

## MaxScience Pico Plus Western Substrate

Catalog Number		Size	Reaction(s)
WE01	MaxScience Pico Plus Western Substrate	50mL x 2	Sufficient for over 25 mini-gel size membranes.

## Storage Conditions

At 25° C. It is stable for up to 24 months.

## Description

As a luminol-based enhanced chemiluminescent substrate, MaxScience Pico Plus Western Substrate is sensitive and compatible with performing immunoblots using horseradish peroxidase (HRP)-conjugated secondary antibodies. MaxScience Pico Plus Western Substrate's outstanding sensitivity and long signal lifetime enable low picogram to high femtogram antigen identification. Furthermore, its extended chemiluminescent signal lifetime allows for both digital and film-based imaging without signal degradation. For optimum signal intensity and duration, appropriate primary and secondary antibody dilutions are recommended.

- There is no need for optimization. Switching from other brands, such as Pierce ECL and GE Healthcare, to MaxScience Pico Plus Western ECL Substrate requires no optimization or procedure modifications.

- Sensitivity is high, and the chemiluminescence lasts longer. After a single exposure, the MaxScience Pico Plus Western Substrate ECL Substrate allows for reliable low picogram to high

femtogram protein detection on the same immunoblot.

- Specifically designed for PVDF and nitrocellulose membranes.

- Western Blotting Markers are compatible with this product.

- Optimized for film- and CCD-based imaging.

## Kit Content(s)

Catalog Number	Size
WE01-A	50 mL x 1
WE01-B	50 mL x 1

## Required materials but not provided

- A Chemiluminescence or X-ray Imaging System that is compatible
- To keep the membrane from drying out, use a plastic sheet protector or plastic wrap.

## Instrument Compatibility

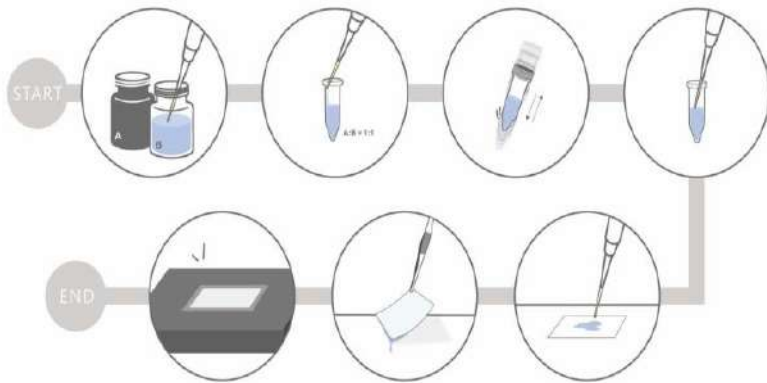
The majority of commercially available Chemiluminescence and X-ray Imaging Systems are compatible with this western substrate.

## Setup for Reaction

1. While preparing the substrate combination, keep the membrane wet in the wash buffer. During the next stages, make sure the membrane does not dry out.
2. Prepare the 0.1 ml of solution / cm<sup>2</sup> of membrane by mixing Luminol solution and Peroxide Solution in a 1:1 ratio and thoroughly agitating the chemiluminescent substrate solution.

**Protocol**

Use a digital imager or expose the membrane to X-ray film to image the membrane.



**Troubleshooting**

Problem	Cause	Solution
High Background	Primary or secondary antibody concentrations are too high	*Decrease the antibody concentration.
		*To optimize the concentration, perform a dot blot.
	Inadequate washing	*Increase the frequency or duration.
	Blocking is not complete.	*Decrease the antibody concentration.
* To optimize the concentration, perform a dot blot.		
Weak Signal or No Reaction	Inadequate antigen binding	*Decrease antibody concentration.  * To achieve a balance of sensitivity and specificity, optimize blocking reagents.
	Antibody binding to the antigen is poor.	*Improve the detergent used for antibodies **Extend the incubation period for antibodies.
	During the test, proteins were rinsed from the membrane.	*Reduce the number of washes or their intensity.
	Reagent volume is insufficient.	*Add more antibody blocking reagent or wash solution

**Notes**

The MaxScience Pico Plus Western Substrate series is suitable with detection levels ranging from low picograms to low femtograms. Please see the table below for the ECL selection guidance for MaxScience Pico Plus Western Substrate.

MaxPrecision Lab LLC	Advantages	Sensitivity	Significantly comparable performance with
MaxScience Pico Plus Western Substrate WE01	Among entry-level Western substrates, this one offers the greatest value for abundant protein detection and sensitivity.	Low pictogram to high fermtoqram	-thermo Scientific pierce ECL substrate - thermo Scientific supersignal West pico PLUS -CYANAGEN WESTER ETAC2.0 -Advasta westernBright ECL -Expedeon LumibblueECL EXTRA
MaxScience Pico Plus Western Substrate WE04	When looking for low abundance proteins, it is a better choice since it has a sensitivity of nearly 30 times than MaxScience Pico Plus Western Substrate.	Low pictogram to high fermtoqram	-Milipoer, immobilon Western, substrate -Fujifilm, wako immunostar, zeta -GE healthcare amersham ECL prime -advansta westerbriht quantum -Expedeon limubule ECL extebded -CYANAGEN WESTAR ETA CULTRA 2.0 -Thermo Scientific SuperSignal West DURA
MaxScience Pico Plus Western Substrate WS08	In your Wester blot, look for the least abundant proteins, even low femtograms.	Low pictogram to high fermtoqram	-FUJIFIM WAKO IMMUNOSTAR LD -Genetex triden lemto -Thermo scientific supersignal west femto -Advansta WesterBright Sirius -Expedeon Lumieblue ECL Extreme -CYANAGEN WESTER SUPERNOVA GE HEALTHCARE SELECT