

## Phosphatase Inhibitor Cocktail IV

### CERTIFICATE OF ANALYSIS

**P-1550**  
**Lot# K1556**

Liquid. In 1 ml DMSO

**1 VIAL**

Crude cell extracts contain a number of endogenous enzymes, such as proteases and phosphatases, which are capable of quickly degrading the proteins of interest present in the extract. As a result, this biochemical process can drastically reduce the yield of any protein during any isolation step and endanger all further downstream experiments. The best way to improve the yield of intact proteins is to add inhibitors of these enzymes known to be present in the source material.

All cells contain a different mixture of enzymes but the following generalizations can be made: Serine proteases are widely distributed in most type of cells / Bacterial extracts typically contain serine and metalloproteases / Extracts from animal tissues contain mainly serine, cysteine and metalloproteases. Some also contain aspartic proteases / Plant extracts contain large amounts of serine and cysteine proteases.

Since cells contain different type of enzymes, our specially formulated cocktails of well selected, different inhibitors supplied in a ready-to-use form, will provide complete protection for your proteins of interest for subsequent experiments like Western blotting, reporter gene analysis, immunoprecipitations, epitope tagging, specific protein activity assay, etc... or during further purification steps.

### Phosphatase Inhibitor Cocktail IV

**Product Description:** Liquid. In 1 ml DMSO. A specially formulated cocktail of three phosphatase inhibitors that will inhibit both serine/threonine and alkaline phosphatases.

**Recommended Usage:** Recommended for use with tissue and cell extracts including extracts containing detergents. Recommended usage is a 100-fold dilution. Each vial contains the following components:

| Products                              | Cat. No. | Mol. Wt. | Concentration | Target Phosphatases                                     |
|---------------------------------------|----------|----------|---------------|---|
| (-)-p-Bromotetramisole oxalate        | B-1262   | 373.23   | 2.5 mM        | Inhibits alkaline phosphatases                          |
| Cantharidin                           | C-1412   | 196.2    | 500 µM        | Inhibits protein phosphatase 2A (PP-2A)                 |
| Calyculin A, <i>Discodermia calyx</i> | C-1031   | 1009.2   | 1 µM          | Inhibits protein phosphatases 1 and 2A (PP-1 and PP-2A) |

**Solubility:** Supplied as a liquid in 1 ml DMSO. Add to water, aqueous buffer or directly to extraction media.

**Storage / Stability:** Freezer (-20°C). This product is stable until December 2021

**References:** Proteolytic Enzymes- A Practical Approach (Beynon, P. J. & Bond, J. S. eds) 1994, pp. 241-249.

#### Try OTHER Ready-to-Use Protease and Phosphatase Inhibitor Cocktails

##### Features/Benefits

- Convenient- No need to prepare, ready to use formulations
- Flexibility- EDTA-Free, Animal-Free and DMSO-Free(Cocktail as a lyophilized solid instead of a solution in DMSO) formulations designed for your specific applications
- Wide Range- A great selection of specific cocktail formulations designed to inhibit proteolytic activity from most tissues or cell extracts, including mammalian, bacterial, yeast, fungal and plant cells

| INHIBITOR COCKTAILS                                     | Cat.No | Components   | Recommended Applications   |
|---|--------|--|--|
| Protease Inhibitor Cocktail I                           | P-1510 | AEBSF, Aprotinin, E-64, EDTA, Leupeptin                              | General Use  |
| Protease Inhibitor Cocktail I, Animal-Free              | P-1540 | AEBSF, Aprotinin(Recombinant), E-64, EDTA, Leupeptin                 | General use and for applications that require animal-free reagents                         |
| Protease Inhibitor Cocktail II                          | P-1511 | AEBSF, Bestatin, E-64, EDTA, Pepstatin A                             | Bacterial cell extracts  |
| Protease Inhibitor Cocktail III                         | P-1512 | AEBSF, Aprotinin, Bestatin, E-64, Leupeptin, Pepstatin A             | Mammalian cells and tissue extracts  |
| Protease Inhibitor Cocktail III, Animal-Free            | P-1542 | AEBSF, Aprotinin(Recombinant) Bestatin, E-64, Leupeptin, Pepstatin A | Mammalian cells and tissue extracts and for applications that require animal-free reagents |
| Protease Inhibitor Cocktail III, Animal-Free, DMSO-Free | P-1543 | AEBSF, Aprotinin(Recombinant) Bestatin, E-64, Leupeptin, Pepstatin A | Mammalian cells and tissue extracts, for animal-free, organic solvent free applications    |
| Protease Inhibitor Cocktail IV                          | P-1513 | AEBSF, E-64, Pepstatin A, Phenanthroline                             | Fungal and yeast cell extracts   |
| Protease Inhibitor Cocktail V, EDTA-Free                | P-1514 | AEBSF, Aprotinin, E-64, Leupeptin                                    | Mammalian cells and tissue extracts, samples analyzed by 2-D gel electrophoresis           |
| Protease Inhibitor Cocktail V, EDTA-Free, Animal-Free   | P-1544 | AEBSF, Aprotinin(Recombinant), E-64, Leupeptin                       | Mammalian cells and tissue extracts and for applications that require animal-free reagents |
| Protease Inhibitor Cocktail VI, General Use             | P-1515 | AEBSF, Aprotinin, Bestatin, E-64, EDTA, Leupeptin                    | General Use  |
| Protease Inhibitor Cocktail VI, Plant Cells             | P-1545 | AEBSF, Bestatin, E-64, Leupeptin, Phenanthroline, Pepstatin A        | Plant cell extracts  |
| Protease Inhibitor Cocktail VII                         | P-1546 | AEBSF, Bestatin, E-64, Pepstatin A, Phosphoramidon                   | Histidine-tagged proteins  |
| Protease Inhibitor Cocktail VII, DMSO-Free              | P-1547 | AEBSF, Bestatin, E-64, Pepstatin A, Phosphoramidon                   | Histidine-tagged proteins and for organic solvent free applications                        |
| Protease Inhibitor Cocktail VIII                        | P-1548 | ALLN, Antipain, E-64   | Broad range cysteine protease inhibition   |
| Serine Protease Inhibitor Cocktail I                    | P-1516 | AEBSF, Aprotinin, Elastatinal, GGACK                                 | Broad range serine protease inhibition   |
| Phosphatase Inhibitor Cocktail I                        | P-1517 | Bromotetramisole, Cantharidin, Microcystin LR                        | Animal tissues, A431 or Jurkat cell extracts   |
| Phosphatase Inhibitor Cocktail II                       | P-1518 | Imidazole, Na(Orthovanadate, Fluoride, Tartrate, Molybdate)          | Animal tissues, A431 or Jurkat cell extracts   |
| Phosphatase Inhibitor Cocktail III                      | P-1549 | Na(Orthovanadate, Fluoride, Pyrophosphate) Glycerophosphate          | Animal tissue extracts   |
| Phosphatase Inhibitor Cocktail IV                       | P-1550 | Bromotetramisole, Cantharidin, Calyculin A                           | Animal tissue extracts   |

## Related Products: Protein Solubilizers

Highly purified, Sterile, 10% aqueous solution of detergents. Aseptically manufactured **Sterile! No more mold growth in your aqueous detergents.**

|                          |           |
|--------------------------|-----------|
| Aldehyde & Peroxide Conc | < 0.1 mM  |
| Conductivity             | < 5 uMhos |
| Sterility                | USP Grade |

| Products  | Cat. No. | Pkg. Size                    |
|---|----------|------------------------------|
| Protein Solubilizer X-114, Sterile 10% <b>Triton X-114</b> Ampules  | P-1496   | 10 X 5ml                     |
| Protein Solubilizer 80, Sterile 10% <b>Tween 80</b> Ampules   | P-1498   | 10 X 5ml                     |
| Protein Solubilizer X-100, Sterile 10% <b>Triton X-100</b> Ampules  | P-1500   | 10 X 5ml                     |
| Protein Solubilizer 20, Sterile 10% <b>Tween 20</b> Ampules   | P-1502   | 10 X 5ml                     |
| Protein Solubilizer 35, Sterile 10% <b>Brij-35</b> Ampules  | P-1504   | 10 X 5ml                     |
| Protein Solubilizer 40, Sterile 10% <b>NP-40</b> Ampules  | P-1505   | 10 X 5ml                     |
| Protein Solubilizer Set-1, Sterile 10% ( <b>Tween 20, Tween 80, Triton X-100, NP-40 &amp; Brij-35</b> ) Ampules | P-1503   | 5 Sample Set @ 2 X 5 ml each |