

Technical Datasheet

Product Name: RIPA Lysis Buffer

Catalogue Number: BPBOI016

Concentration: 1X

Introduction:

RIPA (Radio-Immunoprecipitation Assay) Lysis Buffer is a versatile and powerful detergent-based buffer used for the extraction of total protein, including cytoplasmic, membrane-bound, and nuclear proteins, from various types of tissues and cultured cells. Known for its strong lysis capabilities, RIPA buffer effectively solubilizes proteins while maintaining the structural integrity of protein complexes, making it a preferred choice for applications requiring efficient and thorough cell lysis, such as protein quantification, immunoprecipitation, Western blotting, and enzyme assays.

Product Description:

RIPA Lysis Buffer is a highly efficient lysis buffer composed of a combination of detergents (including SDS and sodium deoxycholate), salts, and chelating agents. This unique composition allows for the comprehensive disruption of cell membranes and the release of total protein content from cells and tissues. The buffer is especially useful for applications where the extraction of both soluble and membrane proteins is required. Additionally, RIPA buffer minimizes protein degradation and preserves protein-protein interactions, making it ideal for downstream analysis of protein complexes.

Applications:

BioPioneer's RIPA Lysis Buffer is versatile and suitable for a range of applications:

- **Protein Extraction:** Highly effective for extracting total proteins, including those from cytoplasmic, membrane, and nuclear compartments.
- **Immunoprecipitation:** Ideal for isolating protein complexes for immunoprecipitation assays.
- **Western Blotting:** Compatible with Western blotting protocols for detecting a wide range of proteins.
- **Enzyme Assays:** Suitable for enzyme activity assays requiring the preservation of protein function.

Composition:

RIPA Lysis Buffer is formulated with a mixture of SDS (Sodium Dodecyl Sulfate), sodium deoxycholate, NP-40 (Nonidet P-40), Tris-HCl, NaCl, and EDTA. This composition ensures effective lysis and protein solubilization while preserving the activity and interactions of proteins. The buffer is provided as a ready-to-use solution.

Preparation Instructions:

The buffer is supplied as a ready-to-use 1X solution. For optimal results, the buffer should be used immediately upon preparation of tissue or cell samples.

Storage Conditions:

Store RIPA Lysis Buffer at 4°C. Ensure the buffer is tightly sealed to prevent contamination and evaporation.

Warning and Precautions:

Not intended for medicinal use. Review the Safety Data Sheet (SDS) thoroughly before starting the protocol. Always wear protective gloves, clothing, eye protection, and face protection. Handle tissue samples and cell lysates with care to avoid cross-contamination. Adhere to good clinical laboratory practices when handling clinical samples, and follow standard precautions as outlined in established guidelines. For detailed safety procedures, consult the product's Safety Data Sheet.

Safety Information:

The RIPA Lysis Buffer is intended solely for laboratory applications and should not be used for pharmaceuticals, household purposes, or other non-laboratory uses. The buffer contains strong detergents, including SDS and sodium deoxycholate, which can be harmful if inhaled, ingested, or in contact with skin or eyes. Always observe proper laboratory safety protocols, including wearing gloves and safety goggles when handling the buffer. For details on hazards and safe handling procedures, please consult the Safety Data Sheet (SDS).

Technical Assistance:

At BioPioneer, we are committed to providing top-notch technical support and ensuring its accessibility. For any technical assistance, please email us at qc@biopioneer.in.