

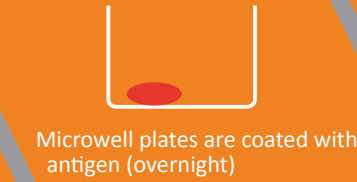
STANDARD PROTEIN ANALYSIS METHODS

ELISA (Enzyme-linked immunosorbent assay) is a common plate-based immunoassay for specifically detecting proteins in solution

A STANDARD ELISA CAN TAKE ANYWHERE FROM 8–36 HOURS PER PLATE

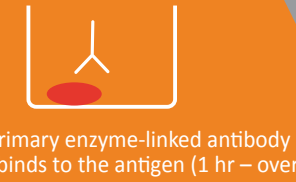
DIRECT ELISA:

STEP 1:



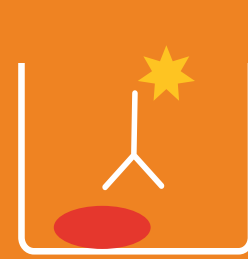
Microwell plates are coated with antigen (overnight)

STEP 2:



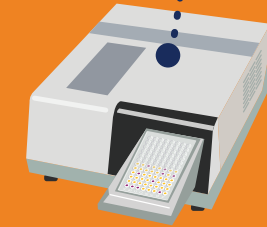
Primary enzyme-linked antibody binds to the antigen (1 hr – overnight)

STEP 3:



The ELISA is developed by adding the enzyme's substrate, which changes color if a reaction occurs (30 sec – 5 mins)

STEP 4:



Color change within each well is detected by spectrophotometry, and results are compared to a standard curve to determine concentration

SANDWICH ELISA:

STEP 1:



Microwell plates are coated with antigen-specific antibody, which then binds to antigen (30 min – 2 hrs)

STEP 2:



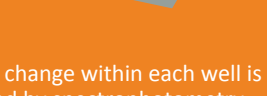
Enzyme-linked secondary antibody binds to the antigen (30 mins – 2 hrs)

STEP 3:



The ELISA is developed by adding the enzyme's substrate, which changes color if a reaction occurs (30 sec – 5 mins)

STEP 4:

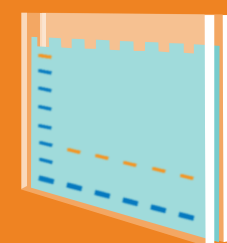


Color change within each well is detected by spectrophotometry, and results are compared to a standard curve to determine concentration

WESTERN BLOT (WB) is the standard method for assessing protein size and relative abundance

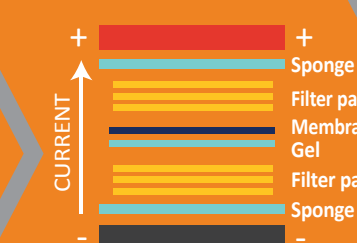
A STANDARD WESTERN BLOT WITH 10–12 LANES CAN TAKE ANYWHERE FROM 7.5–39 HOURS (PER BLOT) AND REQUIRE 10–20 µL OF SAMPLE PER LANE

STEP 1:



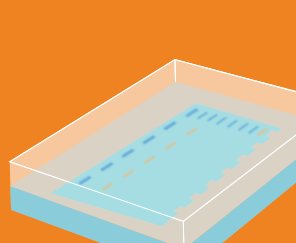
Protein sample (10 – 20 µL/lane) is electrophoretically separated on a sieving matrix or polymer

STEP 2:



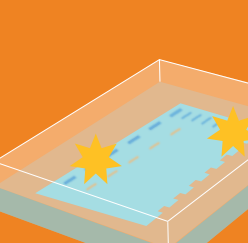
The proteins, separated by molecular weight, are transferred to a membrane (1 hr – overnight)

STEP 3:



Antibodies against the protein of interest are incubated with the blot (1 hr – overnight)

STEP 4:

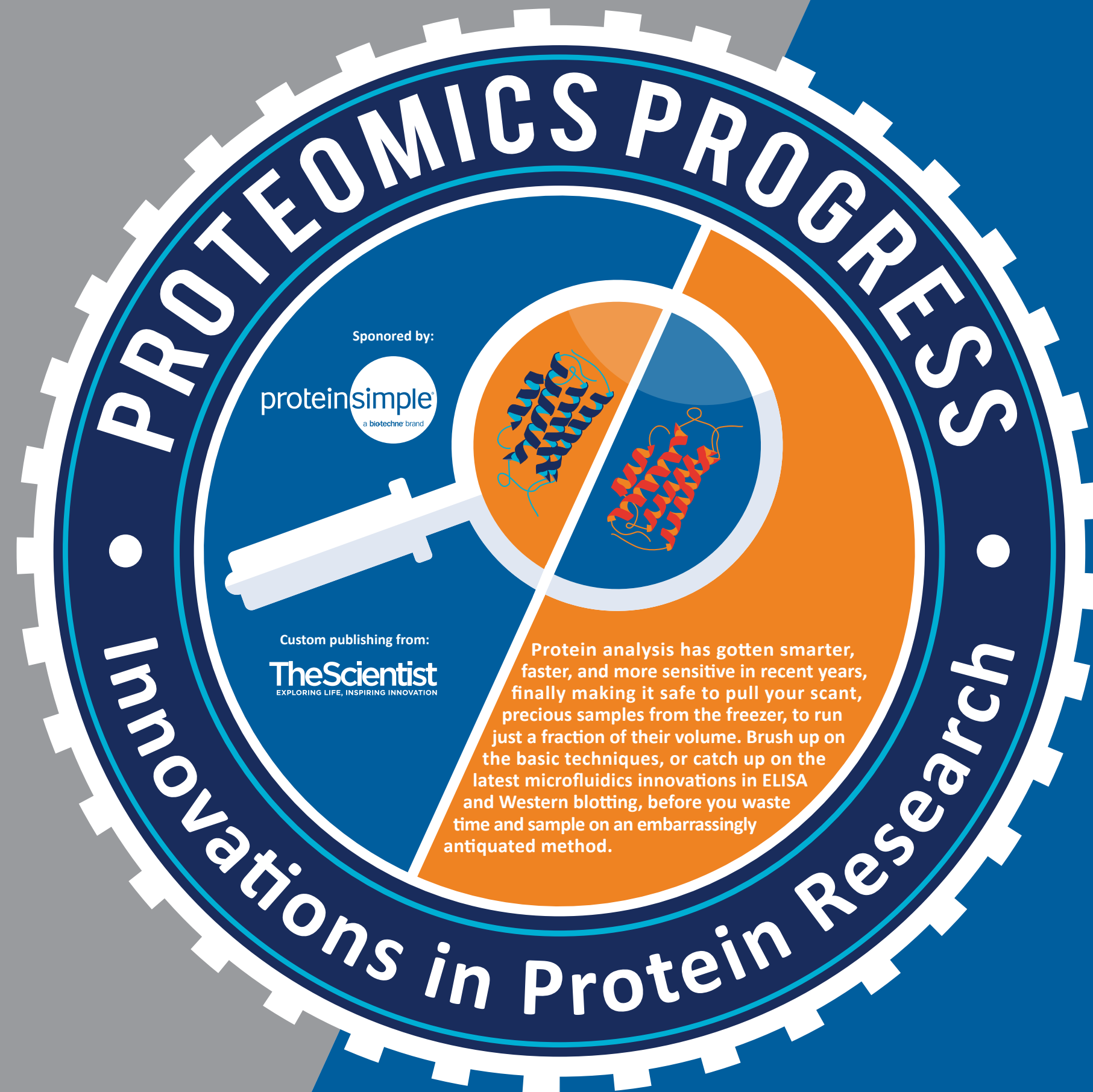


Substrate-conjugated secondary antibodies that recognize the primary antibody are incubated with the blot

STEP 5:



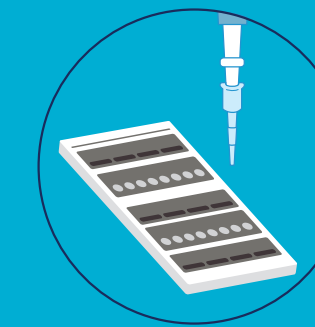
The blot is processed with photographic film or imaged with a blot imaging system and data is analyzed to quantitate signal



ADVANCING PROTEIN RESEARCH WITH MICROFLUIDICS

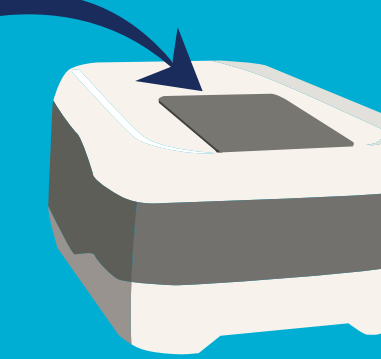
AUTOMATED ELISAs utilize microfluidic cartridges to quantitate protein levels in solution in just one hour, requiring minimal hands-on setup, low sample volume, and no manual washes

STEP 1: LOAD



Load your sample onto the cartridge

STEP 2: RUN



Come back in an hour to analyzed data

BENEFITS:

Enjoy a rapid automated process, with no manual washes, incubations or reagent additions

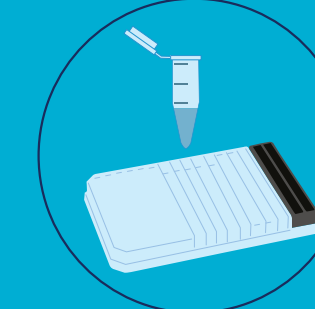
Reproducibly quantitate levels of single or multiple analytes in solution

Rely on accuracy of built-in standard curves and triplicates

AN AUTOMATED ELISA CAN ANALYZE UP TO 72 SAMPLES IN 1 HOUR

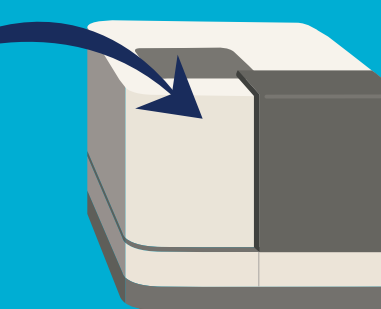
AUTOMATED WESTERN BLOTS utilize microfluidic or capillary cartridges to analyze relative protein size and abundance, minimizing setup, sample volume, time to results, and reagent waste

STEP 1: LOAD



Sample and reagents are loaded onto a plate

STEP 2: RUN



Come back in an hour to analyzed data

BENEFITS:

Enjoy faster Westerns, with no gels or transfers

Experience less hands-on time

Rely on higher reproducibility

AUTOMATED WESTERN BLOTS CAN YIELD 24 DATA POINTS IN ~3 HOURS

to discovery.



Ella automates single or multi-analyte ELISAs, hands-free. Her low volume Simple Plex™ assays are powered by R&D Systems reagents to give you the reproducible sensitivity you need at picogram per mL levels, 4-5 log dynamic range, and zero cross-reactivity. Get results in just one hour, to speed your way to discovery!



Learn more at proteinsimple.com/wes_ella

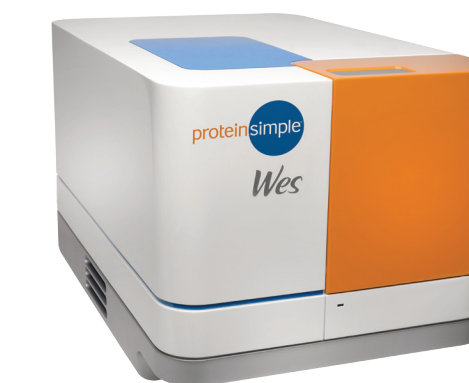
ProteinSimple

ProteinSimple is part of the Protein Platforms Division of Bio-Techne (NASDAQ: TECH). We're rethinking protein tools and helping thousands of researchers around the world resolve their protein analysis problems so they can reveal new insight into proteins and their role in disease. Our wide ranging portfolio of tools includes everything from immunoassay systems that quantify protein expression to systems that probe the structure and purity of protein-based therapeutics.

ProteinSimple is now a brand in the Bio-Techne family of brands that includes R&D Systems, Novus Biologicals, and Tocris. As a company, Bio-Techne has developed, manufactured, and sold biotechnology products, clinical calibrators and controls, and consumables for protein analysis—and now analytical instrumentation and consumables through ProteinSimple.



Win the race



Wes lets you separate and analyze proteins by size from 2 to 440 kDa. He also gets you down to pg-level sensitivity with just 5µL of starting material. Got a lot of samples and no time? No problem. Wes runs up to 25 samples in 3 hours flat and gives you size-based data including total protein. Don't wait to discover, get going today with Wes!



Learn more at proteinsimple.com/wes_ella