



••• Inspiring Innovation •••

Power Your

# Protein Research

From **Collection** to **Analysis**

 **fisher scientific**  
part of Thermo Fisher Scientific



# Understanding the Molecules of Life

Central to many processes of the human body, proteins hold the key to exciting developments and discoveries in research, medicine, pharmaceuticals, and biotechnology. Unlock the potential of proteins by supporting the critical steps of your workflow with products and expertise from the Fisher Scientific channel.

## Collect

### Express and Extract

- Expression Kits and Vectors
- Cell Lysis Detergents
- Extraction Reagents
- Mechanical Homogenizers

## Process

### Isolate and Purify

- Magnetic Beads and Systems
- Ion Exchange Columns
- Dialysis Cassettes
- Purification Instruments

## Analyze

### Measure and Assess

#### Western Blotting

- Protein Gels
- Molecular Weight Markers
- Membranes
- Substrates
- Gel Documentation and Analysis Systems

#### ELISA

- Microplates
- Substrates
- Kits
- Imaging Systems

## Discover More with the Fisher Scientific Channel

We're more than just products. Dedicated Fisher Scientific specialists are available to help you with every step of your work. Plus, we offer a range of programs to help you achieve more.



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### Production Essentials

Advance your production workflow with essential products and services.

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Restrictions may apply

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# Collect

Whether you're extracting protein from primary tissues, cells grown in culture, or cell-free systems, select from product options that meet a range of protein expression and extraction requirements.

## Protein Expression Kits and Vectors

Achieve high protein yields for your downstream applications.

| Description   | Quantity | Cat. No.         |
|---|----------|------------------|
| <b>Gibco Expression Kits</b>  |          |                  |
| Expi293 GnTI- Expression System Kit   | Each     | <b>A39250</b>    |
| Expi293 Inducible Expression System Kit                                     | Each     | <b>A39251</b>    |
| Expi293 Inducible GnTI- Expression System Kit                               | Each     | <b>A39252</b>    |
| Expi293 MembranePro Expression System Kit                                   | Each     | <b>A25870</b>    |
| ExpiCHO Expression System Kit   | Each     | <b>A29133</b>    |
| <b>Thermo Scientific Vectors for Mammalian Cell-Free Protein Expression</b> |          |                  |
| pT7CFE1-Cftag   | 10 µg    | <b>TPPI88866</b> |
| pT7CFE1-CGFP-HA-His   | 10 µg    | <b>TPPI88869</b> |
| pT7CFE1-CHis  | 10 µg    | <b>TPPI88860</b> |



## Thermo Scientific Detergent Solutions

Lyse cells, solubilize membrane proteins and lipids, control protein crystallization, and more.

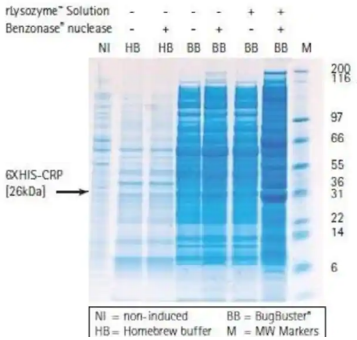
| Description        | Quantity  | Cat. No.       |
|--------------------|-----------|----------------|
| NP-40 Surfact-Amps | 50 mL     | <b>PI85124</b> |
|                    | 6 x 10 mL | <b>PI28324</b> |



## Protein Extraction Reagents

Efficiently extract proteins from cells and tissues.

| Description                            | Quantity | Cat. No.        |
|--|----------|-----------------|
| Genlantis SoluLyse Bacterial           | 125 mL   | <b>L100125</b>  |
|  | 500 mL   | <b>L100500</b>  |
| MilliporeSigma Novagen CytoBuster      | 250 mL   | <b>710094MI</b> |
|  | 50 mL    | <b>710093MI</b> |
| MilliporeSigma Novagen YeastBuster Kit | Each     | <b>711864</b>   |



## MilliporeSigma Master Mixes

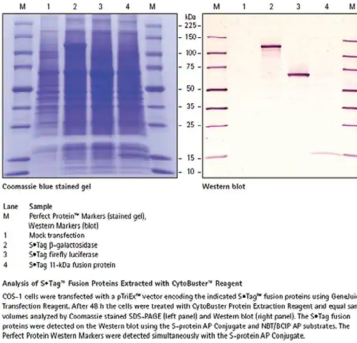
Recover active soluble protein from bacterial and other samples.

| Description       | Quantity | Cat. No.      |
|-------------------|----------|---------------|
| Novagen BugBuster | 100 mL   | <b>714563</b> |

## Lysis Buffers

Recover membrane components under mild and non-denaturing conditions.

| Description                                      | Quantity | Cat. No.          |
|--|----------|-------------------|
| Thermo Scientific Chemicals Triton X-100, pH 7.4 | 250 mL   | <b>AAJ62289AK</b> |
| Thermo Scientific, pH 8.0                        | 500 mL   | <b>AAJ63892AP</b> |



## Bead Homogenizers

Effectively and efficiently grind, lyse, and homogenize samples for RNA and DNA protein extractions.

| Description                                   | Cat. No.           |
|---|--------------------|
| MP Biomedicals FastPrep-24 Classic Instrument | <b>MP116004500</b> |
| MP Biomedicals FastPrep-24 5G Instrument      | <b>11-600-5500</b> |
| Fisherbrand Bead Mill 24 Homogenizer          | <b>15-340-163</b>  |
| Fisherbrand Bead Mill 4 Mini Homogenizer      | <b>15-340-164</b>  |





# Process

Choose from a variety of magnetic beads, columns, dialysis tools, and more to support your protein isolation, purification, and separation.

## MilliporeSigma Magnetic Beads and Systems

Purify biotinylated molecules with reduced mechanical stress and less handling time.

| Description                                 | Quantity | Cat. No.  |
|---|----------|-----------|
| Magna ChIP Protein AG                       | 1 mL     | 16-663    |
| PureProteome Protein A Magnetic Bead System | 2 x 1 mL | LSKMAGA02 |
|   | 10 mL    | LSKMAGA10 |
| PureProteome Protein G Magnetic Bead System | 2 x 1 mL | LSKMAGG02 |



## Magnetic Beads

Explore a variety of coated magnetic beads for purifying antibodies from cell culture supernatant, ascites, serum, and crude extracts and lysates.

| Description  | Quantity | Cat. No.   |
|--|----------|------------|
| Cytiva His Mag Sepharose Ni                                | 5 x 1 mL | 45-002-515 |
| Thermo Scientific HisPur Ni-NTA                            | 10 mL    | PI88832    |
| Thermo Scientific Pierce Protein A MagBeads, Alkali Stable | 5 mL     | PIA53036   |
| MilliporeSigma PureProteome Protein G Bead System          | 10 mL    | LSKMAGG10  |
|  | 2 x 1 mL | LSKMAGG02  |



## Purification Instruments

Perform reproducible nucleic acid purification, proteomics, and cell isolation with minimal hands-on time.

| Description  | Cat. No.   |
|--|------------|
| Thermo Scientific KingFisher Duo Prime Purification System | 14-387-700 |



## Invitrogen Dynabeads Magnetic Beads

Perform immunoprecipitations without the need for pre-treatment, columns, slurries, or centrifugation.

| Description                       | Quantity | Cat. No. |
|-----------------------------------|----------|----------|
| Protein A for Immunoprecipitation | 5 mL     | 10-002-D |
| Protein G for Immunoprecipitation | 5 mL     | 10-004-D |
| Antibody Coupling Kit             | Each     | 14-311-D |



## Cytiva Protein Purification Ion Exchange Columns

Select from multiple preparatory and purification column options designed to help determine selectivity, binding, and elution conditions or perform small-scale purifications.

| Description                          | Quantity         | Cat. No.   |
|--------------------------------------|------------------|------------|
| HiPrep Heparin Fast Flow 16/10       | 1 x 20 mL        | 45-002-075 |
| HiPrep Q Fast Flow 16/10             | 20 mL            | 45-002-071 |
| HiPrep Q HP 16/10                    | 20 mL            | 45-000-555 |
| HiPrep Q XL 16/10                    | 20 mL            | 45-002-068 |
| HiTrap Capto Q ImpRes IEX            | 5 x 1 mL, 5/Pack | 45-002-520 |
| HiTrap CM Sepharose Fast Flow IEX    | 5 x 5 mL, 5/Pack | 45-000-292 |
| HiTrap DEAE Sepharose Fast Flow IEX  | 5 x 5 mL, 5/Pack | 45-000-291 |
| HiTrap IEX SP Sepharose HP Prepacked | 5 x 5 mL, 5/Pack | 45-002-192 |
| HiTrap IEX Q Sepharose HP Prepacked  | 5 x 5 mL, 5/Pack | 45-000-194 |
| HiTrap Q Sepharose Fast Flow IEX     | 5 x 5 mL, 5/Pack | 45-000-293 |
| HiTrap Q Sepharose XL IEX            | 5 x 5 mL, 5/Pack | 45-000-296 |
| HiTrap SP Sepharose Fast Flow IEX    | 5 x 5 mL, 5/Pack | 45-000-294 |
| HiTrap SP Sepharose XL IEX           | 5 x 5 mL, 5/Pack | 45-000-298 |



## Thermo Scientific Slide-A-Lyzer G3 Dialysis Cassettes

These single-use dialysis devices offer an easy-to-use and secure alternative to traditional dialysis tubing—no more knots or clips.

| Description         | Capacity | Cat. No. |
|---------------------|----------|----------|
| 10K MWCO            | 30 mL    | PIA52973 |
| 2K MWCO             | 3 mL     | PIA52961 |
| Irradiated 10K MWCO | 15 mL    | PIA52982 |
| 3.5K MWCO           | 70 mL    | PIA52969 |





# Analyze

Quantify the protein in your samples and perform subsequent analysis using western blotting and ELISA techniques. We offer gels, markers, membranes, microplates, substrates, kits, and more.

## Western Blotting Products

### Invitrogen Mini Protein Gels

Use these pre-cast polyacrylamide gels for reliable and consistent performance and reproducibility.

| Description                              | Wells | Gel Thickness | Cat. No.          |
|--|-------|---------------|-------------------|
| NuPAGE 4 to 12%, Bis-Tris, 1.0 to 1.5 mm | 10    | 1.0 mm        | <b>NP0321BOX</b>  |
| Bolt 4 to 12%, Bis-Tris                  | 10    | 1.0 mm        | <b>NW04120BOX</b> |
| Novex WedgeWell 4 to 20%, Tris-Glycine   | 10    | 1.0 mm        | <b>XP04200BOX</b> |



### Molecular Weight Markers for Protein Separations

Choose from a variety of stained and unstained markers and ladders in your choice of molecular weight ranges.

| Description   | Quantity    | Cat. No.          |
|---|-------------|-------------------|
| Cytiva Rainbow Molecular Weight Markers (2 mg/mL)                         | 250 µL      | <b>45-001-591</b> |
| Fisher Bioreagents EZ-Run Prestained Rec Protein Ladder                   | 2 x 500 µL  | <b>BP36031</b>    |
| Thermo Scientific PageRuler Plus Prestained Protein Ladder, 10 to 250 kDa | 10 x 250 µL | <b>PI26620</b>    |
| Thermo Scientific PageRuler Prestained Protein Ladder, 10 to 180 kDa      | 2 x 250 µL  | <b>PI26616</b>    |
|   | 10 x 250 µL | <b>PI26617</b>    |
| Thermo Scientific PageRuler Unstained Broad Range Protein Ladder          | 2 x 250 µL  | <b>PI26630</b>    |
| Thermo Scientific Spectra Multicolor Broad Range Protein Ladder           | 10 x 250 µL | <b>PI26623</b>    |



### Invitrogen Western Blotting Equipment

Capture and analyze protein and DNA gels and other chemiluminescent and fluorescent blots.

| Description                                      | Cat. No.          |
|--|-------------------|
| Bolt Welcome Pack + iBlot 2 System               | <b>NW0412AIB2</b> |
| iBind Western Starter Kit, Fluorescent Detection | <b>SLF1002S</b>   |



### Reagent and Substrate Kits

Use these packages to detect proteins across a variety of analytical western blot processes.

| Description  | Quantity                       | Cat. No.          |
|--|--------------------------------|-------------------|
| Cytiva Amersham ECL Prime Western Blotting Detection Reagent Kit           | 1,000 cm <sup>2</sup> Membrane | <b>45-002-401</b> |
|  | 3,000 cm <sup>2</sup> Membrane | <b>45-010-090</b> |
| Thermo Scientific SuperSignal West Femto Maximum Sensitivity Substrate Kit | 2,000 cm <sup>2</sup> Membrane | <b>PI-34096</b>   |
| MilliporeSigma Immobilon Western Chemiluminescent HRP Substrate Kit (ECL)  | 500 cm <sup>2</sup> Membrane   | <b>WBKLS0050</b>  |
|  | 5,000 cm <sup>2</sup> Membrane | <b>WBKLS0500</b>  |



### Invitrogen Western Blotting Welcome Packs

Packs include a mini gel tank, plus gels, buffers, and standards for protein electrophoresis.

| Product Name                          | Wells | Cat. No.       |
|---------------------------------------|-------|----------------|
| Bolt Bis-Tris Plus Mini Gel, 4 to 12% | 10    | <b>NW0412A</b> |



### Syngene Gel Documentation and Analysis Systems

Rapidly and accurately image and analyze fluorescence and visible gels, multiplexed fluorescent westerns, stain-free gels, and chemiluminescent blots.

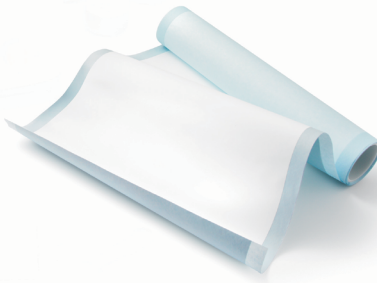
| Description             | Lens  | Cat. No.          |
|-------------------------|-------|-------------------|
| G:BOX Chemi XX6, 6MP    | F0.95 | <b>01-257-167</b> |
|                         | F0.8  | <b>01-257-169</b> |
| G:BOX Chemi XX9, 9.1 MP | F0.95 | <b>01-257-171</b> |
|                         | F0.8  | <b>01-257-172</b> |



### MilliporeSigma Western Blotting Membranes

Find membranes compatible with fluorescent, chemifluorescent, chromogenic, and chemiluminescent detection protocols.

| Description           | Format | Dimension   | Cat. No.         |
|-----------------------|--------|-------------|------------------|
| Immobilon-NC Transfer | Roll   | 33 cm x 3 m | <b>HATF00010</b> |
| Immobilon-FL PVDF     | Sheet  | 10 x 10 cm  | <b>IPFL10100</b> |
|                       | Sheet  | 20 x 20 cm  | <b>IPFL20200</b> |
| Immobilon-P PVDF      | Sheet  | 9 x 12 cm   | <b>IPVH09120</b> |
|                       | Sheet  | 10 x 10 cm  | <b>IPVH10100</b> |



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# Analyze

## ELISA Products

### Microplates

Choose from multiple microplate options for performing ELISA, agglutination, and other manual and automated assays.

| Description  | Plate Color | Well Bottom | Cat. No.                   |
|--|-------------|-------------|----------------------------|
| Fisherbrand High-Binding 96-Well Plates                            | Clear       | Flat        | <a href="#">21-377-203</a> |
| Fisherbrand Untreated 96-Well Polystyrene Plates                   | Clear       | Flat        | <a href="#">12-565-501</a> |
| Fisherbrand Untreated 384-Well Polystyrene Plates                  | Clear       | Flat        | <a href="#">12-565-506</a> |
| Greiner Bio-One High-Throughput 96-Well Solid Bottomed Microplates | Clear       | Flat        | <a href="#">07-000-125</a> |



### Thermo Scientific Substrates

Optimize luminometer-based and horseradish peroxidase detection ELISA assays.

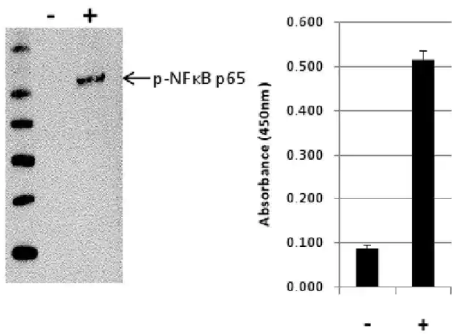
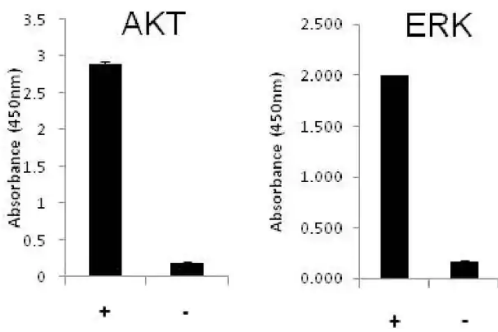
| Description   | Quantity | Cat. No.                |
|---|----------|-------------------------|
| SuperSignal ELISA Pico Chemiluminescent Substrate Kit | 250 mL   | <a href="#">PI37069</a> |
| 1-Step TMB ELISA Substrate Solutions                  | 250 mL   | <a href="#">PI34028</a> |



## Invitrogen ELISA Kits

High-quality, optimized kits allow you to measure target-specific proteins with confidence, reliability, and consistency.

| Description   | Quantity      | Cat. No.                  |
|---|---------------|---------------------------|
| AKT (Total/Phospho) Multispecies InstantOne Kit       | 96 Tests      | <a href="#">501129232</a> |
| AKT (Phospho) [pS473] Multispecies InstantOne Kit     | 96 Tests      | <a href="#">50246243</a>  |
| AKT/ERK Activation Multispecies InstantOne Kit        | 96 Tests      | <a href="#">50246233</a>  |
| ICAM-1 (Soluble) Human Kit                            | 96 Tests      | <a href="#">5017871</a>   |
|   | 10 x 96 Tests | <a href="#">5017894</a>   |
| ERK1/ERK2 (Total/Phospho) Multispecies InstantOne Kit | 96 Tests      | <a href="#">50246232</a>  |
| NFkB p65 (Phospho) [pS536] Human InstantOne Kit       | 96 Tests      | <a href="#">50246258</a>  |



## Agilent BioTek ELISA Imaging Systems

Measure UV-Vis absorbance in 6- to 384-well microplates, cuvetts, and in microvolume samples.

| Description                          | Cat. No.                    |
|--------------------------------------|-----------------------------|
| Epoch 2 Microplate Spectrophotometer | <a href="#">BTEPOCH2TSC</a> |



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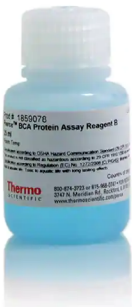


# Protein Research Essentials

Depend on our extensive product offering to support your protein sample prep and assays.

## Protease Inhibitors

| Description  | Quantity | Cat. No.            |
|--|----------|---------------------|
| MilliporeSigma Calbiochem Protease Inhibitor Cocktail Set III, Animal-Free | 1 Set    | <b>53-514-01SET</b> |
|  | 1 mL     | <b>5351401ML</b>    |
| MilliporeSigma Calbiochem Protease Inhibitor Cocktail Set III, EDTA-Free   | 1 Set    | <b>53-913-41SET</b> |
|  | 1 mL     | <b>53-913-41ML</b>  |
| Cytiva Protease Inhibitor Mix  | 1 mL     | <b>45-001-740</b>   |



## Thermo Scientific Total Protein Assays and Standards

| Description                                  | Quantity  | Cat. No.       |
|--|-----------|----------------|
| Pierce Bovine Serum Albumin Standard Ampules | 10 x 1 mL | <b>PI23209</b> |
| Pierce BCA Protein Assay Reagent B           | 25 mL     | <b>PI23224</b> |
| Pierce BCA Protein Assay Reagent A           | 1 L       | <b>PI23223</b> |
|  | 500 mL    | <b>PI23228</b> |
| Pierce BCA Protein Assay Kit                 | 500 mL    | <b>PI23227</b> |
|  | 1 L       | <b>PI23225</b> |
| Pierce 660nm Protein Assay Reagent           | 750 mL    | <b>PI22660</b> |

## Thermo Scientific Pipette Tips for Gel Loading

| Description  | Quantity | Cat. No.          |
|--|----------|-------------------|
| ART Filtered Tips  | 20 µL    | <b>21-236-20</b>  |
|  | 100 µL   | <b>21-236-9</b>   |
| ART Non-Filtered Gel 200 Universal-Fit Pipette Tips, Tip Width: 0.4 mm | 200 µL   | <b>21-236-74</b>  |
| ART Non-Filtered Gel 200 Universal-Fit Pipette Tips, Tip Width: 0.6 mm | 200 µL   | <b>21-402-174</b> |



## Thermo Scientific ELISA Pipette Tips

| Description                                      | Quantity | Cat. No.          |
|--|----------|-------------------|
| ART Barrier Tips, Standard, Reload System        | 10 µL    | <b>13-811-100</b> |
|  | 20 µL    | <b>13-811-114</b> |
|  | 200 µL   | <b>13-811-124</b> |
|  | 300 µL   | <b>13-811-141</b> |
| ART Barrier Tips, Extended Length, Reload System | 1,000 µL | <b>13-811-154</b> |
| ART Non-Filtered Tips, Reload System             | 10 µL    | <b>13-811-106</b> |
|  | 20 µL    | <b>13-811-121</b> |
|  | 200 µL   | <b>13-811-131</b> |
|  | 1,000 µL | <b>13-811-161</b> |



## Hourglass International Gloves

| Description                          | Size    | Cat. No.          |
|--------------------------------------|---------|-------------------|
| HandPRO Scion700 Nitrile Exam Gloves | X-Small | <b>17-900-912</b> |
|                                      | Small   | <b>17-900-913</b> |
|                                      | Medium  | <b>17-900-914</b> |
|                                      | Large   | <b>17-900-915</b> |
|                                      | X-Large | <b>17-900-916</b> |



## AlphaProTech Lab Coats

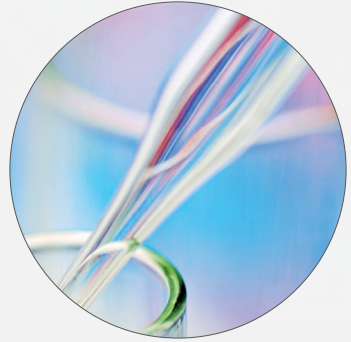
| Description          | Color | Cuff Style | Size     | Cat. No.            |
|----------------------|-------|------------|----------|---------------------|
| AlphaGuard Lab Coats | White | Knit       | Large*   | <b>19-130-1466C</b> |
|                      | White | Elastic    | Large*   | <b>19-130-1467C</b> |
|                      | Blue  | Knit       | Large*   | <b>19-130-4254</b>  |
|                      | White | Knit       | X-Large* | <b>19-130-1466D</b> |
|                      | White | Elastic    | X-Large* | <b>19-130-1467D</b> |
|                      | Blue  | Knit       | X-Large* | <b>19-130-4255</b>  |





## Related Applications and Resources

Look to the Fisher Scientific channel to support a broad spectrum of your research. Explore these categories to find products and information to enhance your workflows and drive your discoveries.



## Protein Biology Methods

Shop products from top brands for isolation, purification, separation, and detection.

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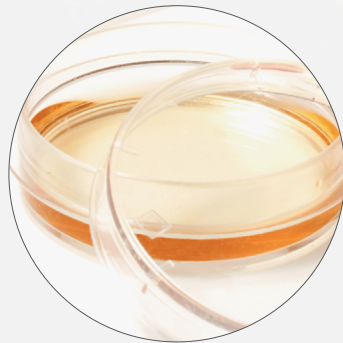
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## Cell Culture

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