The iWestern workflow
A modern start-to-finish western blotting solution
Streamline your western blotting workflow

The Invitrogen™ iWestern™ workflow features innovative, modern solutions designed to address processing efficiency, reproducibility, and robustness of results—because your time is precious.

Together, these products help you achieve exceptional western blotting results with minimal hands-on time.

Achieve comparable results to traditional western blotting, in a fraction of the time

Serial dilutions of A431 lystate were loaded onto Invitrogen™ Novex® WedgeWell™ 4–20% Tris-glycine 12-well gels (starting at 10 µg and then 1:1 serially diluted to 0.02 µg) followed by performing western blotting using the iWestern workflow products (left column) or a classical manual approach (right column). The iWestern workflow products leveraged include a PowerEase Touch Power Supply, Mini Gel Tank, iBlot 3 Western Transfer Device, iBind Western System, and iBright FL1500 Imaging System. The classical, manual workflow used wet tank transfer, a shaker and tray for immunodetection, manual loading and changing of reagents and antibodies, and the Invitrogen™ iBright™ FL1500 Imaging System for data capture. The times indicated in the table correspond to the approximate time investment of each step without factoring in the additional preparation or processing time between steps, which can vary from experiment to experiment.

<table>
<thead>
<tr>
<th>Western blotting step</th>
<th>iWestern workflow</th>
<th>Manual workflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample preparation and electrophoresis</td>
<td>10 min</td>
<td>40 min</td>
</tr>
<tr>
<td>Transfer</td>
<td>6 min</td>
<td>60 min</td>
</tr>
<tr>
<td>Blocking</td>
<td>180 min **</td>
<td>60 min</td>
</tr>
<tr>
<td>Primary antibody incubation</td>
<td>720 min</td>
<td>720 min</td>
</tr>
<tr>
<td>Washes</td>
<td>30 min</td>
<td>30 min</td>
</tr>
<tr>
<td>Secondary antibody incubation</td>
<td>60 min</td>
<td>60 min</td>
</tr>
<tr>
<td>Washes</td>
<td>30 min</td>
<td>30 min</td>
</tr>
<tr>
<td>Substrate incubation</td>
<td>5 min</td>
<td>5 min</td>
</tr>
<tr>
<td>Exposure and data capture</td>
<td>8 sec</td>
<td>8 sec</td>
</tr>
<tr>
<td>Total time</td>
<td>~241 min (approx. 4 hr)</td>
<td>~1,015 min (approx. 17 hr)</td>
</tr>
</tbody>
</table>

* 20-minute electrophoresis time achievable with Invitrogen™ Bolt™ gel chemistry. Electrophoresis run time will vary based upon gel chemistry selected and desired migration of protein bands.

** Once the iBind or iBind Flex Western System is loaded, close the well cover and incubate for 2.5 hours (150 minutes) before loading the tray for performing western blotting. **The 180-minute time factors in the preparation of the iBind system with iBind card and necessary solutions.

Open the iBind or iBind Flex system well cover to verify that well 4 is completely empty (indicating that the run is over) before opening the lid—the 3-hour (180-minute) time indicated in the figures above and below factor in extra time for a buffer.

Gel electrophoresis
• Invitrogen™ PowerEase™ Touch Power Supplies
• Invitrogen™ Precast Protein Gels
• Invitrogen™ Mini Gel Tank
• Invitrogen™ SureLock™ Tandem Midi Gel Tank

Gel to membrane transfer
• Invitrogen™ iBlot™ 3 Western Transfer System

Data capture
• Invitrogen™ iBright™ Imaging Systems

Blot processing
• Invitrogen™ iBind™ Western Systems
PowerEase Touch power supplies

Powerful and versatile

The Invitrogen™ PowerEase™ Touch family of power supplies features large, bright LCD touchscreens that are easy to operate and program. PowerEase Touch power supplies are engineered to deliver precise outputs for voltage, current, and power for gel electrophoresis and western transfer applications. The user-friendly interface allows for quick access to preprogrammed protocols for optimal SDS-PAGE, native-PAGE, IEF, IPG strips, and transfer of Invitrogen™ gels. Adding and saving up to 100 custom run methods is quick and intuitive. Use the table below to choose the power supply that works best for your application.

<table>
<thead>
<tr>
<th>Model</th>
<th>Mini gel runs</th>
<th>Mini gel transfers</th>
<th>Midi gel runs</th>
<th>Midi gel transfers</th>
<th>IEF gels</th>
<th>IPG strips</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerEase Touch 120W Power Supply</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>No</td>
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<td>No</td>
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<tr>
<td>PowerEase Touch 350W Power Supply</td>
<td>12</td>
<td>8</td>
<td>8</td>
<td>4</td>
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<td>No</td>
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<tr>
<td>PowerEase Touch 600W Power Supply</td>
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<td>8</td>
<td>14</td>
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<tr>
<td>PowerEase Touch HV Power Supply</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>No</td>
<td>8</td>
<td>48</td>
</tr>
</tbody>
</table>

Explore our power supplies at [thermofisher.com/powersupplies](http://thermofisher.com/powersupplies)
Bolt precast protein gels
Speed and high throughput without compromise
Invitrogen™ Bolt™ precast gels combine the high performance of the Invitrogen™ Bis-Tris gel chemistry with fast run times. Obtaining straight, well-resolved protein bands takes only 20 minutes. The neutral pH of the buffering system minimizes in-gel protein degradation, helping preserve protein integrity and improving downstream protein detection. The wedge-shaped wells support easy loading of up to 60 µL of sample, helping reduce the need for time-consuming sample concentration steps.

For higher-throughput experiments, Invitrogen™ Bis-Tris precast midi gels expand your sample analysis capabilities with an array of well formats, including a 26-well option.

Learn more about Bolt gel chemistry at thermofisher.com/bolt
Mini Gel Tank
Streamlined protein separation through creative tank design
With an intelligently engineered side-by-side design, the Invitrogen™ Mini Gel Tank provides a forward-facing well configuration for easier sample loading and the simultaneous visualization of both gels. The white tank stand provides contrast to help improve the monitoring of prestained markers during electrophoresis. Compatible with over 180 gels of different formats and gel chemistries, the Mini Gel Tank can help provide you with the flexibility to choose the right gel for the job.

SureLock Tandem Midi Gel Tank
Maximize throughput
Compatible with all Invitrogen™ precast midi gels, the Invitrogen™ SureLock™ Tandem Midi Gel Tank is designed for easy and consistent vertical protein gel electrophoresis. Two separate gel chambers offer the flexibility to run one or two midi gels, and to separate up to 52 samples in the same run. When paired with the Invitrogen™ SureLock™ Midi Transfer Module, this tank performs efficient room-temperature, wet protein transfer in 30 minutes. Made of durable polycarbonate, the SureLock Tandem Midi Gel Tank is built to last.

See more about our tanks at thermofisher.com/electrophoresischambers
iBlot 3 western blot transfer system
The next generation of protein transfer performance and convenience

The Invitrogen™ iBlot™ 3 western blot transfer system is a next-generation dry protein transfer device with ready-to-use consumables that can deliver high performance and convenience.

Perform reliable, high-quality transfers fast—in as few as three minutes. In addition, two independently controlled transfer stations allow you to share the device with your coworker, simultaneously running a total of four mini gels or two midi gels with two different programs.

With the iBlot 3 system, you can achieve as good or better protein transfer efficiency compared to wet tank transfer and other rapid transfer methods. The preassembled single-use consumables and ultrafast transfer methods help eliminate variability—enabling consistent and repeatable results. In addition, the robust design has built-in cooling to reduce heat buildup and facilitate run-to-run consistency.

See performance data and more at thermofisher.com/iblot3
iBind western systems

Revolutionary western blot processing—no shakers, trays, or timers required

Two devices and one simple technology for western blot processing. The Invitrogen™ iBind™ and iBind™ Flex Western Devices are simple, unpowered devices that automate many of the tedious, routine western blot processing steps.

The original iBind device accommodates the processing of one mini blot at a time, while the iBind Flex device accommodates the processing of one midi blot, two mini blots, or up to six vertically cut strips. The entire immunoblotting process can be completed in less than 3 hours and because processing is automated, blot-to-blot consistency can be improved.

See one in action at thermofisher.com/ibind
iBright Imaging Systems
Stunningly easy western blot and gel imaging

iBright Imaging Systems make it easy to capture images by streamlining the image capture process. Automatic zoom, focus, sample rotation*, and Smart Exposure™ auto-exposure technology take the guesswork out of achieving an optimal image. Help maximize the dynamic range of chemiluminescent western blot data by leveraging Smart Range™ high dynamic range (HDR) technology.

All models have a large functional imaging area that enables the simultaneous capture and analysis of up to two midi or four mini blots in a single image. Perform molecular weight marker overlays, densitometry analysis, and normalization on-instrument or with stand-alone Invitrogen™ iBright™ Analysis Software, available in both desktop and cloud-based formats.

The flagship model, the iBright FL1500 Imaging System, features five fluorescence channels, permitting up to four-color fluorescent western blot multiplexing—expanding your possibilities for studying multiple proteins in a single blot without the need to strip and reprobe.

* Note: Sample rotation is only available with the iBright CL1500 and FL1500 systems.

Watch videos, review application notes, and more at thermofisher.com/ibright
Whether you are leveraging a modern or a classical approach to western blotting, we offer efficient solutions across the workflow.
Immunodetection

- Blocking buffers
- Antibodies
- Substrates
- Stripping buffers

Detection and analysis

- iBind Western Devices
- iBright Imaging Systems

Don’t forget about your detection reagents—check out our top picks

**SuperSignal substrates**

Find the right high-performance Thermo Scientific™ SuperSignal™ chemiluminescent substrate based on the required sensitivity, target protein abundance, and sample availability.

Learn more at [thermofisher.com/supersignal](http://thermofisher.com/supersignal)

**AlexaFluor Plus secondary antibodies**

Achieve great sensitivity compared to traditional conjugates—explore our range of Invitrogen™ AlexaFluor™ Plus secondary antibodies.

Learn more at [thermofisher.com/alexafluorplus](http://thermofisher.com/alexafluorplus)
Modernize your western blot workflow today with the iWestern workflow bundle

Our standard iWestern bundle contains the core innovative iWestern workflow devices, including the necessary consumables and reagents (not pictured), to get started:

- PowerEase Touch 600W Power Supply
- Bolt gel welcome pack (includes a Mini Gel Tank)
- iBlot 3 Starter Kit
- iBind Flex Western Starter Kit
- iBright FL1500 Imaging System

Explore more, customize a bundle, and get a quote at thermofisher.com/iwestern