**Directions for Use**

**Protease Inhibitor Cocktail 100X, General Use, EDTA-Free**

**Catalog Number :** MG2287

**Packaging Size : 4×2.0ml 5×5.0ml**

**General Information**

MesGen Biotechnology offers five different protease inhibitor cocktails as Ready-Use Reagent. These are designed to preserve protein composition of samples derived from a broad range of organisms. Protease inhibitors are essential reagents during protein extraction and purification, as there are endogenous proteases and phosphatases in crude lysates, which can compromise protein integrity and yield. MesGen Biotechnology Protease Inhibitor Cocktails contain mixtures of serine, cysteine, aspartic, metalloprotease and aminopeptidase inhibitors in concentrations that are optimized for different protein sources.

**Product features**

1. ※ Ready-Use, premix of protease inhibitors
2. ※ Reconstitute in supplied vial for convenient, 100X cocktail
3. ※ Optimized formulations for use with different organisms
4. ※ EDTA-free, Solvent is H2O, without DMSO

**Storage condition**

Protease Inhibitor Cocktails should be stored at -20°C. Avoid multiple freeze-thaw cycles.

**Protocol / Procedure**

**Formulation of Protease Inhibitor Cocktails**

|  |  |  |  |
| --- | --- | --- | --- |
| **Inhibitor** | **Molecular Weight** | **Concentration** | |
| **100X** | **1X** |
| AEBSF | 239.5 | 50 mM | 0.5 mM |
| Aprotonin | 6,512 | 30 μM | 0.3 μM |
| Bestatin | 308.4 | 1 mM | 10 μM |
| E-64 | 357.4 | 1 mM | 10 μM |
| Leupeptin | 493.6 | 1 mM | 10 μM |

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**Frequently Asked Questions**

**What are the inhibitor specificities for the components of MesGen Biotechnology Protease Inhibitor Cocktails?**  Please refer to the table below.

|  |  |
| --- | --- |
| **Name** | **Inhibition Specificity** |
| AEBSF | Irreversible serine protease inhibitor of chymotrypsin, trypsin, kallikrein, plasmin and thrombin. Non-toxic alternative for PMSF. |
| Aprotinin | Competitive, reversible serine protease inhibitor of chymotrypsin, trypsin, kallikrein and plasmin. Does not inhibit Factor Xa or thrombin. |
| Bestatin | Competitive aminopeptidases inhibitor of aminopeptidase B, leucine aminopeptidase and tripeptide amonopeptidase. Does not inhibit carboxypeptidases. |
| E-64 | Irreversible cysteine protease inhibitor of papain, calpain, cathepsin B, H, L and S. Effective inhibitor of collagenase as well. |
| Leupeptin | Reversible cysteine and serine protease inhibitor of trypsin, plasmin, papain, kallikrein, thrombin and cathepsin A and B. |

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Technical literature is available at: [www.mesgenbio.com](http://www.mesgenbio.com). E-mail MesGen Technical Services if you have questions on use of this system: tech@mesgenbio.com

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