

# LuminolPen™ EZ, HRP system

LH05-10/LH05-50

V2.0

Store at -20 °C  
For Research Use Only

## ■ Introduction

Western blotting (WB) is one of the most utilized techniques in life science researches. With the aid of monoclonal or polyclonal antibodies to specific antigen proteins, researchers are able to identify the interested protein signal, quantitatively or qualitatively, on the electroblotting membranes. However, due to the complexities of biological materials and the insufficient specificity of antibodies, some intriguing WB results may be observed, such as the detection of multiple hybridized signals or hybridized signals with uncertain molecular weight. To validate the WB result, calculating the molecular weight of the hybridized signals is the most straight forward way. However, molecular weight standard markers (pre-stained markers) cannot be visualized in the WB results employing the high sensitive enhanced chemiluminescence (ECL) methods. The **LuminolPen™ EZ, HRP System** is designed to solve the above dilemma. After performing the regular WB hybridization procedures, just use the **LuminolPen™ EZ, HRP System** to mark the pre-stained markers, the position of pre-stained marker can be developed, by using either the X-ray films or the CCD image documentation system. The molecular weight of hybridized signals then can be estimated. Additionally, the **LuminolPen™ EZ, HRP System** can be used for noting experiment conditions or evaluating the efficacy of ECL substrates.

## ■ Product Components

### LuminolPen™ EZ, HRP System (LH05-10)

LuminolPen EZ	100 membranes drawing	1 pen
User's manual		

### LuminolPen™ EZ, HRP System (LH05-50)

LuminolPen EZ	1,000 membranes drawing	1 pen
User's manual		

## ■ Safety Information

Please wear gloves, lab coat and goggles while operating. Prevent contact product directly. In case of contacting, wash with large amount of water.

## ■ Storage

**LuminolPen™ EZ, HRP system** should be stored at -20 °C. The strength of drawing signal will gradually decrease twelve months after the first usage.

## ■ Instruction

**NOTE:** Before use, take the **LuminolPen™ EZ, HRP System** back to room temperature for 3-5 minutes.

1. During electrophoresis, apply pre-stained protein markers in parallel with the samples.
2. Performing the regular hybridization procedures of your WB experiments.
3. **Before performing the ECL development (adding ECL substrates)**, gently remove the residual solution from the PVDF or nitrocellulose membranes by using filter paper (e.g. Whatman #50). Keep the membranes wet and don't let the membranes over-dry.
4. "Gently and slowly" annotate the position of the pre-stained markers and/or take notes on the membranes by using the LuminolPen EZ. If necessary, repeatedly marking the same location for stronger signals.
5. Add the ECL substrate subsequently and record the ECL signals using either the X-ray films or the CCD image documentation systems.

## ■ Troubleshooting

Problem	Possible cause	Remedy
No marked signal or the marked signal is too weak	ECL substrates expired	Use an unexpired ECL substrates
	Less effective ECL substrates are used	Apply more than one drawing on the target area
The marked signal is weaker than last time	LuminolPen™ EZ, HRP System stored at wrong condition	Store at -20 °C and keep away from light

## ■ Related Visual Protein Products

LumiFlash™ Prime Chemiluminescent Substrate, HRP System	LF01-500	500 mL
LumiFlash™ Ultima Chemiluminescent Substrate, HRP System	LF08-500	500 mL
LumiFlash™ Infinity Chemiluminescent Substrate, HRP System	LF16-500	500 mL
LuminolPen™, HRP System	LH03-50	1 pen