Subcellular fractionation kit, Thermo Scientific Pierce

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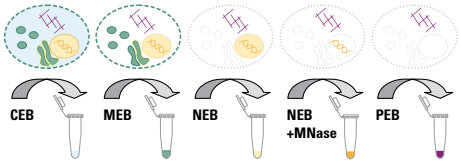
Segregate and enrich proteins from five cellular compartments for localisation studies.

- A simple procedure without using gradient ultracentrifugation
- Obtains cytoplasmic, membrane, soluble nuclear, chromatin-bound and cytoskeletal protein fractions from a single kit
- Uses extracts for downstream applications such as protein assays, Western blotting, gel shift assays, ChIP assays and enzyme activity assays

Fractionation of subcellular proteins enables protein localisation assessment and protein enrichment from specific cellular compartments.
The Thermo Scientific subcellular protein fractionation kit includes a combination of reagents for stepwise lysis of cells into functional cytoplasmic, membrane, soluble nuclear, chromatin bound and cytoskeletal protein fractions in less than three hours.

Catalogue No	Description
PN78840	**Subcellular protein fractionation kit** Sufficient reagent for 50 cell preps. Includes: Cytoplasmic extraction buffer (CEB), 10mL Membrane extraction buffer (MEB), 10mL Nuclear extraction buffer (NEB), 10mL Pellet extraction buffer (PEB), 5mL Micrococcal nuclease, 100 units/µL, 150µL Calcium Chloride ($CaCl_2$), 100mM, 250µL Halt protease inhibitor cocktail, 100X, 350µL
PN88216	Micrococcal nuclease, 100 units/µL, 150µL



Schematic of the subcellular fractionation procedure. Cellular compartments are sequentially extracted by incubating cells with cytoplasmic extraction buffer (CEB) followed by membrane extraction buffer (MEB) and nuclear extraction buffer (NEB). Adding micrococcal nuclease to NEB extracts chromatin-bound proteins from the cell pellet before adding the pellet extraction buffer (PEB) to solubilise cytoskeletal proteins.

B-PER bacterial protein extraction reagents, Thermo Scientific Pierce

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Efficient, gentle lysis and extraction of *E.coli* and other bacterial cells.

- Fast and simple - just add B-PER reagent to a bacterial pellet and shake for 10min
- Recover soluble proteins by pelleting cell debris
- Excellent yields - recover both soluble and insoluble recombinant protein from bacterial lysates and purify inclusion bodies to near homogeneous levels
- Flexible - B-PER reagents are suitable for any scale protein extraction and are available in phosphate and 1X and 2X Tris formulations, with and without enzymes
- Compatible - completely compatible with addition of protease inhibitor cocktails, and resulting protein extract can be used in protein assays, typical affinity purification methods (e.g., GST, 6xHis, IMAC) and other applications
- Convenient, ready to use formats:

  - B-PER and B-PER II (2X) reagents are free of enzymatic components

  - B-PER (phosphate buffer) reagent is an amine-free formulation for direct compatibility with labeling and crosslinking

  - B-PER with enzymes and B-PER Direct with enzymes reagents include lysozyme and DNase enzymes for improved lysis and recovery

Thermo Scientific Pierce B-PER bacterial protein extraction reagents are designed to extract soluble protein from bacterial cells. These reagent based assays eliminate the need for harsh mechanical procedures like sonication. These easy-to-use cell lysis solutions use mild nonionic detergents to disrupt cells and solubilise proteins without denaturation. Enzyme supplements such as DNase I and Lysozyme allow for improved yield of large molecular weight proteins that are difficult to purify. B-PER reagents are formulated in 20mM Tris buffer (pH7.5) or phosphate buffer, yielding lysates that are directly compatible with typical downstream workflows such as electrophoresis, affinity purification, immunoprecipitation, protein interaction analysis, crosslinking and protein labeling. If necessary, the mild detergent components can be removed by dialysis or gel filtration (desalting columns).

B-PER reagent	**Suitable applications**
B-PER	Bacterial lysis Purification of affinity tagged proteins
B-{ER II (2X B-PER)	Bacterial lysis for low cell density Purification of proteins with low expresssion levels
B-PER (in phosphate buffer)	Amine-free formulation for direct compatibility of lysate with amine-reactive labelling and crosslinking
B-PER with enzymes	Improved cell membrane and DNA digestion for increased yields Recovery of large molecular weight proteins Recovery of insoluble proteins from inclusion bodies
B-PER direct with enzymes	Lysis of bacteria directly in cell culture media Ideal for screening 96 well microplate samples

entry continued