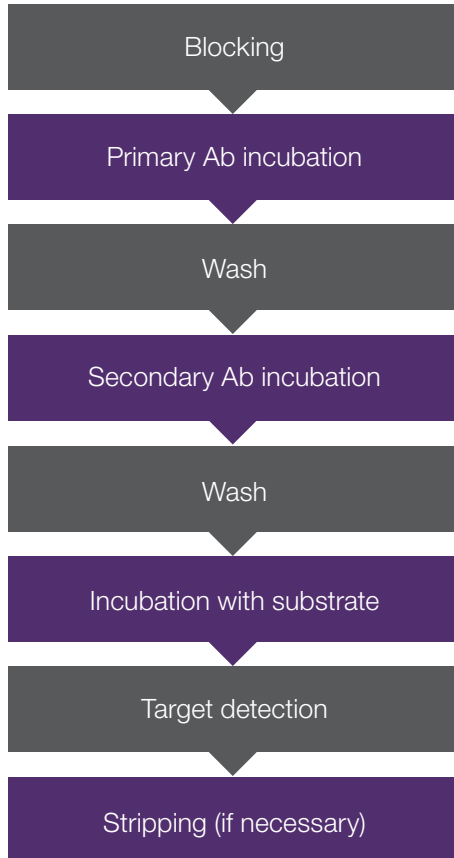




Reagents for manual western blot detection

Manual western blotting

Traditional manual blot probing procedure includes a series of essential steps before the addition of the detection substrate, as shown in the figure below. The target protein on the membrane is then detected by x-ray film or CCD imaging systems. At this point, the blot can be stripped and reprobed, if necessary.

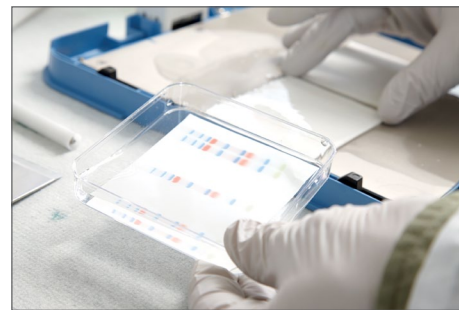


We offer a wide range of ready-to-use western blotting reagents, including blocking buffers, wash buffers, detergents, membrane-stripping buffers, and western blot signal enhancers. Our blocking buffers include traditional protein blocking agents, such as BSA, casein and milk, as well as exclusive blocking buffers, such as Thermo Scientific™ SuperBlock™, StartingBlock™ and Pierce™ Protein-Free Blocking Buffers,

for efficient blocking in western blotting and other immunoassay detection methods. Our wash buffers include pouches of preblended powder mixtures of commonly used buffers, such as PBS and TBS for western blotting; simply add water to dissolve and they're ready for use.

We offer nitrocellulose and PVDF transfer membranes, available in rolls and as pre-cut sheets and X-ray film for chemiluminescence and other western blot detection techniques. Our specially formulated membrane-stripping buffers are designed to dissociate and strip primary and secondary antibodies from western blots, so that membranes can be reprobed under alternate conditions or with another antibody to detect a different protein target. Included in our specialty reagents for western blotting is our Thermo Scientific™ SuperSignal™ Western Blot Enhancer that is designed to increase both signal intensity and sensitivity 3- to 10-fold compared to a detection performed without it.

Explore our reagents for manual western detection to select products most suitable for your western application.



Blocking



Block unreacted sites on the membrane to reduce the amount of nonspecific binding.

We have a complete selection of blocking buffers to improve the sensitivity of your western blot. The proper choice of buffer depends on the antigen and type of enzyme conjugate to be used. With the wide range we offer, you can achieve the highest signal-to-noise ratio possible for your blots.

- **StartingBlock Blocking Buffer in PBS** (Cat. No. PI37538) and in TBS (Cat. No. PI37542)
- **StartingBlock T20 Blocking Buffer** (Contains 0.05% Tween-20) in PBS (Cat. No. PI37539) or TBS (Cat. No. PI37543)
- **SuperBlock Buffer in PBS** (Cat. Nos. PI37515) and in TBS (Cat. No. PI37535)
- **SuperBlock T20 Blocking Buffer** (Contains 0.05% Tween-20) in PBS (Cat. No. PI37516) or TBS (Cat. No. PI37536)
- **SuperBlock Blocking Buffer—blotting in PBS** (Cat. No. PI37517) and in TBS (Cat. No. PI37537)
- **Protein-Free Blocking Buffer** (Cat. Nos. PI37570, PI37571, PI37572, and PI37573)

Wash

Remove unbound primary reagents and reduce background.



Our dry buffers and high-purity detergents all serve to enhance your signal-to-noise ratio.

Buffered saline solutions:

- **Thermo Scientific™ BupH™ Phosphate Buffered Saline Packs** (Cat. No. PI28372)
- **Thermo Scientific™ Pierce™ 20X Phosphate Buffered Saline** (Cat. Nos. PI28348 and PI28358)
- **Thermo Scientific™ BupH™ Tris Buffered Saline** (Cat. Nos. PI-28376 and PI28379)
- **Thermo Scientific™ Pierce™ Modified Dulbecco's PBS Buffer** (Cat. Nos. PI28344 and PI28374)

Thermo Scientific™ Surfact-Amps™ Detergents including:

- **Thermo Scientific™ Tween™-20 Detergent** (Cat. No. PI28320)
- **Thermo Scientific™ Tween™-80 Detergent** (Cat. No. PI28328)
- **Thermo Scientific™ Triton™ X-100 Detergent** (Cat. No. PI28314); **NP-40 Detergent** (Cat. No. PI28324)

Primary and secondary antibody incubation

Our antibodies are fully validated, eliminating the need to screen numerous antibodies to find the correct one. **We offer over 40,000 antibodies for over 50 research areas**, and all of our antibodies are validated and guaranteed to perform in the stated application and species.

Our secondary antibodies and detection reagents are available in a variety of formats and conjugated types including HRP, AP, alexa fluors, and others.

Find your antibody now at VWR.com/antibodies



Target detection

Capture and analyze your image.



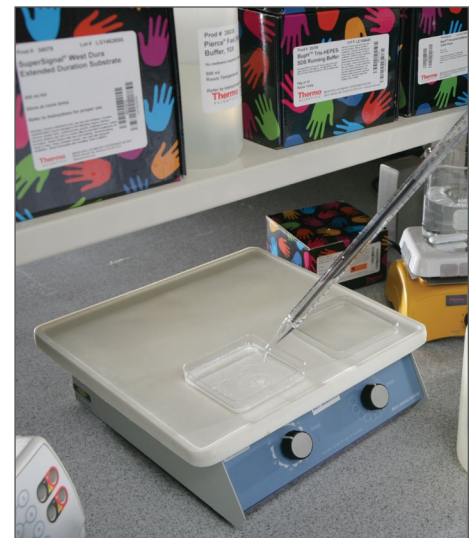
Find many products to cover this step, including the Thermo Scientific™ myECL™ Imager, for one-touch blot imaging and x-ray film in many sizes

and configurations. The handy Thermo Scientific™ Pierce™ Background Eliminator Kit (Cat. No. PI21065) helps retrieve data from overexposed films.

- **myECL Imager** (Cat. No. PI62236)
- **myImageAnalysis™ Software** (Cat. No. PI62237)
- **Thermo Scientific™ CL-XPosure™ Film** (Cat. Nos. PI34089, PI34090, and PI34091)

Stripping (if necessary)

Reprobe the blot if needed.



Using our Thermo Scientific™ Restore™ products, you can quickly strip and reprobe, as well as reuse the blot again and again. We save you time, money, and aggravation in reprobng your blots.

- **Thermo Scientific™ Restore™ Western Blot Stripping Buffer** (Cat. No. PI21059)
- **Thermo Scientific™ Restore™ PLUS Western Blot Stripping Buffer** (Cat. No. PI46430)
- **Thermo Scientific™ Restore™ Fluorescent Western Blot Stripping Buffer** (Cat. Nos. PI62299 and PI62300)

Incubation with substrate

Add the detection reagent to your blot.

Choose the appropriate substrate for your needs from the Pierce ECL Plus and SuperSignal families of chemiluminescent HRP substrates. Our ECL and SuperSignal substrates offer excellent performance in western blotting with longer light emission and stronger signal intensity.



Chemiluminescent substrates

Choose the appropriate chemiluminescent substrate for western blot detection.

As with other components in a western blotting system, there are many chemiluminescent substrate choices available. The appropriate substrate selection depends on the detection level (sensitivity) required, target protein abundance, and sample availability.


- **Excellent sensitivity**—five substrates providing picogram to femtogram sensitivity
- **Strong light emission**—longer signal duration allows for multiple exposures
- **High intensity**—signal is twice as intense as other luminescence-based systems
- **Antibody savings**—our substrates are optimized to work with more dilute primary and secondary antibodies



We offer five types of chemiluminescent substrates for western blot detection with HRP:

	Thermo Scientific Pierce ECL Substrate	Thermo Scientific SuperSignal West Pico Substrate	Thermo Scientific Pierce ECL Plus Substrate	Thermo Scientific SuperSignal West Dura Substrate	Thermo Scientific SuperSignal West Femto Substrate
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Advantage	Same signal, lower price than other entry-level ECL substrates	Better signal, lower price than competing ECL substrates	Same signal and lower price than competing ECL Plus substrates	Best for use with imaging equipment	Most sensitive substrate for HRP detection
Detection level	~20 picograms	~1 picogram	~0.5 picogram	~250 femtograms	~60 femtograms
Signal duration	30 minutes–2 hours	6–8 hours	5 hours	24 hours	8 hours
Select when ...	Target is abundant, sample is abundant, and for everyday use	Target is less abundant, sample is limited, and for more sensitivity than an entry-level ECL substrate	Target is less abundant, sample is limited, and for chemifluorescent detection	Target is less abundant, sample is limited, and for CCD image capture	Target is least abundant, sample is precious, and for maximum sensitivity

Find out more at vwr.com



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