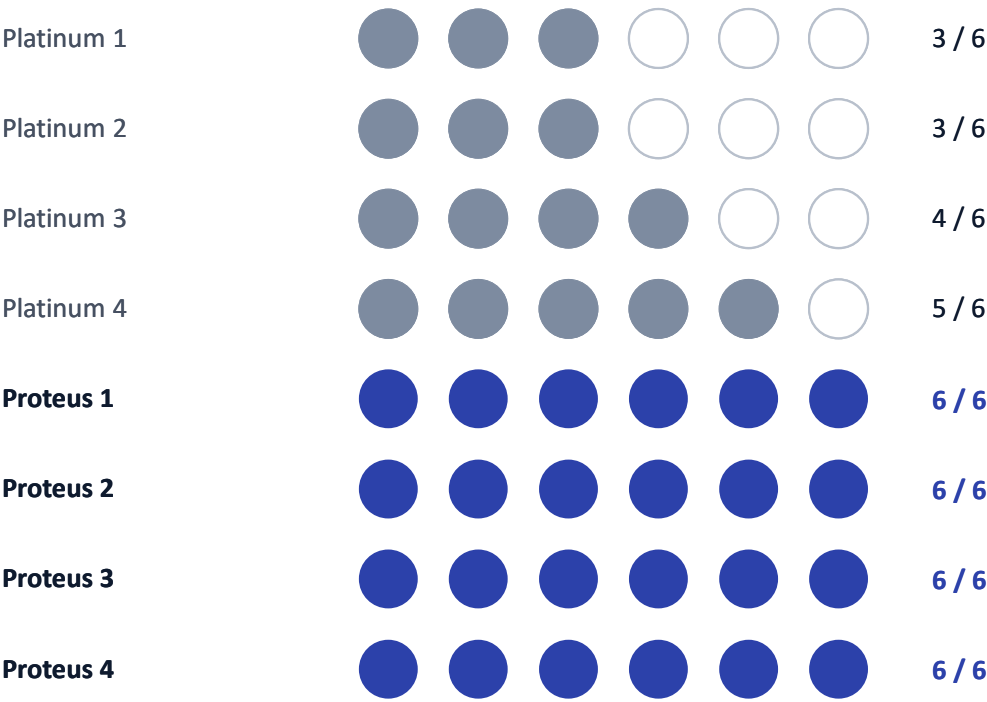
4,094,411

Proteus median

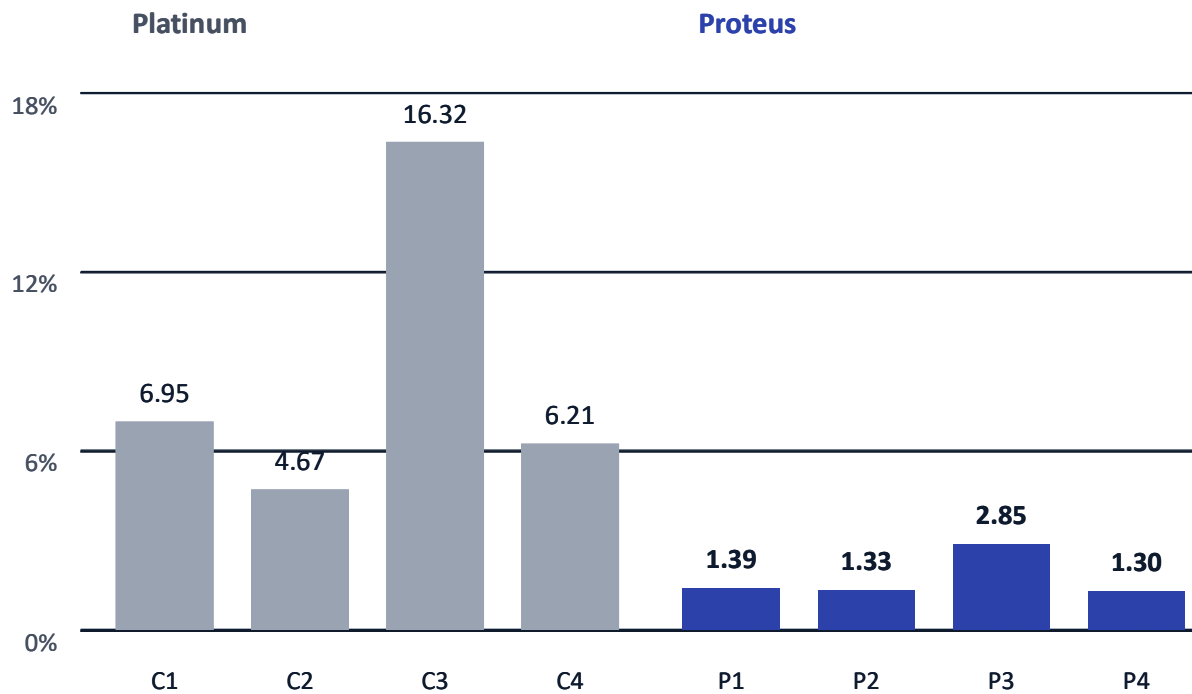
135,901.5

Platinum median

Proteus identifies all 6 peptides in every run



Proteus has a 4.8x lower false discovery rate (FDR)



1.36%

Proteus median FDR

A full Proteus run is capable of delivering 60× more alignments at a 4.8x lower FDR

Platinum
2 chambers

Chamber 1
0.136 M

Chamber 2
0.136 M

= 0.27 M

Proteus
4 chambers

Chamber 1
4.09 M

Chamber 2
4.09 M

Chamber 3
4.09 M

Chamber 4
4.09 M

= 16.4 M

Each chamber assumed to perform like the single-chamber median

~60×

more alignments per instrument
run

Projected per instrument run	Platinum (2 chambers)	Proteus (4 chambers)	Proteus vs. Platinum
Apertures	1.73 M	73.4 M	42.4×
High-quality reads	0.77 M	30.8 M	40.1×
Reported alignments	0.27 M	16.4 M	60.3×
Aligned / aperture · FDR	15.71% · 6.58%	22.21% · 1.36%	1.41× higher · 4.8× lower

ASSUMPTIONS

Every chamber performs like the single-chamber median. Platinum runs 2 chambers, Proteus 4 chambers. Per-chamber rates such as FDR do not change with scale.

Proteus is a fundamentally superior platform technology

Four technology improvements deliver scaling well beyond the increase in nanowells alone

SEQUENCING
SCALE

21.2×

median apertures
per chamber



CLEANER
SIGNAL

87.2%

Pass filter
vs 65.6% Platinum



CONVERSION

1.41×

more alignments
per aperture



HIGHER
ACCURACY

1.36%

median FDR
vs 6.58% Platinum



OUTCOME

~30×
per chamber



~60×
per instrument run

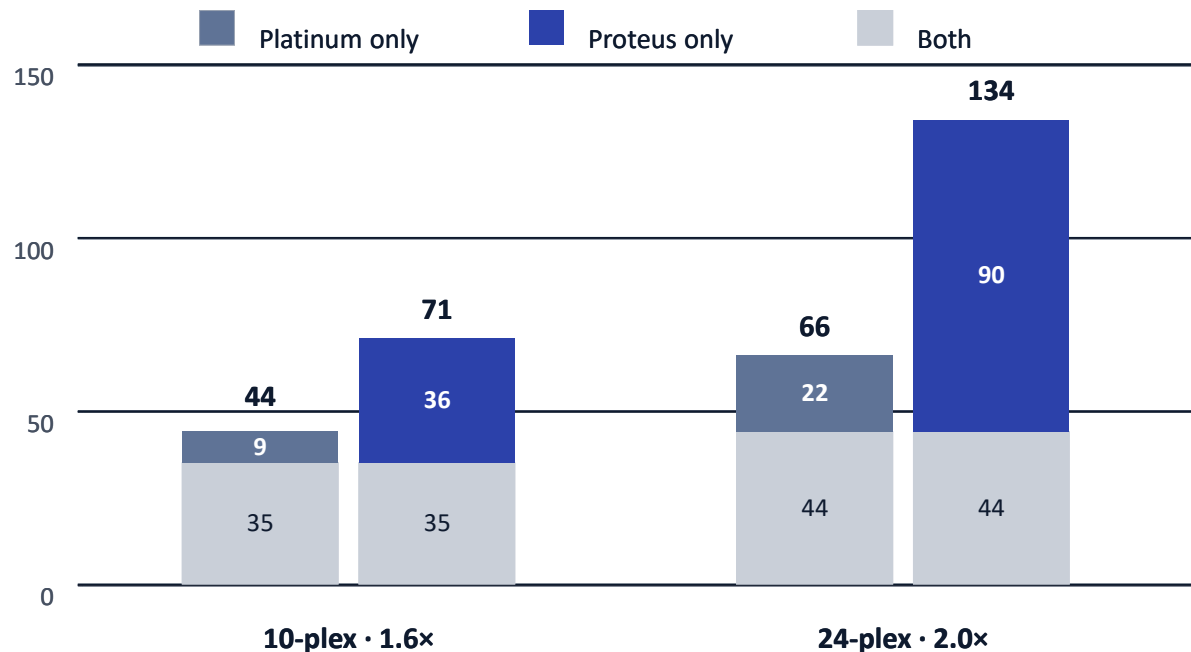


Protein Mixtures

Interim Development Results

Proteus detected 1.6–2.0× more peptides than Platinum from single chamber runs

With further optimization of loading, the unique peptides identified is likely to increase significantly



1.6–2.0×
more peptides identified

2.6 – 9.6×

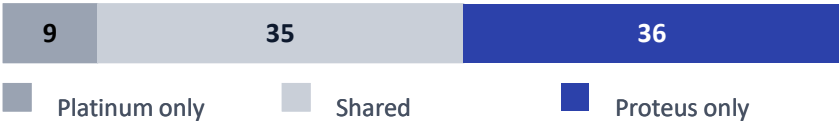
Alignments (24-plex · 10-plex)

Proteus enables deeper insights from protein mixtures via increased amino acid coverage and lower FDR

10-plex

Proteins previously sequenced on Platinum

PEPTIDES IDENTIFIED



WHY PLATINUM MISSED THE 36 PROTEUS-ONLY



24-plex

Proteins new to both platforms

PEPTIDES IDENTIFIED

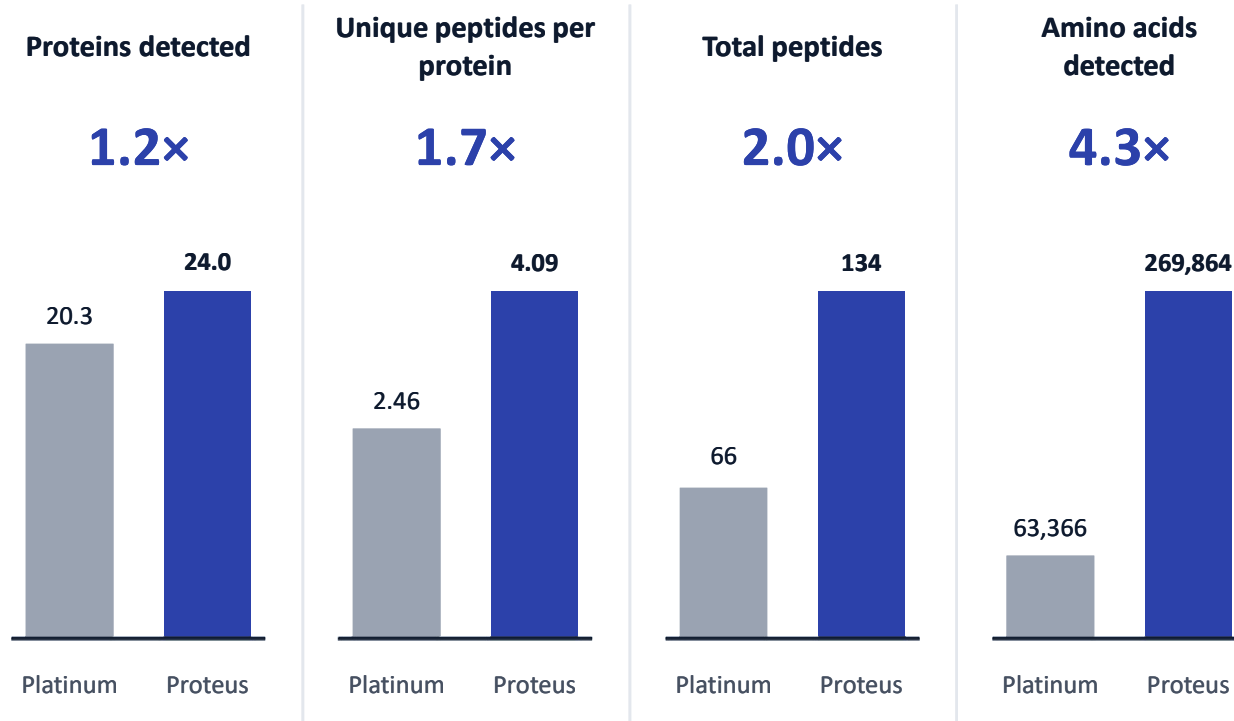


WHY PLATINUM MISSED THE 90 PROTEUS-ONLY



Peptides identified (FDR ≤ 0.1 and ≥10 alignments), and why Platinum missed the Proteus-only set

Proteus delivers 4.3× greater coverage in a 24 plex protein mixture from a single chamber



24 / 24

proteins detected on Proteus
vs 20.3 on Platinum

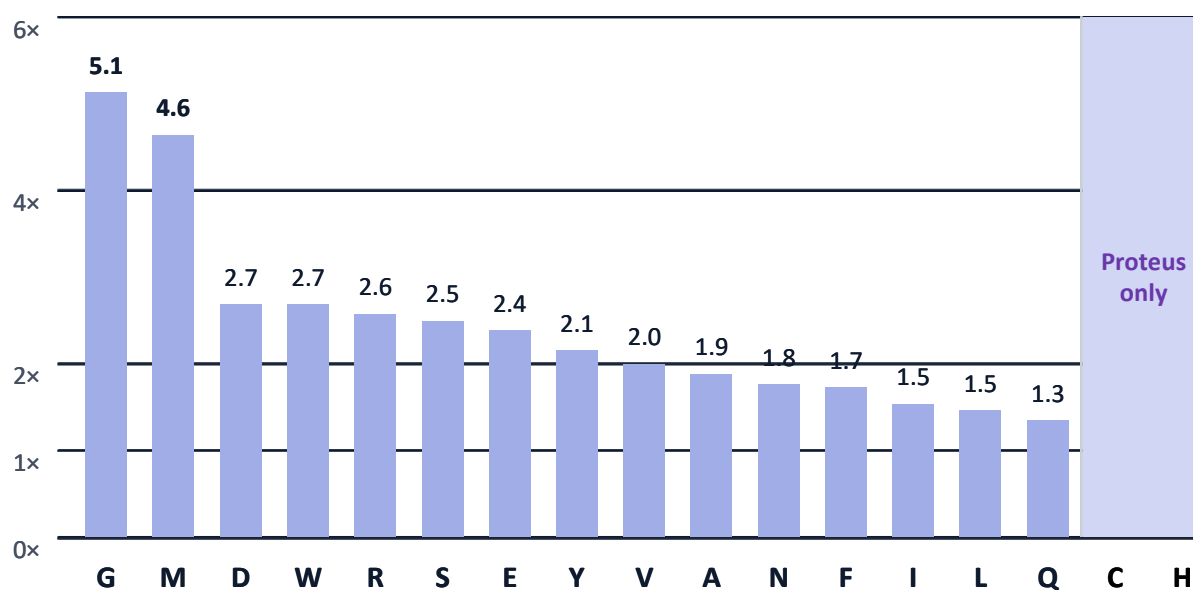
SEQUENCE COVERAGE

270k vs 63k

amino acids detected per run

Proteus developmental sequencing kit has superior coverage across all amino acids

Median fold change in per-residue detection (≥ 10 alignments), Proteus vs Platinum median of the same residue; 24 plex



Platinum = 1x. C, H and K only detected on Proteus

C and H

detected only on Proteus

K

Recognition is enabled on Proteus but not present in data given LysC conjugation chemistry was used for this study

Proteus is well positioned to transform single-molecule protein sequencing

Interim performance data shows significant improvement over Platinum with additional improvements expected prior to launch



Continue to expand amino acid coverage and demonstrate detection of all 20 AAs by end of 2026

Optimize performance of automated workflow(s) across sample types and applications

Complete development of new AI based algorithms to deliver reference free sequencing and generalizable PTM detection in 2027

Proteus launch on track for Q2 2027