Agilent Protein Broad Range P240 Kit

Agilent ProteoAnalyzer system

The Agilent Protein Broad Range P240 kit (p/n: 5191-6640) is designed for general protein analysis used on the Agilent ProteoAnalyzer system. Samples can be analyzed under both reduced and non-reduced conditions and are prepared using a rapid covalent labeling method. Fluorescence detection provides a 3-log linear dynamic range. The Broad Range sieving gel provides high-resolution separations of proteins from 10 to 240 kDa in approximately 30 minutes. Additionally, the included capillary conditioning solution cleans and rejuvenates the capillaries between runs ensuring reproducible separations.

The combination of discrete individual capillaries, a protein conditioning solution, and fresh sieving gel allows for separations of a wide variety of sample types including antibodies, crude cell lysates, and microsomal and soluble fractions.

Features and benefits

– **Simplified sample preparation**
Label samples in 20 minutes directly in a 96-well plate, with only 10 minutes hands-on time.

– **Digital analysis**
Digital data is presented as both an electropherogram and digital gel image for analysis immediately upon completion of each set of 12 samples.

– **High-resolution separation**
Achieve 10% molecular weight resolution (15 to 150 kDa) and resolve glycosylation isoforms to characterize samples.

– **3-log dynamic range**
Detect impurities down to 0.1% with a 2 to 2,000 ng/µL dynamic range.

– **Complex sample separation**
Complete rejuvenation of capillaries between runs allows for separation of samples such as crude lysates and microsomal fractions.
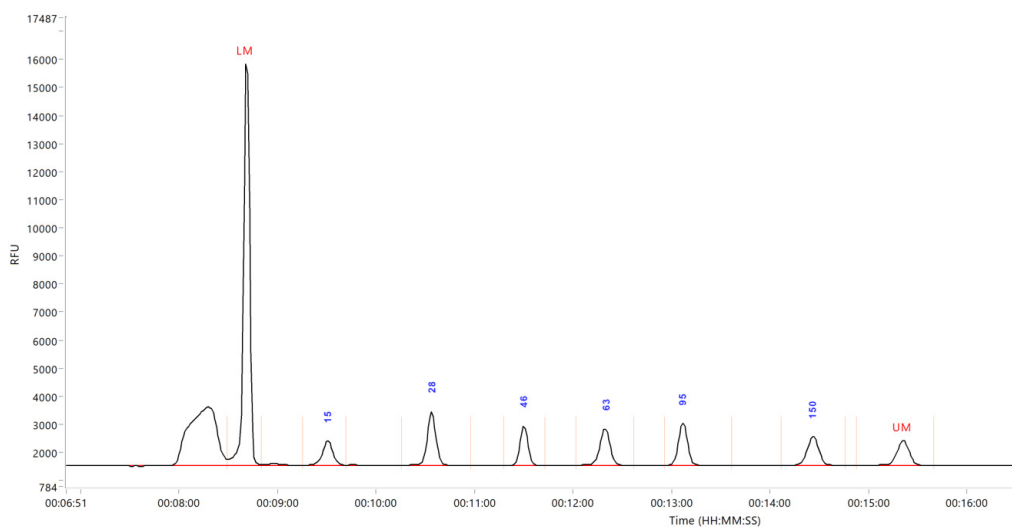
Figure 1. The Agilent P240 Broad Range Ladder separated on the Agilent ProteoAnalyzer system. LM = Lower Marker, UM = Upper Marker.
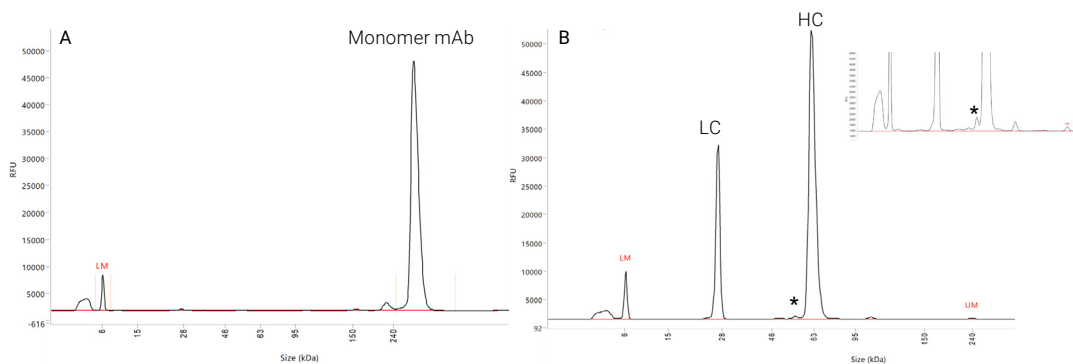

Figure 2. Analysis of the NIST monoclonal antibody (mAb) under non-reduced (A) and reduced (B) conditions using the Agilent Protein Broad Range P240 kit on the Agilent ProteoAnalyzer system. The Broad Range Gel allows for separation of protein glycoforms such as the non-glycosylated heavy chain (denoted with *) and glycosylated heavy chain. LC = Light Chain, HC = Heavy Chain.
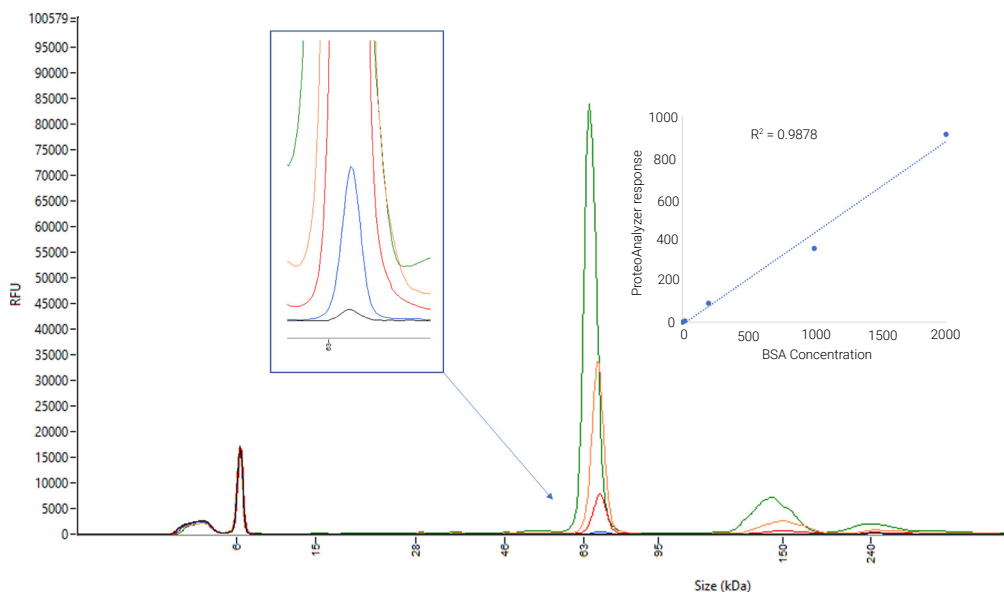

Figure 3. Dilution series of BSA across the 3-log dynamic range (2 to 2,000 ng/µL) of the Agilent Protein Broad Range P240 kit.
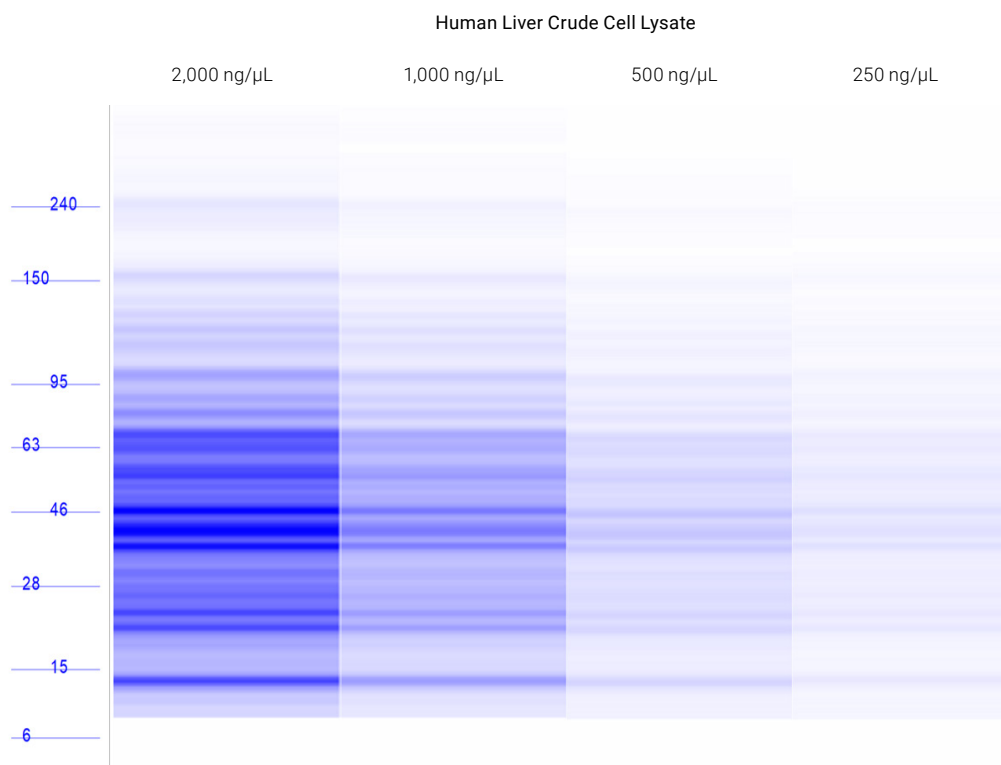
Human Liver Crude Cell Lysate

Figure 4. Digital gel image of human liver cell crude lysate analyzed using the Agilent Protein Broad Range P240 kit on the Agilent ProteoAnalyzer system at 2,000 ng/μL, 1,000 ng/μL, 500 ng/μL, and 250 ng/μL.

Kit Specifications

Analytical Specifications		ProteoAnalyzer Protein Broad Range P240 kit
Sizing Range	LM only LM and UM	10 to 240 kDa 10 to 200 kDa
Typical Sizing Accuracy (% Sizing Error)	LM only LM and UM	< 15% for BSA, CAII (using reduced conditions) < 10% for BSA, CAII (using reduced conditions)
Typical Resolution		< 10% molecular weight resolution between 15 to 150 kDa (based on ladder) R ≥ 1 NIST mAb NGHC/HC (using reduced conditions)
Sizing Precision	LM only	< 8% CV for BSA, CAII, GREMLIN-1, and NIST mAb (using reduced conditions) < 10% CV for intact NIST mAb (using non-reduced conditions)
	LM and UM	< 5% CV for BSA, CAII, GREMLIN-1 and NIST mAb (using reduced conditions)
Quantitative Range		2 ng/μL to 2,000 ng/μL for BSA in PBS
Sensitivity (Signal/Noise > 3)		1 ng/μl for BSA, CAII in PBS
Quantification Reproducibility		<15 %CV for 20 − 2,000 ng/μL BSA <25 %CV for 2 − 20 ng/μL BSA
Physical Specifications		
Total Run Time		30 minutes
Samples Per Run		11 samples + ladder in well 12
Sample Volume Required		1 μL
Kit Stability		Minimum 4 months

LM = Lower Marker, UM = Upper Marker

Learn more at www.agilent.com/genomics/proteoanalyzer

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Trusted Answers