Control Kit for New or Experienced Users of 2-D Electrophoresis

Introduction
The ReadyPrep 2-D starter kit is a complete set of reagents to perform 2-D gel electrophoresis under highly controlled conditions. This allows you to focus on your technique, not your sample and reagent prep, when getting started. This set of control reagents can also be used to validate your 2-D electrophoresis system. The kit contains a complex protein sample (E. coli) and all the buffers needed to focus the sample and then equilibrate and load them onto the second-dimension SDS-PAGE gel. The step-by-step instructions are easy to follow and provide useful tips for first-time users of the PROTEAN® IEF cell and ReadyStrip IPG strips. With this kit you can test your system and technique and then proceed to separating your own samples with confidence.

2-D Start to Finish
Each kit includes all reagents required to:
• Prepare a protein sample (E. coli)
• Rehydrate IPG strips with sample
• Equilibrate IPG strips for SDS-PAGE
• Overlay IPG strips with agarose on SDS-PAGE gels

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Customize to Fit Your System
The ReadyPrep 2-D starter kit is designed to work with all 3 Bio-Rad SDS-PAGE systems. Choose the system you want to use, and then order the appropriate ReadyStrip IPG strips and precast gels to go with the kit. Use:

- 7 cm ReadyStrip pH 4–7 IPG strips (163-2001) and Ready Gel 8–16% precast gels (161-1394) for the Mini-PROTEAN 3 system
- 11 cm ReadyStrip pH 4–7 IPG strips (163-2015) and Criterion 8–16% gels (345-0041)
- 17 cm ReadyStrip pH 4–7 IPG strips (163-2008) and PROTEAN® 8–16% gels (161-1453)

2-D Starter Kit Individual Reagents

**E. coli** protein sample — Use this complex protein sample as a control to validate your 2-D reagents and protocol

**Rehydration/sample buffer** — This standard formulation is appropriate for many protein samples; prepare your sample with confidence using this performance-tested buffer

**Equilibration buffer I and buffer II** — These buffers offer premixed convenience for faster 2-D SDS-PAGE setup. Each vial reconstitutes to 20 ml; buffer I contains DTT, buffer II requires the addition of iodoacetamide

**Iodoacetamide** — Add this to complete equilibration buffer II, or use when preparing your own equilibration buffers

**ReadyPrep overlay agarose** — Save time setting up your 2-D gels and monitor the electrophoresis with the included Bromophenol Blue tracking dye

### Specifications

#### 2-D Starter Kit Contents

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protein sample</strong></td>
<td>E. coli extract, lyophilized, 2.7 mg</td>
</tr>
<tr>
<td><strong>IPG rehydration/sample buffer</strong></td>
<td>8 M urea, 2% CHAPS, 50 mM DTT, 0.2% Bio-Lyte™ 3/10 ampholyte, 0.001% Bromophenol Blue, 1 per kit</td>
</tr>
<tr>
<td><strong>Equilibration buffer I</strong></td>
<td>375 mM Tris-HCl, pH 8.8, 6 M urea, 2% SDS, 2% DTT, 2 per kit</td>
</tr>
<tr>
<td><strong>Equilibration buffer II</strong></td>
<td>375 mM Tris-HCl, pH 8.8, 6 M urea, 2% SDS, 2 per kit</td>
</tr>
<tr>
<td><strong>Glycerol solution</strong></td>
<td>30% (v/v) ultrapure glycerol, 70 ml, 1 per kit</td>
</tr>
<tr>
<td><strong>Agarose</strong></td>
<td>0.5% low melt agarose, 1x Tris-glycine-SDS, 0.001% Bromophenol Blue, 50 ml, 1 per kit</td>
</tr>
<tr>
<td><strong>Iodoacetamide</strong></td>
<td>0.5 g, 2 per kit</td>
</tr>
<tr>
<td><strong>Nanopure water</strong></td>
<td>15 ml, 1 per kit</td>
</tr>
</tbody>
</table>

#### Ordering Information

**Catalog #** | **Description**
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163-2105 | ReadyPrep 2-D Starter Kit, includes protein sample and reagents sufficient to rehydrate, focus, and transfer to second-dimension gels six 17 cm, ten 11 cm, or sixteen 7 cm ReadyStrip IPG strips (ReadyStrip IPG strips and precast SDS-PAGE gels and gel stains not included in the kit)
163-2106 | ReadyPrep 2-D Starter Kit Rehydration/Sample Buffer, 1 vial, lyophilized, reconstitutes to 10 ml
163-2107 | ReadyPrep 2-D Starter Kit Equilibration Buffer I, with DTT, 1 vial, lyophilized, reconstitutes to 20 ml
163-2108 | ReadyPrep 2-D Starter Kit Equilibration Buffer II, without DTT or iodoacetamide, 1 vial, lyophilized, reconstitutes to 20 ml
163-2109 | Iodoacetamide, 30 g
163-2110 | E. coli Protein Sample, lyophilized, 2.7 mg
163-2111 | ReadyPrep Overlay Agarose, 50 ml
161-0786 | Bio-Safe Coomassie Stain, 1 L
161-0434 | IEF Gel Staining Solution, 1 L
161-0435 | Coomassie Brilliant Blue R250 Staining Solution Kit

* 17 cm IPG strips fit PROTEAN II Ready Gel precast gels and PROTEAN XL and PROTEAN Plus handcast gels without trimming.

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**Bio-Rad Laboratories, Inc.**

**Life Science Group**

**Web site** www.bio-rad.com **USA** (800) 4BIO-RAD **Australia** 02 9914 2800 **Austria** (01) 877 89 01 **Belgium** 09-385 55 11 **Brazil** 55 21 507 6191 **Canada** (800) 712-2771 **China** 06-10-8201-1368/88 **Denmark** 45 44 52-1000 **Finland** 358 699 804 2200 **France** 01 47 95 69 65 **Germany** 089 318 84-177 **Hong Kong** 852-2789-3300 **India** 031-951 4124 **Italy** 34 91 590 5200 **Japan** 03-5811-6270 **Korea** 82-2-3473-4460 **Latin America** 305-894-5950 **Mexico** 52 5 534 2552 **The Netherlands** 0318-540666 **New Zealand** 64-9-4152280 **Norway** 47-23-38-41-30 **Russia** 7 955 979 98 00 **Singapore** 65-2729877 **Spain** 34-91-590-5200 **Sweden** 46(0)8-55 21 27 00 **Switzerland** 061-717-9550 **United Kingdom** 0800-181134

**Bulletin 2642 EG Rev A**