MCLAB

TrenX™ PAGE Gels

User Manual

384 Oyster Point Blvd, Suite 15
South San Francisco, CA 94080
Phone: 1 (888) MCLAB-88
Fax: 1 (650) 872-0253
www.mclab.com

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Description

MCLAB TrenX™ PAGE Gels are precast polyacrylamide gels with a select range of acrylamide percentages. The precast gels are designed for high performance and provide a wide range of proteins separation. In contrast to traditional Tris-glycine SDS-PAGE gels, TrenX™ PAGE gels are set at a neutral pH environment that result in longer shelf-life and minimize protein modification when run under denaturing conditions. This unique formulation offers reliable separation and excellent resolution of protein bands.

Key Features:

High Resolution: Novel formulation allowing for excellent protein band resolution.
Wide Protein Separation: Low molecular weight or high molecular weight proteins can be separated with the use of low or high molecular weight running buffer.
Long Shelf Life: up to 12 months at 4°C.
Fast Run Time: 45 minutes or less.

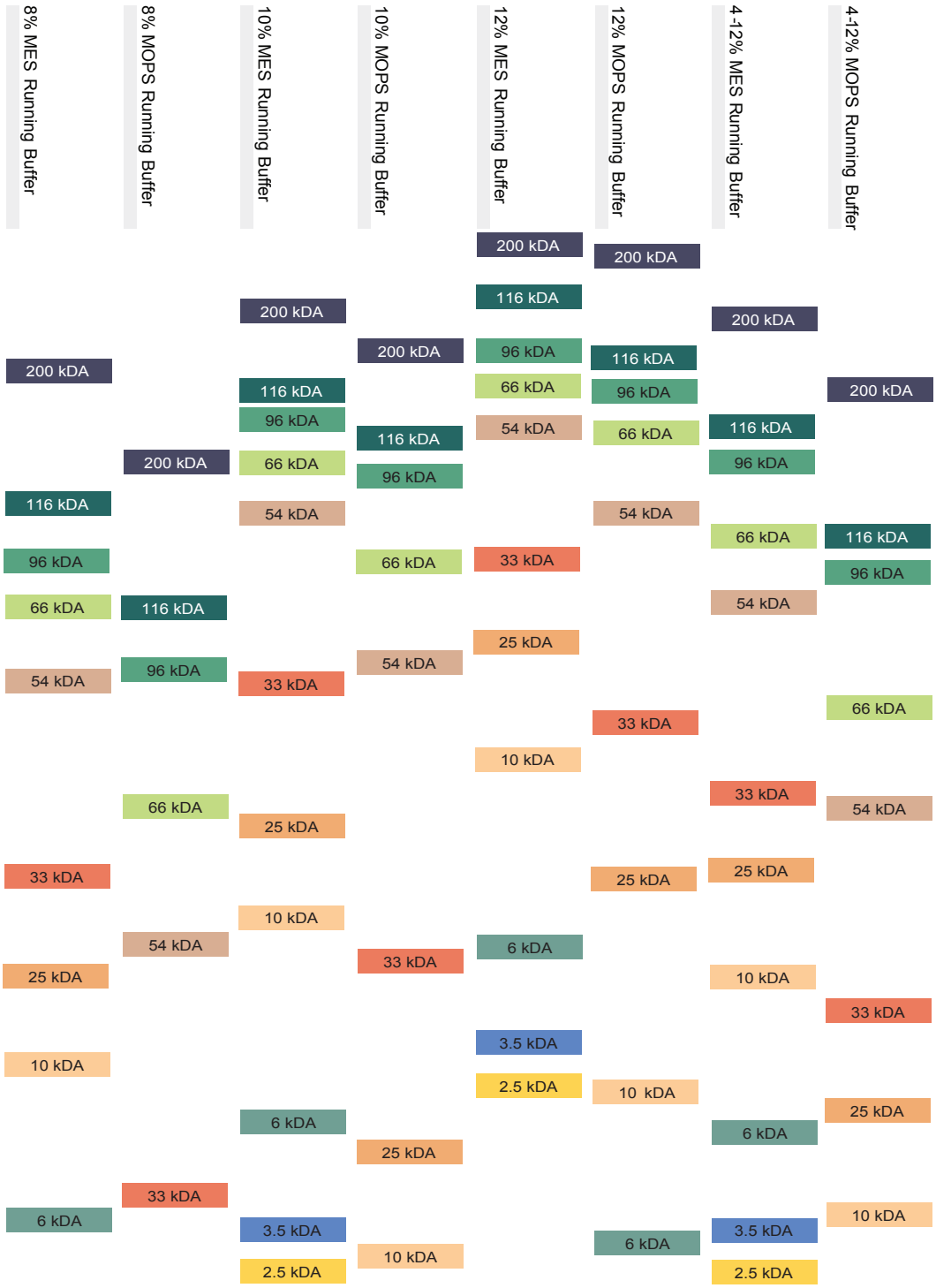
Cat. No.	Separation Range	% Acrylamide	Wells	Samples Volume Per Well	Size	Price
TPG8-40	30 - 180kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	8%	10	40 ul	10/pk	$50.00
TPG10-40	15 – 160kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	10%	10	40 ul	10/pk	$50.00
TPG12-40	3.5 – 40kDa (Low molecular weight running buffer) 10 – 80kDa (High molecular weight running buffer)	12%	10	40 ul	10/pk	$50.00
TPG412-40	15 -260kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	4 – 12%	10	40 ul	10/pk	$50.00
TPG8-30	30 - 180kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	8%	12	30 ul	10/pk	$50.00
TPG10-30	15 – 160kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	10%	12	30 ul	10/pk	$50.00
TPG12-30	3.5 – 40kDa (Low molecular weight running buffer) 10 – 80kDa (High molecular weight running buffer)	12%	12	30 ul	10/pk	$50.00

Cat. No.	Separation Range	% Acrylamide	Wells	Samples Volume Per Well	Size	Price
TPG412-30	15 -260kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	4 – 12%	12	30 ul	10/pk	$50.00
TPG8-20	30 - 180kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	8%	15	20 ul	10/pk	$50.00
TPG10-20	15 – 160kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	10%	15	20 ul	10/pk	$50.00
TPG12-20	3.5 – 40kDa (Low molecular weight running buffer) 10 – 80kDa (High molecular weight running buffer)	12%	15	20 ul	10/pk	$50.00
TPG412-20	15 -260kDa (High molecular weight running buffer) 3.5 – 160kDa (Low molecular weight running buffer)	4 – 12%	15	20 ul	10/pk	$50.00

Related Products

Cat. No.	Name	Size	Price
TPS-5	5X Sample buffer	5ml	$24.00
TPR-ED	Low molecular weight running buffer	1000ml	$56.00
TPR-OD	High molecular weight running buffer	1000ml	$56.00
TPL-500	Protein ladder	500ul	$110.00
TPQ-1L	Quik-Stain	1000ml	$94.40
TPA-15	200x Redox running buffer agent	15ml	$15.00

Protein migration pattern: %Acrylamide



Gel systems compatibility:

X Cell 6™ MultiGel
X Cell SureLock™ mini
X Cell I and II
P82 Dual Gel System
IBI Universal Protein System
CVS10DSYS omniPAGE mini dual vertical electrophoresis system
Owl Single Sided Vertical System

Instructions:

1. Remove TrenX™ gel from packet and position into the gel running apparatus*.
2. Pour 200ml of 1X running buffer into the inner gel tank to the rim, and add in 1ml of 200x Redox running buffer agent for reduced samples. Fill sufficient amount of 1X running buffer into the outer gel tank. Total volume should take up ~1000 mL.
3. Be sure to flush the wells out thoroughly with a transfer pipette or syringe to displace any air bubbles and any storage buffers.
4. Load prepared protein samples into wells. Optimal sample amount must be established through trials.
5. Place gel apparatus cover onto gel tank and connect electrodes into power supply. Run gel at constant voltage of 200V for 40 to 50 minutes or until front dye reaches near the bottom of the gel.
6. Once running the gel is complete, insert a metal spatula into the side of the gel cassette to crack open plastic. Remove gel and proceed to gel staining or transferring.

*Refer to gel systems' manuals for setting up.

Problem	Cause	Solution
Proteins smearing	Samples are poorly soluble or are weakly charged	Heat samples with sufficient amount of SDS and load supernatant. Centrifugation may be required to pellet down insoluble.
Distorted protein bands	Wells contains air bubbles or storage buffer	Be sure to flush wells with 1X running buffer before loading samples.
Insufficient separation of protein bands	-Wrong gel percentage -Samples overloading	Use different percentage gel, Reduce samples volume.
Protein Streaking	-Overloading of sample -Precipitation of sample -High salt concentration	-Load appropriate amount of protein -Increase SDS concentration in sample -Decrease salt concentration through dialysis or gel filtration

Stock Reagent Recipe:

	20X high molecular weight running buffer	20X low molecular weight running buffer
Tris Base	121.2g	121.2g
MOPS	209.2g	
MES		195.2g
SDS (For Standard SDS PAGE)*	4.0g	4.0g
EDTA	6.0g	6.0g
Deionized Water to	1000 ml	1000 ml

	4X Sample Buffer
Tris Base	1.705 g
Tris HCl	1.67 g
SDS	2.0g
Glycerol	10 g
Bromophenol Blue	50 mg
2-Mercaptoethanol	1.0 ml
EDTA	0.015g
Deionized Water to	25 ml

Protein Ladder

(10 – 96 kDa)

MCLAB Protein Ladder contains a mixture of 6 highly purified proteins, which is used as a size standard for SDS-PAGE to calculate the molecular weight of a protein of interest. Protein Ladder becomes clearly visible bands from 10-96 kDa when analyzed by SDS-PAGE and stained with Coomassie Brilliant Blue.

Quik-Stain

MCLAB premixed solution allows the user to perform fast staining on SDS-PAGE gels for protein analysis. This staining solution is nonhazardous and does not require the use of methanol and acetic acid for destaining. Protein bands become visible within minutes and the whole process takes 30 minutes.

Instructions:

1) Soak gel in a microwavable container with water and microwave for 3 minutes
2) Discard the hot water and repeat until dye front becomes faded or disappears
3) Remove water and add in 50 mL of Coomassie Stain (or enough to completely cover the gel)
4) Microwave for 1 minute and repeat until protein bands become visible
5) Discard the staining solution and replace with water for destatining
6) Place a kimwipe on top of gel and microwave for 3 minutes
7) Replace with new water and repeat until desired destaining results has been met