WestPure PVDF Membrane, 0.45um

LC7032

Storage

Store at room temperature

Store membranes flat at ambient temperature, away from chemical vapors. Some solvent vapors may partially dissolve the membranes, which will disrupt the pore structure.

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Introduction

Polyvinylidene difluoride (PVDF) membranes are hydrophobic and have high binding affinity for proteins and nucleic acids. These membranes are typically used for applications such as Western, Southern, Northern and dot blots.

WestPure PVDF membranes offer a better retention of adsorbed proteins than other supports including nitrocellulose.

Choosing the Right Membrane for Western Blot

Sample Concentration

PVDF membranes have a higher protein binding capacity than nitrocellulose. The protein binding capacity of PVDF ranges from 150-200 µg of protein/cm^2 and nitrocellulose ranges from 80-100 µg of protein/cm^2. Although PVDF has a higher binding capacity, it could result in increased background in some circumstances.

Membrane Integrity

PVDF membranes are less fragile than nitrocellulose and generally a better choice for experiments that require stripping and re-probing of the membrane.

Pore Size

Both PVDF and nitrocellulose Western blotting membranes are commonly available in two different pore sizes, 0.2 µm and 0.45 µm. Membranes with a pore size of 0.2 µm are generally recommended for proteins with a molecular weight of less than 20 kDa, while 0.45 µm membranes are suitable for most Western blotting applications.

Transfer Buffer Conditions

Transfer buffer must contain methanol when using nitrocellulose membranes. Although PVDF membranes must be pre-wetted with methanol, they can be used with methanol-free transfer buffer.

Detection

PVDF and nitrocellulose are both well suited for chemiluminescence and fluorescence detection methods, however low-fluorescence PVDF must be used for fluorescence detection to avoid high background resulting from auto-fluorescence of standard PVDF membranes. It is recommended that you cut a small sample of membrane and image it both wet and dry, to check for auto-fluorescence and background.

Protocol : Transfer proteins to a PVDF membrane

1. Remove gel from the electrophoresis apparatus and equilibrate in Transfer Buffer for 30 minutes with gentle shaking.

Note: Incubation time is based on a 1.5mm thick gel. Reduce incubation time for thinner gels.

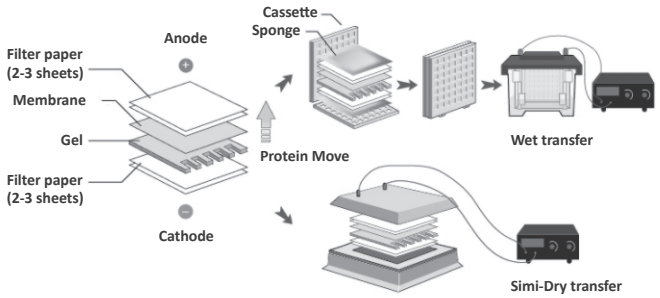
2. Cut membrane to the same dimensions of the gel. Cut a notch in the membrane corner to correspond to a corner of the gel.

3. Wet membrane in 100% methanol for 15 seconds. Ensure that there are no dry areas on the membrane that could inhibit protein transfer.

4. Place membrane in a new container with Transfer Buffer and equilibrate for 15 to 20 minutes.

5. Wet the absorbent filter paper in Transfer Buffer.

6. Use the following component order to form the transfer stack:



7. Connect the leads and perform transfer for 45-90 minutes at 0.8mA/cm^2 of gel.

Note: Transfer time and efficiency will vary depending upon polyacrylamide concentration, gel thickness, the presence of SDS or methanol, pH and ionic strength of the transfer buffer and the molecular weight of the protein. Determine optimal transfer conditions empirically.

8. When the transfer is complete, disconnect leads and disassemble the transfer stack to remove the membrane.

9. Keep membrane moist until ready to use.

Related Products

Product Name	Cat No
Albumin	A0100-010
Xpert 2 Prestained Protein Marker	P8503-050
Xpert Protease Inhibitor Cocktail Solution (100X)	P3100-005
Xpert Phosphotase Inhibitor Cocktail Solution (100X)	P3200-005
Xpert Duo Inhibitor Cocktail Solution(100X)	P3300-005
West-Q Pico Dura ECL Solution	W3653-050
West-Q Femto ECL Solution	W3700-020

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