

## Series II Protein 80 and 230 kits

### Speed up your analysis with the Agilent 2100 bioanalyzer

#### The fast and reliable way to replace analytical SDS-PAGE methods

Are you expressing recombinant proteins, purifying proteins, performing stability studies or working with antibodies? Do you need a reliable protein quality control? Would you like to obtain details on protein size, purity and concentration in one fast step?

#### 10 reasons to switch from SDS-PAGE to the 2100 bioanalyzer

- 1. Improved data reliability** – Pre-packaged reagents and standardized assays yield highly reproducible data.
- 2. Faster results** – Sizing and quantitation of 10 samples in less than 45 minutes including sample preparation and data analysis.
- 3. Easy-to-use** – Simply load the chip, press "start" and the Agilent 2100 bioanalyzer does the rest.
- 4. Applicable to quality control in regulated environments** – 21 CFR part 11 compliant Security Pack software, IQ & OQ/PV services for hardware and software, declaration of conformity for consumables.
- 5. Minimal sample consumption** – Only 4 µL of protein sample required per analysis.



- 6. No manual staining and destaining steps** – All integrated into a single, automated step.
- 7. Clean** – Minimal exposure to hazardous materials.
- 8. Quick and easy sample comparison** – One-click overlay, scaling or zooming features.
- 9. Alternative data display options** – Results shown in gel-like image, electropherogram and tabular formats.
- 10. Conveniently archived and stored digital data** – Share data with others and export it for publication or presentations.

Specifications	Protein 80 (p/n 5067-1515)	Protein 230 kit (p/n 5067-1517)
Sizing range	5-80 kDa	14-230 kDa
Typical sizing resolution	10 %	10 %
Typical sizing accuracy	10 % CV (CAII, BLG)	10 % CV (CAII, BLG)
Sizing reproducibility	3 % CV (CAII, BLG)	3 % CV
Sensitivity (S/N>3)	6 ng/µL CAII (15 ng/µL BSA) in PBS, 10 ng/µL (CAII) in 0.5 M NaCl (30 ng/µL BSA)	6 ng/µL CAII (15 ng/µL BSA) in PBS 30 ng/µL (BSA) in 0.5 M NaCl
Quantitative range	60-2000 ng/µL CAII in PBS	15-2000 ng/µL CAII 30-2000 ng/µL BSA in PBS
Qualitative range	6-4000 ng/µL CAII in BLG	6-5000 ng/µL CAII in PBS 15-5000 ng/µL BSA in PBS
Quantitation reproducibility	20 % CV (CAII, BLG)	20 % CV (CAII, BLG)
<b>Physical specifications</b>		
Analysis time	30 minutes	30 minutes
Number of samples	10 samples/chip	10 samples/chip
Sample volume	4 µL	4 µL
Kit stability	4 months	4 months

CAII= Carbonic Anhydrase II, BSA=Bovine Serum Albumin, BLG=beta-Lactoglobulin

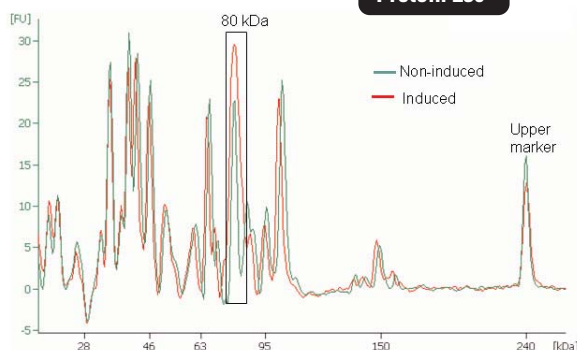


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# Solutions for a wide range of applications

## Protein Expression

- Select clones based on protein expression
- Identify overexpressed proteins
- Compare different expression patterns

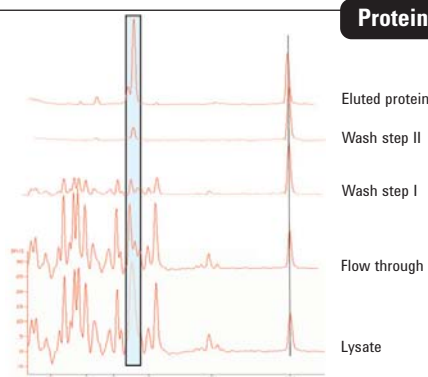


**Protein 230**

The overexpression of a recombinant 80 kDa protein was induced in *E. coli* cells. The cell lysates were prepared in 0.5 M NaCl, 1% Triton and diluted in PBS buffer. The overexpression of the 80 kDa protein was verified using the Protein 230 kit and the overlay function of the 2100 expert software.

## Protein Purification

- Monitor the protein isolation and purification process
- Check fractions for impurities
- Quickly optimize purification protocols

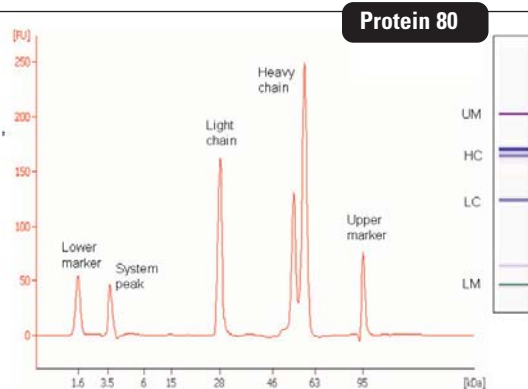


**Protein 230**

The Protein 230 kit was used to monitor each step of the overexpressed 80 kDa protein purification via affinity chromatography. The enlarged electropherograms of the several purification steps are shown. The analysis of the main elution fraction shows that the protein is 76 % pure and has a concentration of 132.2 µg/mL.

## Protein QA/QC

- Monitor protein stability, e.g. degradation and integrity
- Determine protein contaminations
- Analyze proteins under reducing and non-reducing conditions in parallel on one chip



**Protein 80**

The Protein 80 kit was used for quality control of an IgG antibody under reducing conditions in the presence of DTT. The electropherogram and the gel-like image show three main peaks/bands, the light chain, and the heavy chain with and without glycosylation. No degradation was detected.

Kits for the Agilent 2100 bioanalyzer are available for the analysis of DNA, RNA, proteins and cells.



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