

ClearBand Nitrocellulose Membrane, 30 cm x 3 m Roll

Troubleshooting Guide

0.22 µm, 0.45 µm

Cat No: NC022, NC045

Use this guide for common membrane-selection and handling problems with ClearBand Nitrocellulose Membrane. The 100% nitrocellulose membrane is supplied in 0.22-µm and 0.45-µm pore sizes for Western blotting, dot blotting, and other protein or nucleic-acid methods.

Before You Start - Quick Checks

1. Store the membrane at room temperature.
2. Confirm the pore size (0.22 µm or 0.45 µm) required by the validated transfer or blotting workflow.
3. Handle the membrane cleanly to preserve its low-background surface.
4. For nucleic-acid applications, the datasheet specifies use with nucleic acids greater than 300 bp.

Problem	Most likely cause	Recommended action
Weak retained signal after transfer	The selected membrane pore size or transfer workflow may not match the validated method.	Confirm whether the 0.22-µm or 0.45-µm membrane is required and verify the transfer setup before changing detection conditions.
Background is higher than expected	The membrane may have been contaminated during handling or the downstream blocking/washing workflow may differ.	Use clean handling and recheck the downstream blotting conditions while keeping the membrane type constant.
Membrane is difficult to handle after cutting	Mechanical handling may be too aggressive.	Cut and manipulate the membrane carefully and support it during transfer and washing steps.
Nucleic-acid signal is poor for a very short target	The datasheet specifies nucleic-acid use for targets greater than 300 bp.	Use the membrane within the stated application range or validate a different membrane strategy for shorter targets.
Results changed after switching pore size	The membrane pore size changed between experiments.	Use the same pore size as the validated workflow and record 0.22 µm versus 0.45 µm explicitly.
Transfer result is inconsistent across the membrane	The problem may be in membrane contact or transfer assembly rather than membrane chemistry.	Reassemble the transfer stack carefully and ensure uniform membrane contact before repeating.
Wrong membrane type was selected	Nitrocellulose and PVDF have different handling properties.	Confirm that the protocol calls for nitrocellulose before proceeding rather than substituting membrane types without validation.
Performance changed after storage	Storage may not have followed the datasheet condition.	Store the membrane at room temperature in a clean, dry condition and use undamaged material.

Still having trouble? Recheck membrane type, pore size, clean handling, transfer assembly, and the stated >300-bp nucleic-acid application range before changing antibody or detection conditions.