



is now part of the

biotechne[®]
family of companies

Innovative Protein Analysis Tools

Single-Cell WB

Is my sample heterogeneous?



Simple Western

Exactly how much protein is present?



Simple Plex

Which biomarkers define my biology?



iCE

Is my biologic drug pure?



MFI

Is my biologic drug safe?



Milo: The Single-Cell Western System

Western-based protein detection
+
Heterogeneity information

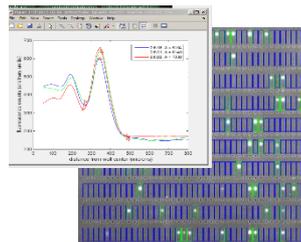


- +1,000 WB at a single cell level / run
- Detect up to 4 proteins per cell
- 4-6 hour workflow
(3-4 hr hands-free time)
- Uses all antibodies (Western, Flow...)

scWest Kits



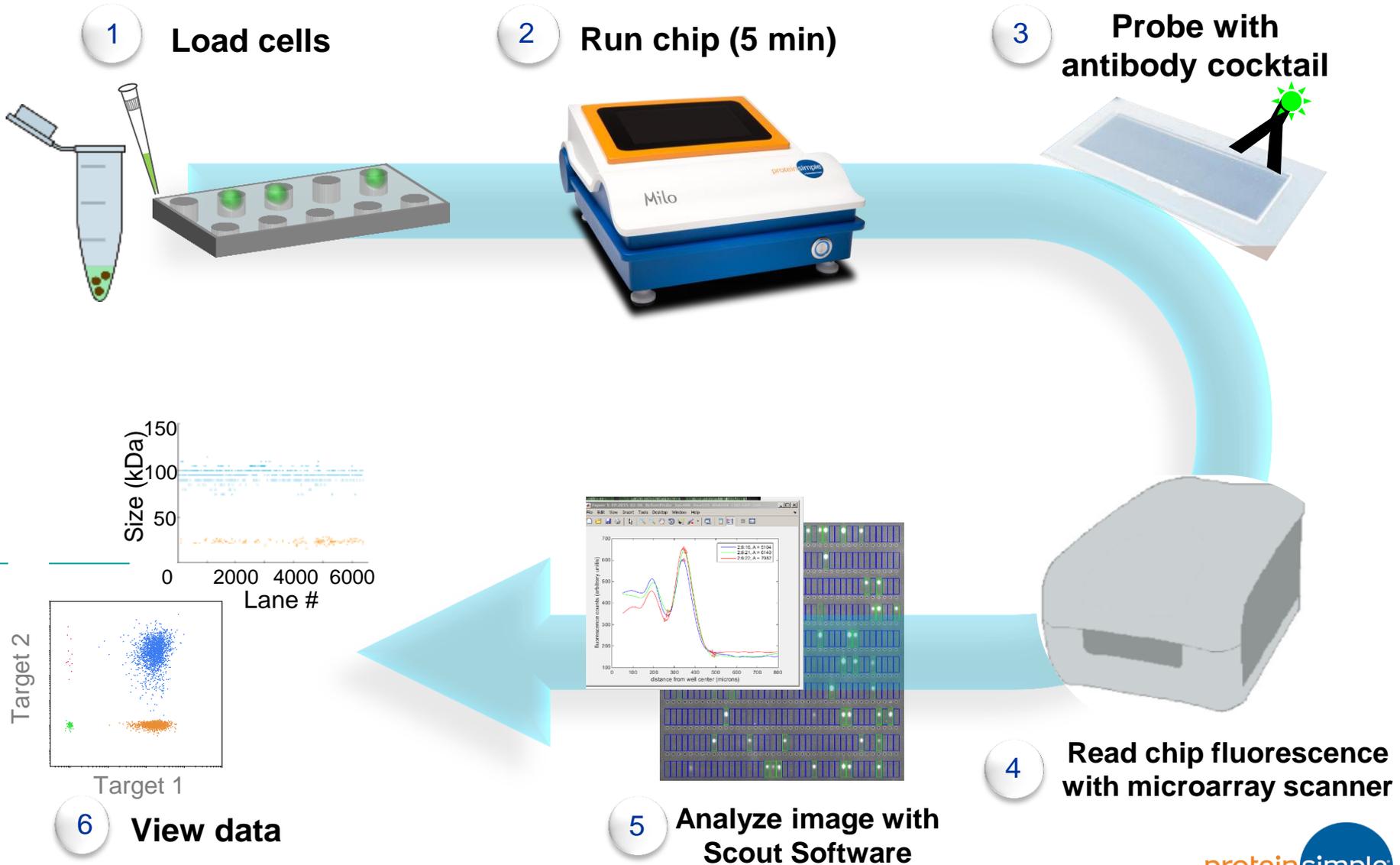
Scout Software



Antibodies



Milo is Fast and Simple to Use

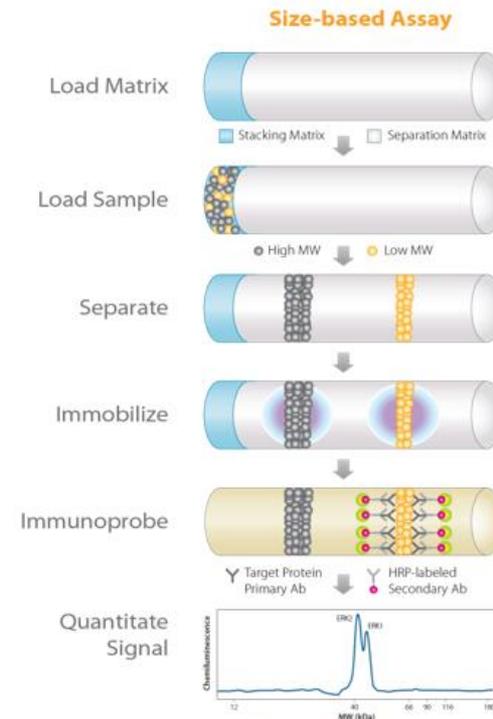


Meet Wes – Detect & Quantitate Proteins

Capillary Electrophoresis System with Immuno-detection



- **More sensitive than traditional Western**
 - Use as little as 0.2 $\mu\text{g}/\mu\text{L}$ protein in 3 μL /well
- **3 hour run time (25 samples)**
 - Run up to 75 samples/day
- **Completely automated run**
- **Quantitative & reproducible data (CV<15%)**
- **30 minute workflow**
 - Pre-filled plate
 - Disposable capillary cartridge
 - Easier to use
 - No messy waste to clean up



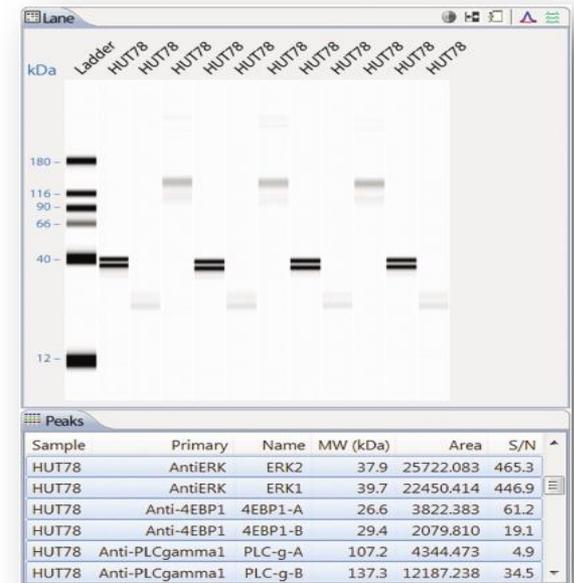
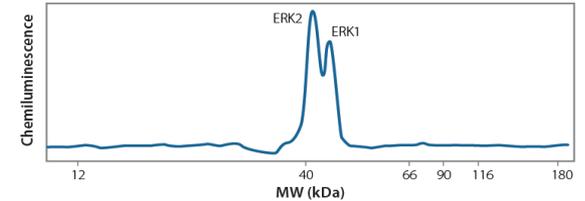
Assay set up is easy



Prepare & Load samples



Insert cartridge/Plate + Press start



Get Results automatically

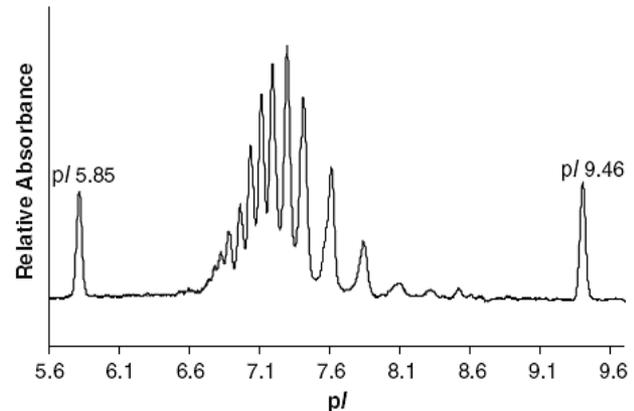
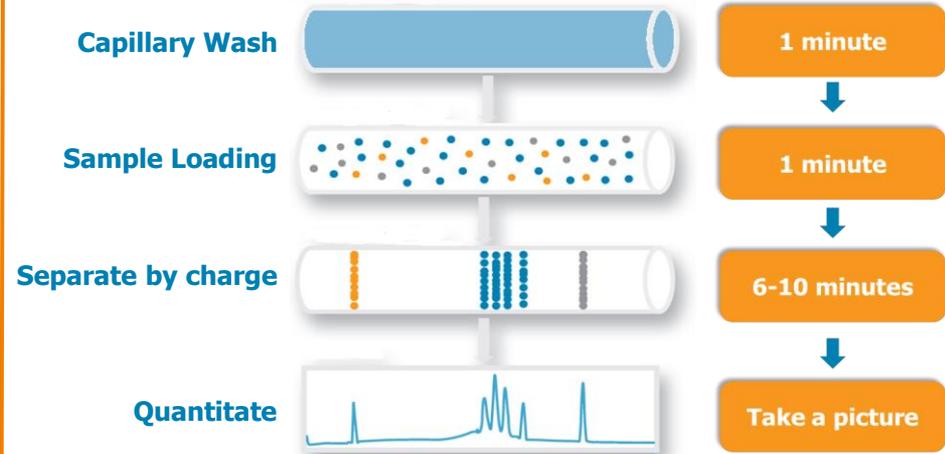
2-40 kDa/12-230 kDa/66-440 kDa

iCE & Maurice – Is My Drug Pure?

iCIEF (Imaged Capillary IsoElectric-Focusing)



- Must monitor charge heterogeneity to ensure product quality and consistency
- Required by US and EU regulator agencies
- Charge signature impacted by:
 - Physical or chemical alteration, Fragmentation, Oxidation
- Used in:
 - Cell culture development, Formulation development, Process development, QC



Charge Heterogeneity Signature

iCE & Maurice – Have Real Benefits

Faster than Competition

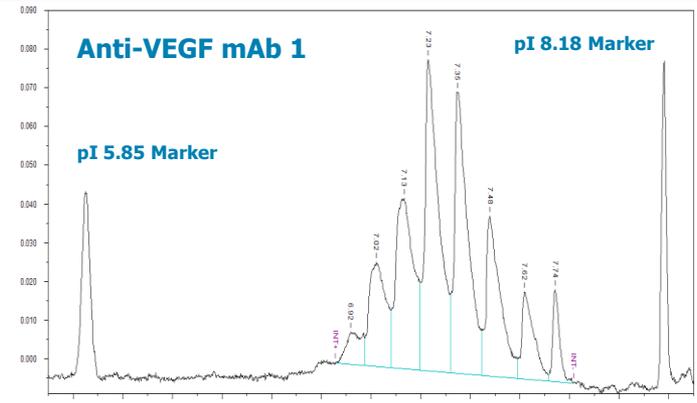
Minutes per Sample

10 iCE

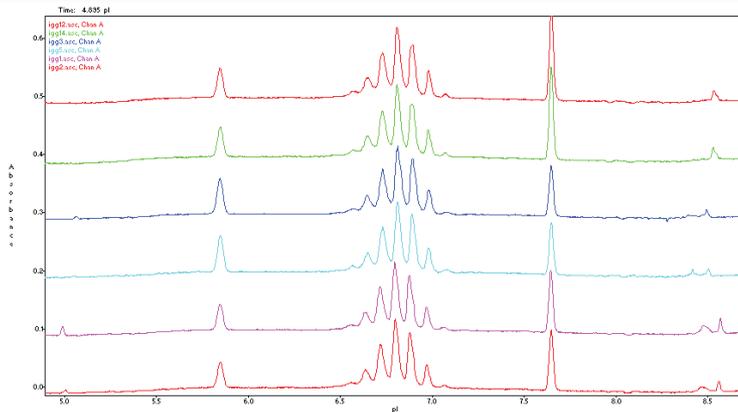
50 Traditional cIEF

60 IEX Chromatography

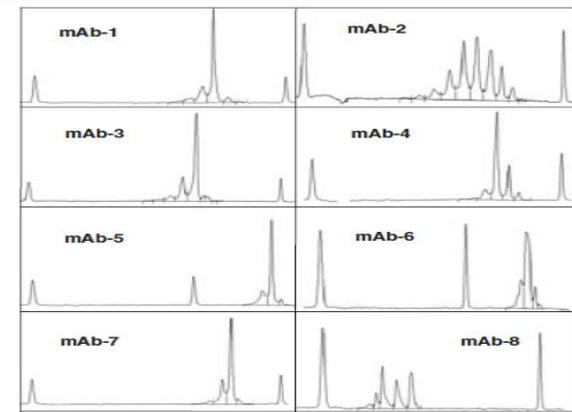
High Resolution



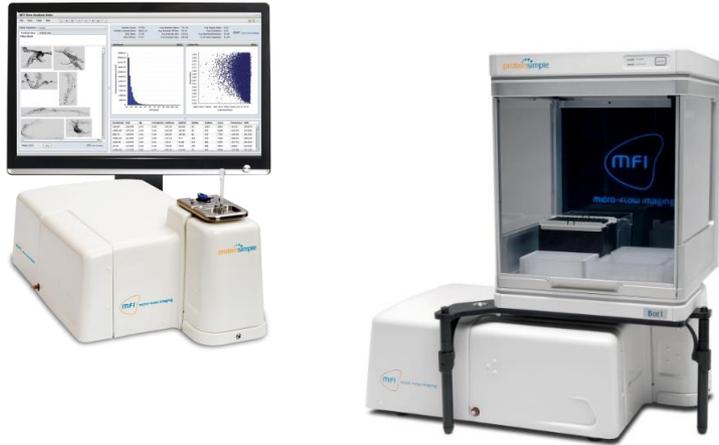
Reproducible



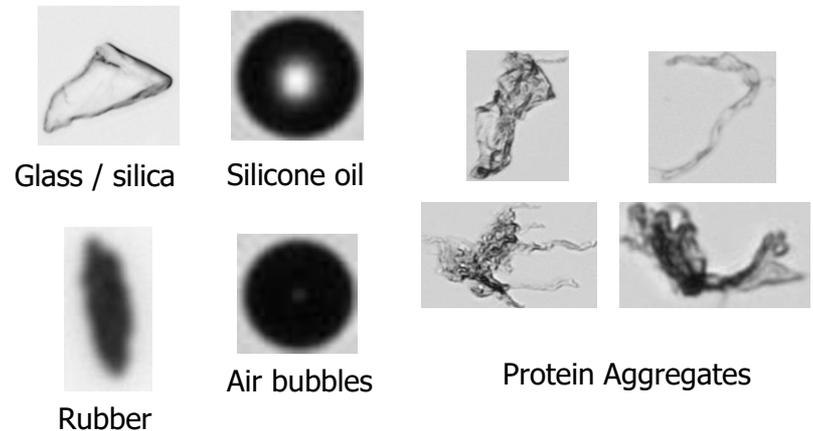
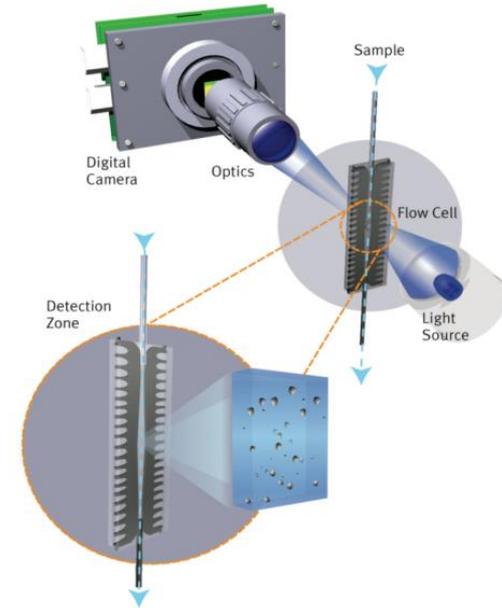
One Assay, Many mAbs



MFI (Micro-Flow Imaging) - Is My Drug Aggregated ?



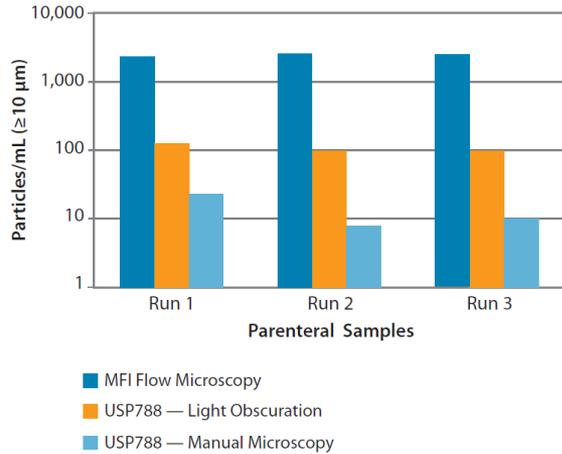
- Concern over immunogenic responses to protein aggregates has created pressure from the FDA to characterize particles
- Looking for
 - Protein aggregates, Air bubbles, Silicone oil droplets and other Contaminants
- Monitor and characterize
 - Size, Shape, Count and Concentration



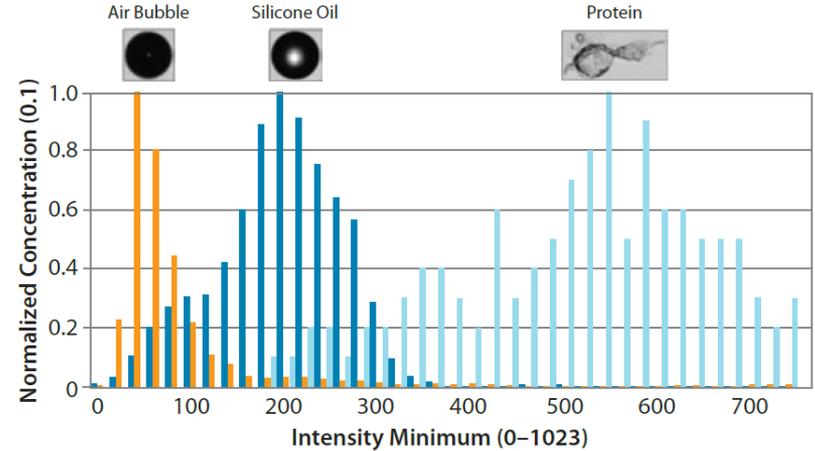
Images of Particle & Aggregates

MFI Advantage is Imaging

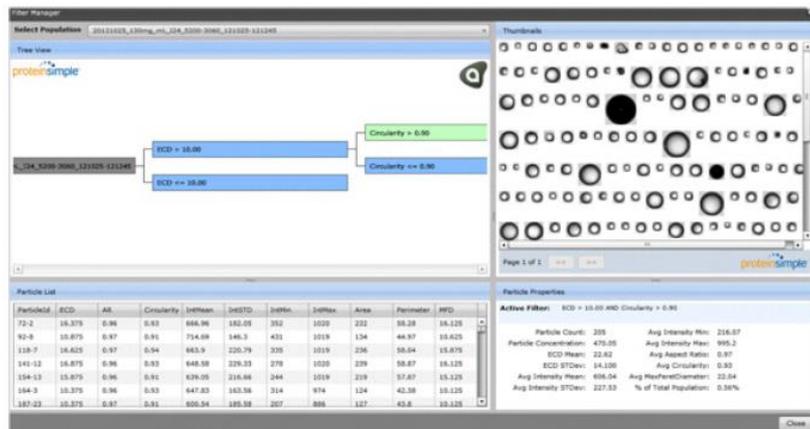
More Sensitive ⇒ Translucent particles detected



Easily Classify



Optimize, Reliable & Robust Transfers



Automate, Fully Integrated





protein simple[®]

a biotechne[®] brand