

Ultra-Sensitive ECL Kit

Introduction

TargetMol's Ultra-Sensitive ECL Kit is a high-performance chemiluminescent detection reagent specifically optimized for Western blot applications. It reacts efficiently with horseradish peroxidase (HRP) conjugated to secondary antibodies, producing strong and stable chemiluminescent signals. The substrate is compatible with X-ray film exposure as well as various chemiluminescence imaging systems.

With extremely high sensitivity, it enables precise detection of proteins at mid- to low-femtogram (fg) levels. In addition, it offers excellent signal stability, with luminescence lasting for more than 2 hours, significantly improving experimental reproducibility and data reliability. This product is an ideal choice for routine Western blot experiments.

Product Components

Taking 100 mL packing for example:

Catalog No.	Product Name	Packing
C2003-1	Solution A	50 mL
C2003-2	Solution B	50 mL

Product Features

1. High sensitivity
2. Strong signal output
3. Stable and long-lasting luminescence
4. Excellent reproducibility

Applications

Suitable for chemiluminescent detection of HRP-conjugated secondary antibodies in Western Blot assays, enabling high-sensitivity detection of extremely low-abundance protein signals.

Recommended Concentration

Antibody	Primary Antibody (1 mg/mL)	HRP-conjugated Secondary Antibody (1 mg/mL)
Suggested Working Dilution	1:2000~1:50000	1:50000~1:500000

Instructions

1. Preparation of Working Solution

Prepare the ECL working solution by mixing equal volumes of Solution A and Solution B and gently invert to mix thoroughly. Keep the working solution at room temperature and protect from light before use. The prepared working solution remains stable for approximately 2 hours.

2. Membrane Handling

After secondary antibody incubation and thorough washing in the Western Blot procedure, carefully remove the membrane using flat-tip forceps. Gently blot excess liquid with absorbent paper (avoid contact between the paper and the protein-binding surface of the membrane). Then place the membrane flat on clean plastic wrap.

3. Substrate Incubation

Calculate the required volume based on membrane area and add approximately 0.1 mL of working solution per square centimeter. Evenly dispense the solution onto the membrane surface to ensure complete coverage, and incubate at room temperature for 1–2 minutes.

4. Pre-imaging Preparation

After incubation, remove the membrane and discard excess working solution. Gently blot off residual liquid with absorbent paper. Place the membrane between two layers of plastic wrap and prepare it for X-ray film exposure or chemiluminescent imaging.

5. Imaging and Detection

For detection using a chemiluminescence imaging system, place the membrane into the instrument and set the appropriate parameters according to the imaging system's operating instructions to acquire the signal.

Storage

Store at 4 °C, protected from light, for 1 year.

Precautions

1. When pipetting Solution A and Solution B, always use separate pipette tips. Do not mix or cross-contaminate the solutions, as this may cause gradual inactivation of Solution A or Solution B and negatively affect subsequent experimental results.
2. After use, immediately tighten the caps of all reagent bottles to prevent reagent degradation caused by exposure to air.
3. This product provides long-lasting chemiluminescence; more than 80% of the signal intensity is retained after 60 minutes. It is recommended to take full advantage of the strong signal within the first 60 minutes for film exposure or imaging.
4. If this product is overly sensitive and interferes with detection, substrates with lower sensitivity may be used instead, such as Sensitive ECL Kit (C2001) or Highly Sensitive ECL Kit (C2002).
5. The product is for R&D use only, not for diagnostic procedures, food, drug, household or other uses.
6. Please wear a lab coat and disposable gloves.

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