

## UPX™ Universal Protein Extraction Kit USE AND STORAGE INSTRUCTIONS

### INTRODUCTION

UPX Universal Protein Extraction Kit is for the solubilization of proteins for a variety of proteomics applications. The kit contains a proprietary buffer designed to maximize the extraction of proteins from cells and tissues under conditions that are compatible with downstream proteomics applications. UPX Universal Protein Extraction buffer contains reducing agents and SDS and provides unbiased extraction of proteins from cells and tissues. The resulting lysates are compatible with protein quantification assays, fractionation using the Gelfree® 8100 Sample Fractionation System, other SDS-PAGE separations, and the Filter-Aided Sample Preparation (FASP) method.

### USAGE GUIDELINES

- UPX Universal Protein Extraction Kit provides efficient protein extraction for both freshly harvested cells and frozen cells.
- UPX Universal Protein Extraction buffer contains SDS and reducing agents. For accurate determination of total protein concentration, use an assay that is compatible with detergent and reducing agent.
- The UPX Universal Protein Kit is designed for maximum, unbiased extraction, reduction, and denaturation of whole proteomes. It should not be used prior to functional protein assays.
- For Research Use Only.

### STORAGE AND STABILITY

Store UPX Universal Protein Extraction Buffer at 4 °C.  
Product shelf life is six months.

### RECOMMENDED PROCEDURE

#### MATERIALS NEEDED

- UPX Universal Protein Extraction buffer
- Protease inhibitor cocktail
- Dounce homogenizer
- Centrifuge tubes
- Vortex/Shaker
- Centrifuge
- Water bath or hot plate set to 100 °C.

### PROTOCOL

When preparing tissue for proteomics analysis, it is recommended that UPX Universal Protein Extraction Buffer be used in conjunction with protease inhibitors.

1. Weigh out a portion of tissue.
2. Measure out a volume of UPX Buffer at a ratio of 10 mL Buffer per 1 g of tissue, or 0.3 g of wet cell pellet.
3. Add protease inhibitors to the UPX Buffer.
4. Add a volume of mixed buffer consisting of UPX Buffer and protease inhibitors at a ratio of 10 mL mixed buffer per 1 g of tissue, or 0.3 g of wet cell pellet.
5. Homogenize the sample tissue with buffer in a dounce homogenizer for two to three minutes.
6. Place the sample in a 100 °C water bath for five minutes.
7. Remove the sample from the water bath and allow it to cool at 4 °C for one hour.
8. Centrifuge the sample at 15,000 *g* for 10 minutes to pellet the cellular debris.
9. Collect the supernatant for analysis.

### REORDERING INFORMATION

To order the UPX Universal Protein Extraction Kit, visit [www.proteindiscovery.com](http://www.proteindiscovery.com) to request a quote, or contact Protein Discovery, Inc. by phone, fax, or e-mail.

(T) 865.521.7400 / (TF) 866.670.9038 / (F) 865.521.3548  
[sales@proteindiscovery.com](mailto:sales@proteindiscovery.com)

#### DESCRIPTION

UPX Universal Protein Extraction Kit.  
Contains 50 mL UPX Buffer.

#### PART NUMBER

44101