

AUTOMATION

FOR WESTERN BLOT ASSAYS



clinisciences

NeoBlot Auto™

Revolutionizing Western Blot Automation for Consistent and Reproducible Results



Streamline Your Western Blot Workflow with NeoBlot Auto™

NeoBlot Auto™, the innovative automatic Western blot processor from **Neobiotech**, is engineered to automate the most critical and time-consuming steps of Western blotting: blocking, antibody incubation, and washing. This compact system eliminates the variability of manual methods, ensuring precise, reproducible results with every experiment. Designed for research laboratories that demand accuracy and efficiency, **NeoBlot Auto™** provides advanced automation for protein detection, cell signaling research, and biomarker discovery—optimizing productivity without compromising quality.



Why Choose NeoBlot Auto™?

Superior Reproducibility

Eliminate the inconsistencies of manual blotting. **NeoBlot Auto™** delivers precise control over fluid delivery, incubation times, and washing, leading to highly reproducible Western blot results. No more batch-to-batch variability.

Increase Throughput and Save Time

Process up to 12 blots simultaneously with customizable protocols. **NeoBlot Auto™** streamlines your workflow, allowing you to focus on data analysis while the system manages the entire process from start to finish.

Fits Your Lab's Workflow

NeoBlot Auto™ integrates seamlessly into your existing lab setup, supporting standard protocols and reagents. No need to reconfigure your processes, just plug it into any standard outlet and start optimizing your blotting experiments.

Advanced Antibody Preservation

Save valuable reagents with **NeoBlot Auto™**'s antibody collection system. Primary antibodies are preserved for reuse, minimizing waste and reducing costs, making it an economical solution for high-throughput labs.

Cold Room Compatibility

For sensitive applications, **NeoBlot Auto™** can perform incubations at 4°C, reducing non-specific binding and background noise. This is ideal for researchers seeking higher specificity and signal clarity in their Western blot assays.



Key Features

- ✓ **Automated Precision:** Automates all key steps—blocking, primary and secondary antibody incubation, and wash cycles—while maintaining precise timing and fluid control.
- ✓ **Customizable Protocols:** Program up to 100 steps, with the ability to store 20 custom protocols for easy reuse. The intuitive touch-screen interface makes setup easy, and remote control via the Internet enhances flexibility for long assays.
- ✓ **Versatile Tray Sizes:** Choose from Delta, Mini, or Midi trays to fit various blot sizes. This versatility makes NeoBlot Auto™ ideal for a range of research applications, from immunology to molecular biology.
- ✓ **Complete Wash Removal:** The system's advanced washing mechanism ensures that unbound antibodies are completely removed, resulting in cleaner blots and more accurate quantification.

Trays for membrane and solution. Choose from 3 tray sizes: delta, mini, or midi.

BlotCycler can capture and save primary antibodies. Place collection vials here under the trays.



Antibody and buffers are dispensed from the poly-carbonate tank mounted on the top of **NeoBlot Auto**.

Touch screen used for selecting preset protocols or designing new ones. **NeoBlot Auto** can be controlled remotely via an Internet connection.

Scientific Applications and Performance

NeoBlot Auto™ is an essential tool for labs focused on protein expression analysis, post-translational modifications, and signal transduction research. Whether you work in academic research, biotechnology, or pharmaceutical development, NeoBlot Auto™ will enhance the accuracy, reproducibility, and efficiency of your Western blotting workflows.

The NEW Western Blot Workflow:

1. Sample preparation

2. Gel electrophoresis

3. Electrotransfer (blotting)

4. Blocking and antibody incubation is performed automatically by **NeoBlot Auto**

5. Quantification

NeoBlot Auto™'s precise fluid management and timing ensured consistent results across multiple blots. Its ability to perform cold room incubations further enhances sensitivity, ideal for detecting low-abundance proteins.

A. Manual procedure: Primary antibody was incubated at 4°C, and then membrane was processed at room temperature. As seen here (at right), multiple non-specific bands are visible.

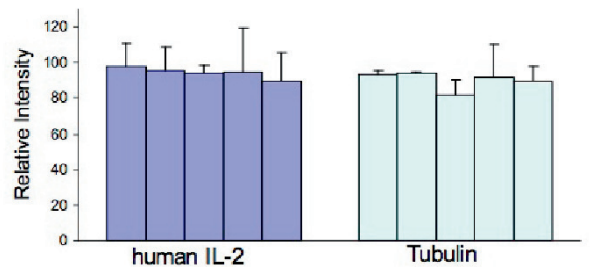
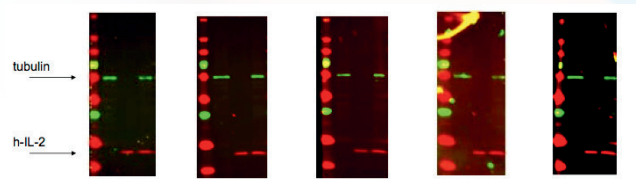
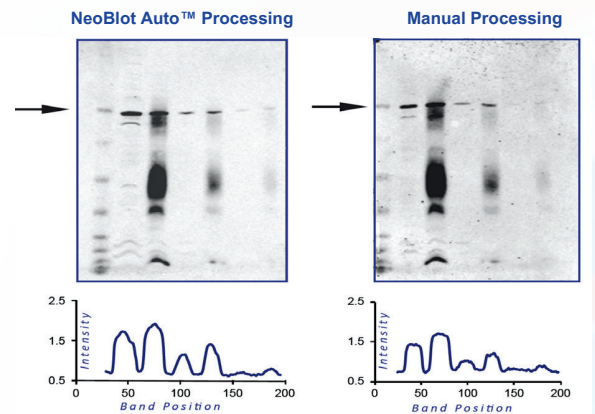


Thanks to Laura Marlow, Mayo Clinic

B. NeoBlot Auto™ automated procedure: All the steps in the protocol, including incubation, were performed at 4°C – virtually *no non-specific bands are visible.*



Versatility and Reproducibility: NeoBlot Auto™ supports multiple immunodetection methods, including fluorescent and chemiluminescent detection. In the examples shown, identical blots processed using NeoBlot Auto™ (left) and manually (right) demonstrate protein detection with fluorescence-labeled antibodies. Thanks to the Aaron Diamond AIDS Research Center, NY. NeoBlot Auto™ processed five identical blots containing HeLa lysate, recombinant human IL-2, and a mix of both. After incubation with anti-IL2 and anti-α-tubulin antibodies, secondary DyLight™ antibodies were used, resulting in highly reproducible results due to precise timing and efficient automated washing.



Product specifications:

Input voltage: 110 – 120V or 220 – 240V

Rated input current 5.0A max

Polyurethane trays

Delta : 3 ml – 5 ml per chamber, 4 cm x 9.5 cm

Mini: 8 ml – 25 ml per chamber, 9 cm x 7.5 cm

Midi: 13 ml – 40 ml per chamber, 9.5 cm x 15 cm

Dimensions: 35 cm W x 34 cm H x 42 cm D (with mini tray)



A touch screen allows users to select preset protocols or design new ones. The screen can be controlled remotely using an Internet connection.

NeoBlot Auto™ Mini

Efficient and Reproducible Western Blot Automation in a Compact Design



NeoBlot Auto™ Mini is a compact bench-top device that automates processing of 1 to 8 western blots simultaneously., designed to deliver reproducible and consistent results in research labs. With a smaller footprint and lower cost compared to traditional systems, it is ideal for labs seeking to improve workflow efficiency and data accuracy without sacrificing bench space.



Key Features

- ✓ **Compact and Space-Saving:** Measuring only 17.3 x 10.2 inches, the NeoBlot Auto™ Mini fits neatly into any lab, requiring minimal bench space. Despite its small size, it automates the entire Western blot process, including blocking, primary and secondary antibody incubation, and washing steps.
- ✓ **Enhanced Reproducibility:** By automating critical steps like reagent delivery, timing, and membrane agitation, the NeoBlot Auto™ Mini eliminates human error, ensuring consistent results every time. The system supports 1 to 8 blots simultaneously with two different primary and secondary antibodies, increasing throughput while maintaining precision
- ✓ **Flexible Protocol Programming:** Use your existing protocols and reagents with no need for adaptation. The NeoBlot Auto™ Mini's intuitive touchscreen interface allows you to program up to 100 protocol steps, including blocking times, incubation periods (up to 120 hours), and washing cycles, providing unmatched flexibility for diverse experiments
- ✓ **Cost-Effective Antibody Usage:** The system collects excess primary antibodies for reuse, reducing reagent costs. After each run, a cleaning cycle automatically prepares the system for the next experiment, ensuring easy maintenance
- ✓ **Seamless Workflow Integration:** NeoBlot Auto™ Mini works seamlessly with established protocols and standard reagents, making it easy to integrate into any existing laboratory workflow. With no need for cassettes or cards, simply load your blocking buffer, washing buffer, and antibodies into the system and let it handle the rest

Scientific Applications and Performance

NeoBlot Auto™ Mini is optimized for applications in protein detection, immunoassays, and biomarker discovery. It ensures reproducibility in experiments where precision is critical, such as **cancer research**, **virology**, and **post-translational modification studies**. The automation of critical steps significantly reduces manual handling errors, leading to lower background noise and enhanced signal clarity, making it indispensable for high-impact research

Choose from 4 sizes of trays for membrane and solution

Buffers are automatically dispensed from the polycarbonate bottle



Use the Touch Screen for selecting preset protocols or designing new ones.

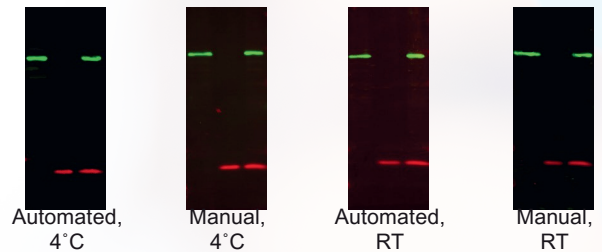
Capture and save primary antibodies. Place collection vials under the trays.

Traditional western blot analysis is a time-consuming process. **NeoBlot Auto™ Mini** changes everything by automating the fluid changes and timing associated with blocking, washing and antibody incubation. There's no more need to watch over the western blot procedure. With BlotCycler Mini, simply set up your protocol, and walk away!

Blot-to-blot consistency.

Time after time.

The first lane in each blot shown at left contains a HeLa whole cell lysate, the second lane contains a recombinant human IL-2, and the third lane a mixture of HeLa whole cell lysate and hIL2



Product specifications:

Input voltage: Input: 110 – 120V or 220 – 240V

voltage: 4A max

Polyurethane trays

Delta: 4 cm x 10 cm

Mini: 10 cm x 8 cm

Midi: 15 cm x 10 cm

Mega: 30 cm x 10 cm

Dimensions: 44 cm W x 30 cm H x 26 cm D

Weight: 15 lbs.



A touch screen allows users to select preset protocols or design new ones. The screen can be controlled remotely using an Internet connection.

List of NeoBlot Auto™ Products

Product Code	Description
<u>NB-12-8101-MINI3-MIDI2</u>	NeoBlot Auto, Automated western blot processor, with 3 mini trays and 2 midi trays and touchscreen
<u>NB-12-8101-MINI3-DELTA3</u>	NeoBlot Auto, Automated western blot processor, with 3 mini trays and 3 delta trays
<u>NB-12-8101-MIDI4</u>	NeoBlot Auto, Automated western blot processor, with 4 midi trays and touchscreen
<u>NB-12-8101-DELTA6</u>	NeoBlot Auto-Multi, Automated western blot processor, with 6 delta trays
<u>NB-12-8101-MINI6</u>	NeoBlot Auto-touch, Automated western blot processor, with 6 mini trays and touchscreen
<u>NB-12-8101-CV-SET2-DM</u>	NeoBlot Auto-Multi, Automated western blot processor, convertible model, touchscreen supplied with two sets of trays (delta and mini)
<u>NB-12-8101-CV-SET2-MM</u>	NeoBlot Auto-Multi, Automated western blot processor, convertible model, touchscreen supplied with two sets of trays (midi and mini)
<u>NB-12-8101-CV-SET3</u>	NeoBlot Auto-Multi, Automated western blot processor, convertible model, touchscreen supplied with three sets of trays (delta, mini, and midi)

List of NeoBlot Auto™ Mini Products

Product Code	Description
<u>NB-12-8102</u>	NeoBlot Auto Mini, Automated western blot processor, two tray model, touchscreen
<u>NB-12-8102-DELTA2</u>	NeoBlot Auto Mini, Automated western blot processor, two tray model, touchscreen, wash bottle, drain collector supplied with set of two delta tray
<u>NB-12-8102-MEGA2</u>	NeoBlot Auto Mini, Automated western blot processor, two tray model, PI2 touchscreen, wash bottle, drain collector supplied with set of 2 mega tray
<u>NB-12-8102-SET2-MM</u>	NeoBlot Auto Mini, Automated western blot processor, two-tray model, touchscreen, wash bottle, drain collector supplied with a set of two trays (mini or midi)

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