Ripa Lysis Buffer

Cat#: orb348556 (User Manual)

Product Description: 1X RIPA Lysis Buffer

Concentration: 1X

Physical State: Liquid (sterile filtered)

Label: Unconjugated

Buffer: See application note.

Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Expiration: Expiration date is six (6) months from date of opening.

Storage Condition: Store container at room temperature (18° to 26° C) prior to opening. Protect from light (store in the dark).

Sterilization: This product was aseptically filtered through a Millipore 0.22 micron filter into clean, pre-sterilized containers. The product was tested on trypticase soy agar for 24 hours, 48 hours and 72 hours and was found to be negative for bacteria.

Synonyms: 1X RIPA Lysis Buffer, 1X RIPA (Radio-Immunoprecipitation Assay) Lysis Buffer, RIPA Buffer

Background: RIPA (Radio-Immunoprecipitation Assay) Lysis Buffer enables rapid, efficient cell lysis and solubilization of proteins from both adherent and suspension cultured mammalian cells. It has long been a widely used lysis and wash buffer for small-scale affinity pull-down applications, such as immunoprecipitation, since most antibodies and protein antigens are not adversely affected by the components of this buffer. In addition, RIPA Lysis Buffer minimizes non-specific protein-binding interactions to keep background low, while allowing most specific interactions to occur, enabling studies of relevant protein-protein interactions. The following RIPA Lysis Buffer components have the following effects: Tris-HCl is a buffering agent prevents protein denaturation, NaCl is a salt that prevents non-specific protein aggregation, NP-40 is a non-ionic detergent to extract proteins; Na-deoxycholate and SDS are ionic detergents to extract proteins; and sodium azide is a bacteriostatic agent added to retard bacterial growth. RIPA Lysis Buffer is supplied as a ready-to-use solution that requires no preparation. We suggest that the user add protease and phosphatase inhibitors not included with this product prior to use.

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Application Note: RIPA Lysis Buffer is ready-to-use as a working 1X solution and requires no further dilution. RIPA Lysis Buffer is intended for the extraction of cellular proteins for the efficient lysis of cells and solubilization of protein, while minimizing protein degradation and maintaining protein immunoreactivity and biological activity. We recommend using 1.0 mL of RIPA Lysis Buffer to lyse 0.5 to 5 x 10E7 adherent mammalian cells. This buffer contains ionic detergents and may not be suitable for kinase enzymes, if these enzymes are easily denatured. Do not add phosphatase inhibitors when preparing lysates for phosphatase assays. 1X RIPA lysis buffer consists of 50 mM Tris HCl, 150 mM NaCl, 1.0% (v/v) NP-40, 0.5% (w/v) Sodium Deoxycholate, 1.0 mM EDTA, 0.1% (w/v) SDS and 0.01% (w/v) sodium azide at a pH of 7.4. This buffer was meticulously prepared using ultra pure reagents dissolved in highly polished pharmaceutical grade deionized water. Protease and phosphatase inhibitors are recommended but not included in product composition. Recommended final concentrations of protease inhibitors: 1.0 mM Phenylmethylsulfonyl fluoride (PMSF), 10 µM Leupeptin, 0.1 µM Aprotinin, 1.0 µM Pepstatin. Recommended final concentrations of phosphatase inhibitors: 1.0 mM Na3VO4, 1.0 mM NaF.

Purity and Specificity: 1X RIPA Lysis Buffer was aseptically filtered through a Millipore 0.22 micron filter into clean, pre-sterilized containers. The product was tested on trypticase soy agar for 24 hours, 48 hours and 72 hours and was found to be negative for bacteria.

Assay Dilutions: All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

Specific Reference: - Successful Correction of ALD Patient-derived iPSCs Using CRISPR/Cas9.;2020;BioRxiv preprint.;Jung et al.
- Effects of Aerobic and Resistance Exercise on Myokines in High Fat Diet-Induced Middle-Aged Obese Rats.;2020;Int J Environ Res Public Health.;Ahn N et al.
- Liver safety evaluation of endothelin receptor antagonists using HepatoPac®: A single model impact assessment on hepatocellular health, function and bile acid disposition.;2019;J Appl Toxicol.;Aleo MD et al.
- Liver-targeted anti-HBV single-stranded oligonucleotides with locked nucleic acid potently reduce HBV gene expression in vivo.;2018;Mol Ther Nucleic Acids.;Javanbakht H et al.
- Targeting the Hsp90 C-terminal domain to induce allosteric inhibition and selective client downregulation.;2017;Biochim Biophys Acta Gen Subj.;Goode KM et al.

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