

## NativeLyser™ Soluble Protein Lysis Buffer

<b>Catalog number:</b>	B2010007
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<b>Content:</b>	NativeLyser™ Reagent (50 mL)
<b>Storage:</b>	-20°C
<b>Keywords:</b>	Bacterial lysis, solubilization, recombinant protein, cell-free extract

**Product Description:** NativeLyser is a bacterial cell lysis buffer specially formulated to promote the efficient breakdown of bacterial cells while solubilizing and stabilizing the released recombinant protein. NativeLyser contains a proprietary cocktail of stabilizers that prevent the loss of recombinant proteins during the preparation of cell-free extracts. By preventing denaturation, proteolytic degradation and non-specific protein aggregation, NativeLyser creates a protein-friendly environment when recombinant proteins are released from the bacterial cytoplasm. We recommend the use of NativeLyser to purify proteins expressed using the NativeFolder Bacterial Culture Medium.

### Instructions

1- Mix the bacterial wet pellet with NativeLyser using the following rules:

- 1 g of wet bacterial weight requires 7 mL of NativeLyser
- 1 OD<sub>600</sub> of a bacterial culture corresponds to 1.7 g/L wet bacterial weight
- Example calculation: After induction, 0.5 L of a bacterial culture with an OD<sub>600</sub> of 2.7 was collected by centrifugation. The wet bacterial pellet recovered  $m = 0.5 * 2.7 * 1.7 = 2.3$  g. The volume of NativeLyser required for lysis is  $V = 2.3 * 7 = 16.1$  mL.

2- Resuspend bacterial pellet in NativeLyser using low speed vortexing or low speed magnetic stirring in a glass beaker, at room temperature.

3- Incubate the resuspend bacterial pellet in ice for 30 min.

4- Put the Beaker in ice and sonicate (typical setting: Probe = Large, Power = Medium, Amplitude = 4  $\mu$ s, Times = 10 x 30 s with 2 min 30 s pauses). Sonicate until the bacterial slurry is no longer viscous. Keep a 100  $\mu$ L-aliquot, labeled "Total Fraction" (**T**), for SDS-PAGE analysis.

5- Spin for 1 hour at 4 °C at 12000 rpm.

6- Pour off the supernatant into a pre-chilled glass bottle. Keep a 100  $\mu$ L-aliquot, labeled "Soluble Fraction" (**S**), for SDS-PAGE analysis.

7- For His-tagged proteins, measure the volume of the supernatant, add Magnesium Chloride to 7 mM final and Imidazole to 10 mM final and follow the Ni-NTA purification protocol.

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**WARNING:** This product is for **Research Use Only (RUO)**. This product is not for administration to humans or animals. This product is not for human or veterinary diagnostic or therapeutic use.

**SAFETY:** User must review the **Material Safety Data Sheet (MSDS)** provided with this product. In addition, this product should not be ingested, inhaled, swallowed or put in contact with eyes, skin or clothes.

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