

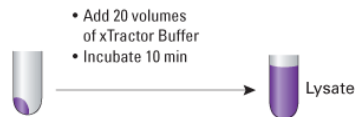
## Western blot & antibodies

### Cell Lysis/Protein Sample Prep

#### Cell lysis buffers

##### xTractor Buffer

- Bacteria, yeast, mammalian cells, baculovirus
- 10 minute incubation
- Non-denaturing



##### ProteaPrep Bacterial and Mammalian Cell Lysis Kit

- Ready to use solution
- Free of lysozyme
- Compatible with Bradford and Lowry assays

Anionic, zwitterionic, & non-ionic lysis kits also available



#### Protease Inhibitors



##### ProteoGuard™ EDTA-Free Protease Inhibitor Cocktail

- Use with xTractor buffer or other lysis buffers
- Single-use tubes
- Great for use with TALON® and his-tagged proteins

##### ProteaPrep Protease Inhibitor cocktail

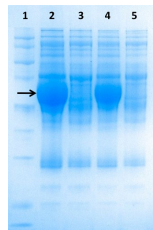
- Contains inhibitors of aminopeptidases and serine-, cysteine-, metallo-, and aspartic acid- proteases
  - Ideal for GST-tagged proteins
- Note: for use with his-tagged proteins



#### Depletion kits

##### ProteaPrep Albumin Depletion Sample Prep Kit

- Affinity-based serum albumin depletion
- Revolutionary non-antibody based method
- Excellent batch-to-batch reproducibility
- SpinTube technology
- Compatible with current spec's



##### ProteaPrep IgG Depletion Sample Prep Kits

- Affinity-based serum albumin depletion
- Revolutionary non-antibody based method
- Robust, efficient removal of IgG from serum samples
- >99% efficiency in less than 20 mins



#### Protein quantification

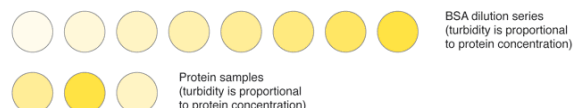
##### ProteaPrep Coomassie Protein Quantification Kit

- Modified Bradford assay
- 1-1500 µg/mL protein
- Simple <10 min assay



##### Protein Quantification Assay

- Reducing agent and detergent compatible
- 10-20,000 ng/µL protein
- Ideal for proteins in Laemmli buffer or Protein Solving Buffer (PSB: found in NucleoSpin® kits)

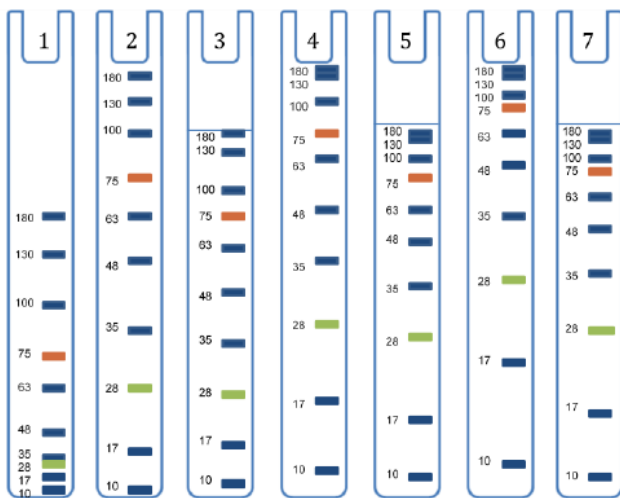


# Protein Gel Electrophoresis

## Ready-made polyacrylamide solutions

### ProteaGel™ 5%, 10%, 12% and 15% Solutions

- 'Ready-to-Run' SDS polyacrylamide
- No stacking gel required due to advanced gel matrix solutions
- Unparalleled band separation
- 2.5 to 250 kDa

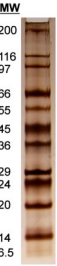


Lane 1: MWM on 5% ProteaGel  
 Lane 2: MWM on 10% ProteaGel  
 Lane 3: MWM on 10% ProteaGel with 5% stacking gel  
 Lane 4: MWM on 12% ProteaGel  
 Lane 5: MWM on 12% ProteaGel with 5% stacking gel  
 Lane 6: MWM on 15% ProteaGel  
 Lane 7: MWM on 15% ProteaGel with 5% stacking gel

## Protein Molecular Weight Markers

### Protein Molecular Weight Markers

- 6.5 to 200 kDa
- Lyophilised for long shelf life



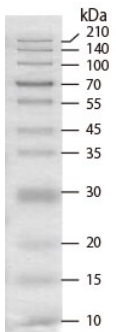
### TriColor Prestained Protein Molecular Weight Markers

- 10 to 180 kDa
- Comprises 10 proteins
- Real-time visualisation during electrophoresis



### CLEARLY Protein Ladder (Unstained or Stained)

- Unstained—10 to 250 kDa
- Stained—10 to 210 kDa
- 11 highly purified recombinant proteins



## Protein Gel Stains

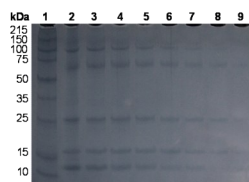


### SuperBlue Coomassie Stain G250 & R250

- Sensitivity ~20 to 40 ng/band
- Non-fixative and fixative protocols available
- R250—traditional coomassie stain
- G250—colloidal coomassie stain that reacts with proteins and not the gel itself

### ZincPlus Stain Kit

- Negative stain producing a whitish opaque background
- Proteins remain unstained providing benefits for downstream processing & analysis
- Detects ~ 1 ng of protein
- Staining complete in 15 mins



## Silver Stain Kit, Certified MS grade

- 50 to 100 times more sensitive than coomassie stains
- Detects as little as 2 ng protein
- Unique fast protocol—complete in 35 mins
- Compatible with MALDI analysis



## Gel Buffer Pouches



### Buffer pouches for SDS- and Native-PAGE

- Just add distilled water to produce 1L of buffer
- Pre-measured
- pH optimised

*Tris-glycine buffer (pH 8.3), Tris-glycine-SDS buffer (pH 8.3), SDS (10% & 20%)*

# Gel Electrophoresis cont'd

## Vertical Gel Electrophoresis Apparatus

Mini Vertical Gel Electrophoresis Apparatus  
 Maxi Vertical Gel Electrophoresis Apparatus  
 Mini Wide Vertical Gel Electrophoresis Apparatus

- Single moulded tanks
- Run up to 4 gels at a time
- Packages with blotting apparatus available



## MiniPro 300V Power Supply

- 300V, 400mA 60W
- Two pairs of outlet terminals



## MS 300V Power Supply

- 300V, 750mA, 150W
- Four pairs of outlet terminals



# Western Blotting

## Blotting Apparatus



### Semi Dry Mini and Semi Dry Midi

- 15 to 30 minute transfer
- Very low buffer volume (few millimetres)
- Practically no corrosion



## Incubation

### Elmi Intelli-Mixer™ RM-2

- A multi-purpose unit
- Change racks and modes to rock, mix, vibrate, rotate
- Advanced, patented mixing and liquid handling technology



## pH Meters

### General Purpose

- Variety of electrodes available
- Measurement range from -2.0 to 20.0



## Gel Buffer Pouches & Tablets



### Buffer pouches for WESTERN blots & ELISA

- Just add distilled water to produce 1L or 500 mL of buffer
- Pre-measured
- pH optimised

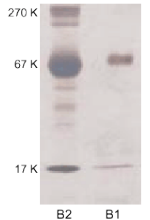
PBS, PBS with Tween®20, TBS (pH 7.6), TBS with Tween®20 (pH 7.6)

## Blotting Membranes



### Porablot PVDF

- Polyvinylidene difluoride
- Hydrophobic
- 0.20 µm pore size
- Binding capacity 50-100 µg/cm<sup>2</sup> (for large globular proteins- capacity higher for smaller peptides)

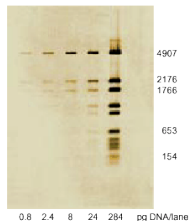


### Porablot NCP (Nitrocellulose)

- 100% nitrocellulose
- 0.45 µm pore size
- Hydrophilic
- Binding capacity 100 µg/cm<sup>2</sup>

### Porablot NY plus (Nylon)

- Highly pure nylon membrane with inert support tissue
- 0.45 µm pore size
- Positive (Cationic) surface charge



### Porablot NCL (Nitrocellulose)

- Porablot NCP with a supporting membrane
- Prevents breaking, tearing or shrinking
- Binding capacity 100 µg/cm<sup>2</sup>

# Detection

## Western Blot HRP Detection Substrates

### Western BLoT Chemiluminescence HRP Substrate

- Stronger signal than equivalent ECL substrates
- Picogram detection limit
- Detect signal with X-ray film

Good

### Western BLoT Hyper HRP Substrate

- Detect even low abundance proteins
- Strong signal when high dilution factor is used for the primary antibody
- Femtogram detection limit
- Detect signal with CCD camera, X-ray film

Sensitivity

### Western BLoT Quant HRP Substrate

- Long-lasting, stable signal
- Low picogram detection limit
- Detect signal with CCD camera, X-ray film

### Western BLoT Ultra Sensitive HRP Substrate

- Highest sensitivity in the series
- Low femtogram detection limit
- Detect signal with CCD camera, X-ray film

Highest

## Western Blot Rapid Detection

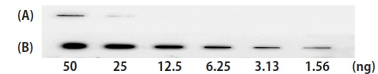
### Western BLoT Rapid Detect

- Rapid detection without a labelled secondary antibody
- Simultaneous detection of multiple primary antibodies
- Detection of minute quantities of antigen (below that of secondary antibody detection)

## Western Blot Signal Enhancer

### Western BLoT Immuno Booster

- Enables detection of low abundance proteins without having to change HRP substrate or the amount of antibody



# Antibodies

*Let us do the searching for you:-* tell us your protein and we will find the right antibody for your research

## Takara/IBL antibodies

- Alzheimers
- Brain and CNS
- Cancer and Inflammation
- Cell adhesion
- Cytokines
- Epigenetics
- Metabolic diseases
- mTOR signalling
- Miscellaneous

## Clontech antibodies

- Cyan fluorescent proteins
- Far red fluorescent proteins
- Green fluorescent (GFP) proteins
- Orange fluorescent proteins
- Red fluorescent proteins
- Yellow fluorescent proteins
- 6xHN tag
- 6xHis tag
- HA-tag
- c-Myc tag
- DYKDDDDK (Flag) tag

## SWANT antibodies

- Ca<sup>2+</sup>-binding proteins
- Ca<sup>2+</sup>-channels, exchangers & pumps
- Insulin-like growth factor
- Neurotransmitters
- Renin-angiotensin system components
- Miscellaneous



## Protea Biosciences

- Anti-cortactin pS405 and pS418 (human) phosphospecific

## Abnova

- Allergen
- Cancer metastasis
- Cervical cancer
- Colorectal cancer
- Stem cell growth factors
- Tumour antigen related
- Prostate cancer
- Dengue fever
- Kinases
- *Many, many more*

## Spring Biosciences

- Cancer mutation specific
- Apoptosis
- Cancer markers
- Cell and tissue markers
- DNA repair, synthesis & replication
- Enzymes
- Immunoglobulins
- Infectious diseases
- Stem cells
- Immune response
- *Many more*