

# ONE-HOUR Western™ General Guideline Using SNAP I.D.



Technical Manual No. TM0357

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## I. Description

Under ordinary conditions one can perform a complete Western blot in just one hour or so using GenScript's ONE-HOUR Western™ Blot Kits. When used in combination with the Millipore SNAP I.D. System, one can perform a complete Western blot even faster, in less than 12 minutes.

| Procedure           | Time               |
|---------------------|--------------------|
| Blocking            | 20 sec             |
| Antibody Incubation | 10 min             |
| Wash                | 1 min              |
| <b>Total</b>        | <b>&lt; 12 min</b> |

## II. Protocol

### 1. Prepare Mixture 1

Before or during protein electrophoresis, prepare Mixture 1 by mixing primary antibody with WB-1 in a microcentrifuge tube as indicated below. Vortex Mixture 1 gently for a few seconds and centrifuge briefly to collect the solution at the bottom of the tube. Incubate Mixture 1 at room temperature (RT) for at least 40 minutes.

| Mixture 1 Preparation    | Single-Well    | Double-Well     | Triple-Well    |
|--------------------------|----------------|-----------------|----------------|
| <b>WB-1 Solution</b>     | 30 µl per well | 15 ul per well  | 10 µl per well |
| <b>Primary Antibody*</b> | 3 µg per well  | 1.5 µg per well | 1 µg per well  |

\*Refer to manufacturer's recommendations for the appropriate amount of antibody. GenScript's ONE-HOUR Advanced Western™ Kits (L00241, L00242, and L00243) use only 1/4 of the manufacturer's recommended amount of the primary antibody for Western blot.

### 2. Pre-Treat Membrane

Just before the protein transfer from gel to membrane is complete, prepare the Pretreat Solution:

Mix one volume of Pretreat A, one volume of Pretreat B, and two volumes of double distilled water. Use fresh mixture for every analysis. Use the Pretreat Solution as indicated below. Apply vacuum until well(s) are completely empty.



| Pretreat Solution Preparation | Single-Well    | Double-Well     | Triple-Well      |
|-------------------------------|----------------|-----------------|------------------|
| Pretreat A                    | 5 ml per well  | 2.5 ml per well | 1.25 ml per well |
| Pretreat B                    | 5 ml per well  | 2.5 ml per well | 1.25 ml per well |
| ddH <sub>2</sub> O            | 10 ml per well | 5 ml per well   | 2.5 ml per well  |

Wash with 1X Wash solution once, using 20 ml for Single-Well, 10 ml for Double-Well, etc.

### 3. Antibody Incubation with Pre-Treated Membrane

Mix the Mixture 1 solution prepared in step 1 with WB-2 Solution in the amounts indicated below. Incubate the membrane in this solution for 10 minutes at room temperature with the vacuum turned off.

| Antibody Incubation | Single-Well   | Double-Well     | Triple-Well   |
|---------------------|---------------|-----------------|---------------|
| WB-2 solution       | 3 ml per well | 1.5 ml per well | 1 ml per well |

### 4. Wash

With the vacuum running continuously, wash three times with 1X Wash Solution.

| Wash             | Single-Well | Double-Well | Triple-Well |
|------------------|-------------|-------------|-------------|
| 1X Wash solution | 3 X 20 ml   | 3 X 15 ml   | 3 X 10 ml   |

### 5. Signal Development

Remove the membrane from the SNAP I.D system and incubate it with a detection reagent such as LumiSensor™ HRP substrate, LumiSensor™ plus HRP substrate, or TMB substrate. When using GenScript fluorescence kits (L00397 and L00398), the membrane must be scanned with an appropriate fluorescence imager, such as LI-COR Odyssey Infrared Imaging Systems.

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