TECHNICAL MANUAL

GenieLyse RIPA Lysis Buffer

- **SKU CODE:** AGEL3520
- **SIZE:** 20 mL / 50 mL / 100 mL
- **RUO:** Research-Use-Only

Revised: 11/2026

GenieLyse RIPA Lysis Buffer

Please read entire manual carefully before starting experiment.

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1. Product Description

GenieLyse RIPA Lysis Buffer is a traditional rapid lysis buffer for cells and tissues, used as the preferred lysis buffer for protein extraction from tissues or cells in Western Blot assays.

Buffer composition:

50 mM Tris (pH 7.4), 150 mM NaCl, 1% Triton X-100, 1% $C_{24}H_{39}O_4Na$, 1 mM EDTA, 0.1% SDS, 10 mM NaF, 1 mM Na_3VO_4, 1 mM PMSF.

2. Kit Contents

No	Component Name	20 mL	50 mL	100 mL	Storage
1	GenieLyse RIPA Lysis Buffer	20 mL	50 mL	100 mL	-20°C
2	100 mM PMSF	200 µL	500 µL	1 mL	-20°C
3	100 mM Na_3VO_4	200 µL	500 µL	1 mL	-20°C
4	Manual	1 copy	1 copy	1 copy	

3. Storage & Expiry

Store at -20°C for 12 months.

4. Experimental Procedure

A. For Tissue Samples

a) Take the samples and wash the tissue thoroughly with pre-cooled PBS (0.01 M, pH 7.4) to remove surface blood and internal debris.

b) Weigh and mince the tissue, add an appropriate ratio of RIPA Lysis Buffer (add 10 µL PMSF and 10 µL Na_3VO_4 to 1 mL RIPA Lysis Buffer) and homogenize to lyse the tissue.

It is recommended to homogenize at a ratio of tissue weight : RIPA volume = 1:5-1:10, for example, adding 0.5-1 mL of RIPA lysis solution mixture to 0.1 g of tissue sample. The specific volume can be adjusted according to experimental requirements.

c) Shake and lyse on ice for 30 min after homogenization. Use an ultrasonic crusher to sonicate the lysate (under ice bath conditions) until it becomes clear and no longer sticky.

d) Centrifuge at 12,000 rpm for 10 min at 4°C.

e) Take the supernatant and measure the protein concentration.

B. For Cell Samples

a) Collect the cells and wash them thoroughly with pre-cooled PBS (0.01 M, pH 7.4) to remove the medium (it is generally recommended to wash 3 times).

b) Add an appropriate ratio of RIPA Lysis Buffer (10 µL PMSF and 10 µL Na_3VO_4 in 1 mL RIPA Lysis Buffer) and lyse on ice for 30 min. It is recommended to add 1 mL of RIPA Lysis Buffer to 10^7 cells (the protein concentration in the supernatant of the lysate is approximately 2-4 mg/mL; the protein content of different cells may vary, and the volume of lysis buffer added can be adjusted accordingly).

c) Use an ultrasonic crusher to sonicate the cell lysate (under ice bath conditions) until it becomes clear and no longer sticky.

d) Centrifuge at 12,000 rpm for 10 min at 4°C.

e) Take the supernatant and measure the protein concentration.

5. Important Notes

1. All steps to lyse samples should be performed on ice or at 4°C.
2. It is recommended to add 10 µL PMSF and 10 µL Na_3VO_4 to 1 mL RIPA Lysis Buffer before use. If the RIPA Lysis Buffer has precipitated, dissolve it at room temperature or in a warm water bath.
3. It is normal for a clear gelatinous substance to appear in the RIPA lysate. This transparent gel is a complex containing genomic DNA. Repeatedly pipetting the sample about 50 times can effectively reduce its viscosity. After centrifugation, the supernatant can be taken for subsequent experiments.
4. Tissue or cell samples lysed with RIPA Lysis Buffer cannot be measured by the Bradford method because of the high concentration of detergent in the buffer. It is recommended to measure the protein concentration by the BCA method.
5. For your safety and health, please wear a lab coat and disposable gloves before the experiments.

Notes:

Notes:

Assay Genie 100% money-back guarantee!

If you are not satisfied with the quality of our products and our technical team cannot resolve your problem, we will give you 100% of your money back.