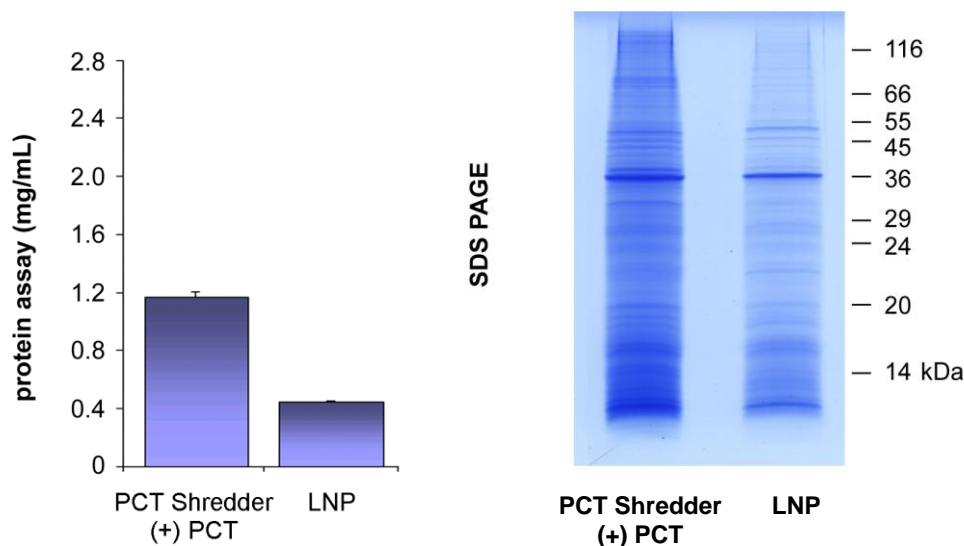


ProteoSolve-CE

Native

A Pressure-Enhanced Kit for the Extraction of Native Protein from C. elegans

The nematode *Caenorhabditis elegans* is so resistant to lysis that specimens aboard the Space Shuttle Columbia were the only survivors of the disastrous crash [1]. However, using the ProteoSolve-CE Native Kit in combination with *The PCT Shredder* system and pressure cycling technology (PCT) results in nearly total disruption of the nematodes, including resilient larval stages and worm embryos. The ProteoSolve-CE Native Kit was developed for the maximal recovery of Native proteins and protein complexes from the nematode *C. elegans* under minimally denaturing conditions in which Native conformation and activity are preserved. Protein yields are greater than those obtained from bead beating or processing with mortar and pestle in the presence of liquid nitrogen. Furthermore, Smejkal *et al.* [2] showed that bead beating may result in protein loss through denaturation and aggregation.



Extraction of Protein from *C. elegans* Using PCT in Combination with *The PCT Shredder* and Chemistry for Extraction of Native Protein Compared to Protein Extraction with Mortar and Pestle with Liquid Nitrogen (LNP)

The ProteoSolve-CE NATIVE Plus Reagent is licensed for Research Use Only from Target Discovery, Inc. It is designed to preserve the Native conformation of proteins and their activity, while preventing aggregation and the loss of hydrophobic proteins [3]. Moreover, the reagent design may facilitate the refolding of some denatured proteins, in many cases partially restoring their activity [4].

Features & Benefits:

- **ProteoSolve-CE Native:
A “Gentle” Kit for the Extraction of Native Proteins**
- **The Kit Contains a Non-detergent Sulphobetaine that Helps Preserve the Native Conformation of Proteins and Their Activity**
- **Increase the Number of Unique Proteins on a 2D Gel**
- **Use the Synergy of Pressure, Chemistry and Mechanical Force to Optimize Yield**
- **Standardize Extraction of Proteins from *C. elegans* by Pressure Cycling Technology (PCT)**

Specifications of the ProteoSolve-CE Native Kit

Shredder PULSE Tubes	Set of 12	Number of Extractions/Kit	12
Bottle C: ProteoSolve-CE Native Plus Reagent*	1 Vial 18 mL	Storage Conditions	4°C
Bottle Si: SiC Abrasives	1.2 grams	Tissue Sample Amount/Tube	Up to 500 mg
User Manual	1 Each	Additional Equipment Required	<i>The PCT Shredder and Barocycler NEP 3229 or NEP 2320</i>

* ProteoSolve-CE Native Plus Reagent was developed and licensed for Research Use Only from Target Discovery, Inc.

For Research Use Only

Not for Use in Diagnostic Procedures

Note: The ProteoSolve-CE Native Kit works in conjunction with PBI’s pressure generating Barocyclers and *The PCT Shredder*. Both Barocyclers and the PCT Shredder are sold separately.

References:

1. Szewczyk, N.J. *et al.* (2005) *Astrobiology*, 5, 690-705.
2. Smejkal, G.B. *et al.* (2008) *HUPO World Congress, Amsterdam, August 16-20, 2008*.
3. Vuillard L. *et al.* (1995) *Biochem. J.* 305, 337-343.
4. Goldberg, M.E., *et al.* (1996) *Folding & Design* 1, 21.
5. *The PCT Shredder Manual*
6. *The NEP2320 or NEP3229 Barocycler Manual*

