

# Afyon™ SDS-PAGE Sample Preparation Kit

Fast, easy concentration and purification of samples for SDS-PAGE

**Afyon SDS-PAGE sample preparation kit** is a fast, efficient way to concentrate protein samples and to remove buffer components that may interfere with electrophoresis. In less than 10 minutes, samples are ready for SDS-PAGE. The Afyon protocol is easily scaled up and can be used for routine preparation of samples for electrophoresis and Western blotting.





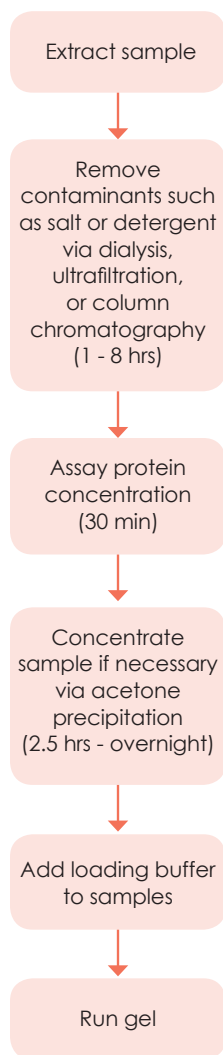
## Fast, easy concentration and purification of samples for SDS-PAGE

Afyon SDS-PAGE sample preparation kit is a fast, efficient way to concentrate protein samples and remove contaminants that can interfere with electrophoresis.

*Ready for electrophoresis in less than 10 minutes*

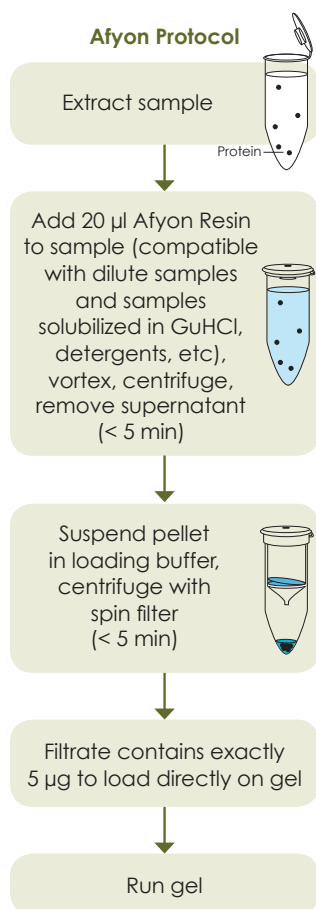
### Protein concentration with Afyon Kit

#### Traditional Protocol



**Traditional Protocol:**  
4 hrs – overnight

#### Afyon Protocol

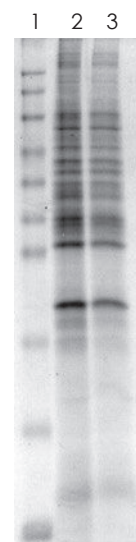


**Afyon Protocol:**  
10 minutes

**Afyon is a quick, easy protocol to concentrate protein samples and remove unwanted chemicals prior to electrophoresis.** Simply add Afyon resin to the sample, vortex, spin to pellet resin, resuspend resin in gel loading buffer to elute protein, and remove resin with the spin filter provided with the Afyon kit. The resulting sample is ready to load on a gel in less than 10 minutes.

*Concentrate samples faster than ultrafiltration*

**Concentrate samples 10 times faster than spin ultrafiltration.** HeLa cell lysate was diluted to 20 µg/ml with 1M NaCl, 20 mM Tris pH 7.6. 1 ml diluted lysate was concentrated and buffer exchanged using an ultrafiltration spin filter (Millipore), or Afyon resin. Ultrafiltration took over one hour, while Afyon took less than 10 minutes. Lane 1: molecular weight markers. Lane 2: sample concentrated by ultrafiltration. Lane 3: sample concentrated using Afyon.

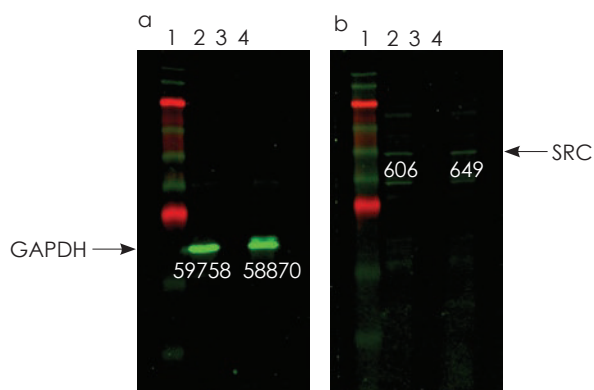




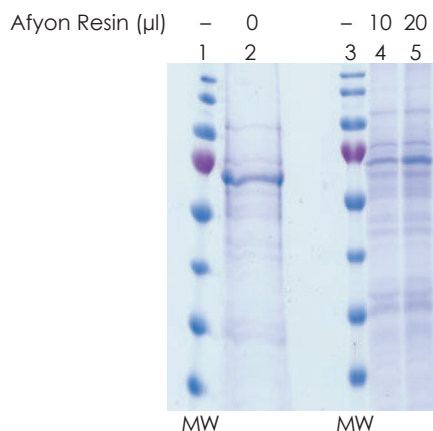
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## Compatible with chemiluminescent or fluorescent Western blotting

**Afyon is compatible with Western blot detection.** After 100-fold concentration with Afyon, proteins that were undetectable in a dilute solution can be detected by Western blot. A431 cell lysate (lane 2) was diluted (lane 3) and the diluted lysate concentrated using Afyon (lane 4). A Western blot of these samples was detected using the WesternBright MCF multicolor fluorescent Western blotting kit. The band intensities are indicated.



## Remove contaminants that interfere with electrophoresis



**Remove substances that interfere with electrophoresis in minutes.** Afyon quickly removes buffer components such as guanidinium chloride, thiocyanate or urea that can cause samples to migrate irregularly during electrophoresis. A sample of K-561 cell lysate in 4 M guanidinium thiocyanate spreads and runs irregularly on a gel (lane 2). When the protein is recovered using Afyon resin (lanes 4-5), the salt is removed and the sample runs cleanly. 10 µl of Afyon recovers 2.5 µg protein (lane 4), while 20 µl of Afyon recovers 5 µg protein (lane 5). MW = molecular weight markers.





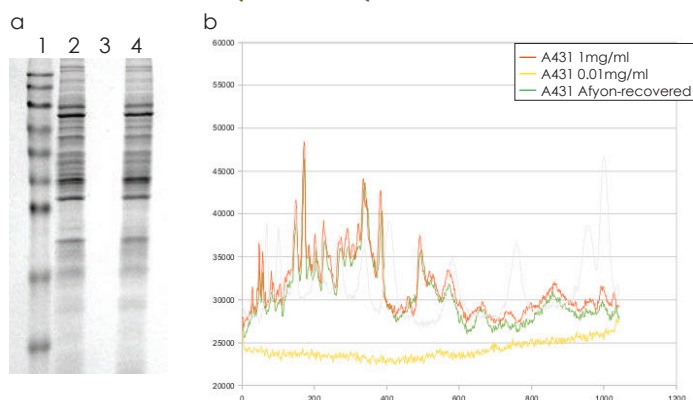
## Fast, easy concentration and purification of samples for SDS-PAGE

**Afyon** SDS-PAGE sample preparation kit includes everything needed to prepare protein samples for electrophoresis: Afyon resin, spin filters, and sample loading buffer.

### Features

- Quickly remove contaminants that can interfere with electrophoresis (GuHCl, urea, ammonium sulfate, etc)
- Protein samples ready to load in less than 10 minutes
- Safe and non-toxic – no DMSO, acetone or TCA required
- Many times faster than concentration and buffer exchange via ultrafiltration or dialysis
- Compatible with SDS-PAGE and downstream Western blotting

### Maintain sample composition



**Effective concentration of a protein sample using the Afyon kit.** Panel a depicts a Coomassie R-250 stained gel comparing initial A431 cell extract (lane 2, 5µg total protein), diluted cell extract (lane 3), and concentrated sample after the Afyon protocol using 20 µl resin slurry (lane 4). Lane 1 is molecular weight marker. Panel b shows the profiles of lanes on the stained gel, demonstrating that the banding patterns of the initial and Afyon-concentrated samples are identical.

### Ordering Information

| Catalog Number | Product                                | Size    |
|----------------|----------------------------------------|---------|
| K-02101-010    | Afyon™ SDS-PAGE Sample Preparation Kit | 10 rxns |
| K-02101-025    | Afyon™ SDS-PAGE Sample Preparation Kit | 25 rxns |

### Related Products

|             |                                                                                                                                                                                   |                                   |        |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------|
| K-12021-010 | WesternBright™ MCF fluorescent Western blotting kit (Contains: secondary antibodies, washing solution, blocking solution, pre-cut PVDF membranes and background quenching sheets) | 10 blots                          |        |
| K-12042-D10 | WesternBright™ Quantum Western Blotting HRP Substrate                                                                                                                             | For 1000 cm <sup>2</sup> membrane | 100 ml |
| K-12042-D20 | WesternBright™ Quantum Western Blotting HRP Substrate                                                                                                                             | For 2000 cm <sup>2</sup> membrane | 200 ml |
| K-12045-D20 | WesternBright™ ECL Western Blotting HRP Substrate                                                                                                                                 | For 2000 cm <sup>2</sup> membrane | 200 ml |
| K-12045-D50 | WesternBright™ ECL Western Blotting HRP Substrate                                                                                                                                 | For 5000 cm <sup>2</sup> membrane | 500 ml |

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