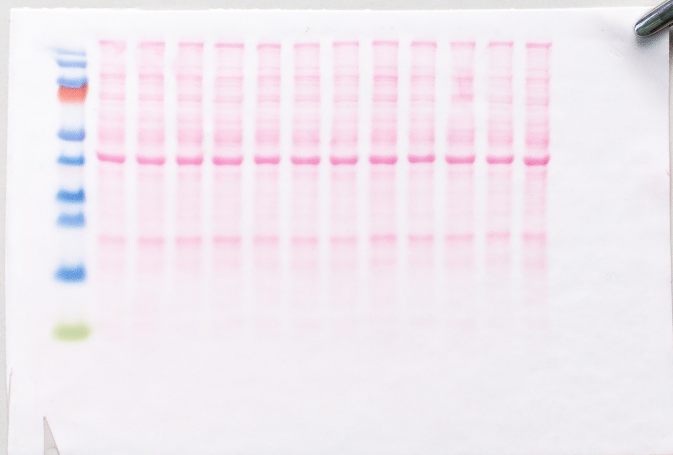




# Western Blotting

Enhanced Protein Detection



# SIMPLIFY YOUR WESTERN: SIX SIMPLE STEPS

Western blotting is viewed as the gold standard for protein detection in molecular biology research. Common detection methods involve spending a lot of time in the dark room, guessing your optimum exposure time. Ditch the darkroom and give your assay an upgrade with our complete portfolio of antibodies, reagents, and supplies to simplify your Western blot workflow. Results develop before your eyes.

1

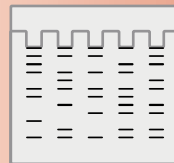
Sample Preparation



Cell Lysis Buffers

2

Separate Proteins



Protein Ladders

3

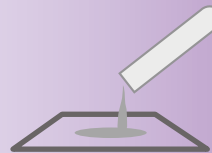
Transfer Proteins



PVDF Membranes

4

Block Non-specific Binding



BSA Blocking Solution

5

Incubate with 1° Antibody



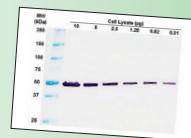
Over 2,000 Primary Antibodies

6

Incubate with 2° Antibody and Detect & Visualize Antibody-Protein Complex



WESTERNVIEW™ Detection Kits



SEPARATE | TRANSFER | DETECT

# SIGNAL DEVELOPS IN FRONT OF YOUR EYES

## WESTERNVIEW™ Detection Kits

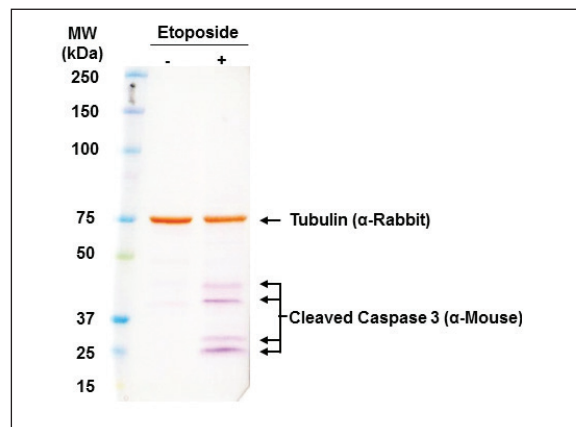
The most common method of visualization still seen today is a chemiluminescent reaction. This involves spending time in a tight dark room, with a timer and a list of exposure times, which are mostly chosen based on educated guesswork. Who wants to spend all that time in the dark? Enzo has removed the need for you to spend time in the dark room. Let your blot develop before your eyes, right there on your bench!

The WESTERNVIEW™ Detection Kits for Western Blot analysis quickly and clearly reveal bands on the transfer membrane without the need for specialized equipment.

- **A simple solution for real-time results** – no film developer or fluorescent reader required or time in the dark room.
- **High sensitivity** – quickly visualize your bands with minimal overexposure risk and with no visible background.
- **Convenient and easy to use** – includes secondary antibody and all reagents necessary to visualize your bands.

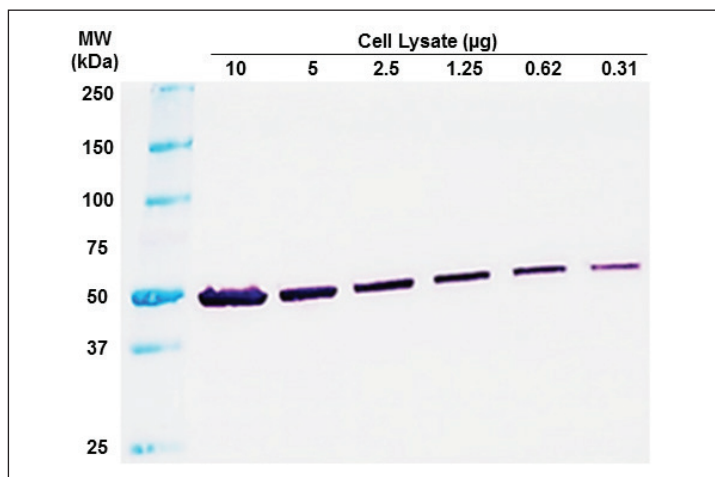
For high sensitivity, ease of use, and long-lasting signal, try our new WESTERNVIEW Detection Kits.

### Reliably Distinguish Multiple Targets



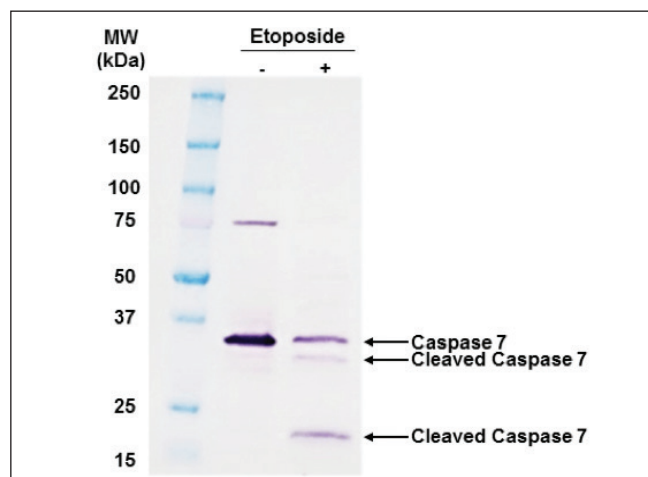
PANC-1 cells treated with or without etoposide. Loaded total cell lysate (20 µg) and simultaneously incubated with tubulin and caspase antibodies before being developed with the ENZ-KIT163.

### Sensitive Results Without Expensive Equipment



Total cell lysate from Jurkat cells. Membrane was probed with anti-tubulin. Detected using ENZ-KIT182 and exposed for 1 minute.

### Clear Signals Without the Background



Jurkat cells treated with or without 12.5 µM etoposide for 18 hours. Loaded 12 µg lysate per well.

Product Name	Product #	Kit Contents
WESTERNVIEW Detection Kit (Anti-Mouse)	ENZ-KIT182	AP Anti-Mouse Secondary, NBT/BCIP, Antibody Diluent, 10x Wash Buffer
WESTERNVIEW Detection Kit (Anti-Rabbit)	ENZ-KIT183	AP Anti-Rabbit Secondary, NBT/BCIP, Antibody Diluent, 10x Wash Buffer
WESTERNVIEW Dual Detection Kit (Anti-Mouse / Anti-Rabbit)	ENZ-KIT163	HRP Anti-Mouse Secondary, AP Anti-Rabbit Secondary, NBT/BCIP, DAB Chromogen, DAB Substrate Buffer, Antibody Diluent, SignaSure® Butter Salts, Tween®-20

# TAKE THE GUESSWORK OUT OF BLOTTING

## Blotting Membranes

### Optimized for Western Transfer

- Sensitive protein detection with low background and very low burn-through
- Provides high surface area for strong hydrophobic interactions (adsorb 50% more protein than nylon or nitrocellulose.)
- Broad solvent compatibility

Membrane Type	Polyvinylidene Fluoride (PVDF)	Membrane Type	Polyvinylidene Fluoride (PVDF)
Protein Binding Capacity	100-300 µg/cm <sup>2</sup>	Detection Methods	Chromogenic Chemiluminescent Fluorescent Radioactive Chemifluorescent
Solvent Resistant	Resistant to acetone, DMSO, dimethyl formamide, methanol, trifluoroacetic acid, and triethylamine.		
Binding Interaction	Hydrophobic		
Pore Size	0.2 µM	Other Applications	Amino Acid Analysis Protein Sequencing Solid Phase Assay Systems
Total Protein Stain Compatibility	Amido black Ponceau S Colloidal gold		
		Double-blotting Method	Yes
		Strip and Re-probe	Yes

Product Name	Product #	Available Formats
PVDF Transfer Membrane	ENZ-KIT164	7cm x 9cm
	ENZ-KIT165	10cm x 15cm

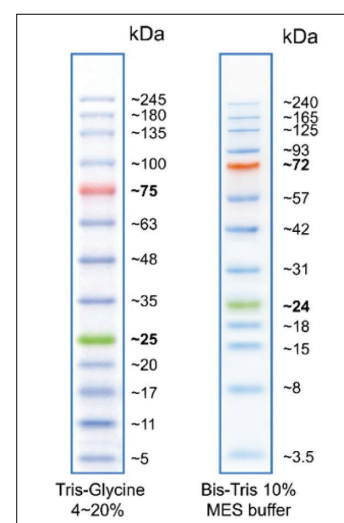
## Prestained Protein Ladder

### Protein Ladder for Use with Protein Gel Electrophoresis

- 3 µL or 5 µL per loading for **clear visualization** during electrophoresis on 15-well or 10-well mini-gel, respectively
- **Three color** protein standard with 13 prestained proteins
- Apply more for thicker (>1.5 mm) or larger gel

Our Protein ladder is designed for monitoring protein separation during SDS-polyacrylamide gel electrophoresis, verification of Western transfer efficiency on membranes (PVDF, nylon, or nitrocellulose) and for approximating the size of proteins. The ladder is supplied in gel loading buffer and is ready to use. Do not heat, dilute or add reducing agent before loading.

Proteins are covalently coupled with a blue chromophore except for two reference bands (one green and one red band at 25 kDa and 75 kDa respectively) when separated on SDS-PAGE (Tris-glycine buffer).



Guide for Molecular Weight Estimation (kDa): Migration patterns of Prestained Protein Ladder in different electrophoresis conditions.

Product Name	Product #	Range
Prestained Protein Ladder	ENZ-ACC131	3.5 – 245 kDa

# EVERYTHING YOU NEED, INCLUDING ANTIBODIES

## Primary Antibodies for Western Blotting

We have over 2,000 antibodies validated for Western Blot. Download the catalog at [www.enzolifesciences.com/westernblot](http://www.enzolifesciences.com/westernblot)

- **Specific** – to bind your protein of interest or primary antibody
- **Sensitive** – for high detection and low background
- **Reliable** – for consistent results
- **Validated** – for Western blot application and stated species

## Antibodies for Loading Controls

Find the right loading control to ensure proper interpretation of your Western blots. The sample type will help you determine which target to use for your loading control.

- Check for equal transfer across membrane
- Ensure even loading between lanes
- Normalize and quantify your data

Sample Type	Target	MW (kDa)	Product Name	Product #
Whole Cell & Cytoskeleton	Vinculin	124	Vinculin (human) monoclonal antibody (FB11)	BML-VG6110
	Alpha Tubulin	50	$\alpha$ -Tubulin Recombinant monoclonal antibody (F2C) (Mouse IgG1 $\lambda$ )	ENZ-ABS609
			$\alpha$ -Tubulin Recombinant monoclonal antibody (F2C) (Rabbit IgG $\lambda$ )	ENZ-ABS610
	Beta Tubulin	50	$\beta$ -Tubulin Recombinant monoclonal antibody (S11B) (Mouse IgG1 $\lambda$ )	ENZ-ABS613
			$\beta$ -Tubulin Recombinant monoclonal antibody (S11B) (Rabbit IgG $\lambda$ )	ENZ-ABS614
	Actin	42	Actin polyclonal antibody	ADI-CSA-400
			Actin clonal antibody (S12-I)	ALX-810-001
	Beta Actin	42	$\beta$ -Actin polyclonal antibody	ADI-905-733
	GAPDH	36	GAPDH monoclonal antibody (1D4)	ADI-CSA-335
			GAPDH monoclonal antibody (GA1R) (HRP conjugate)	ENZ-ABS276
Mitochondrial	HSP60	60	HSP60 monoclonal antibody (LK-1)	ADI-SPA-806
			HSP60 monoclonal antibody (LK-2)	ADI-SPA-807
			HSP60 monoclonal antibody (Mab11-13)	ADI-SPA-829
			HSP60 polyclonal antibody	ADI-SPA-828
	VDAC1/Porin	31	Voltage-dependent anion channel polyclonal antibody	ALX-210-785
Nuclear	Lamin B1	66	Laminin B chain (human) monoclonal antibody (DG10)	BML-LG6030
	HDAC1	55	HDAC1 polyclonal antibody	BML-SA401
	PCNA	29	PCNA monoclonal antibody (SPM350)	ENZ-ABS794
Serum	Transferrin	77	Transferrin polyclonal antibody	ADI-VAP-EN004

## Cell Lysis Buffers

Product Name	Product #	Size	Detergents
RIPA Lysis Buffer	ADI-80-1284	100 mL	1% Triton X-100, 1% sodium deoxycholate and 0.1% SDS
	ADI-80-1496	100 mL	1.2% Triton X-100, 0.5% sodium deoxycholate, and 0.1% SDS
Cell Lysis Buffer	ADI-80-1134	100 mL	0.1% Triton X-100, 0.1% Tween 20 and 0.1% Hydrolol M
	ADI-80-1339	100 mL	0.5% Triton X-100 and 0.005% Tween 20
	ADI-80-1631	100 mL	1% Triton X-100

## Blocking Solutions

Product Name	Product #	Size	Composition
BSA Solution	ADI-80-1928	50 mL	10% BSA in PBS

*You may also be interested in:*



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