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Datasheet for MB-030-0050

1X RIPA Lysis Buffer

Overview

Description:	1X RIPA Lysis Buffer - MB-030-0050
Item No.:	MB-030-0050
Size:	50 mL
Applications:	ChIP, IP, WB, Other

Product Details

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

Target Details

Purity/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.
Relevant Links:	• MB-030 SDS • RIPA Lysis Buffer Procedure • Protocol

Application Details

Tested Applications:	ChIP, IP, WB
Suggested Applications:	Other (Based on references)
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) IGEPAL® CA-630, 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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

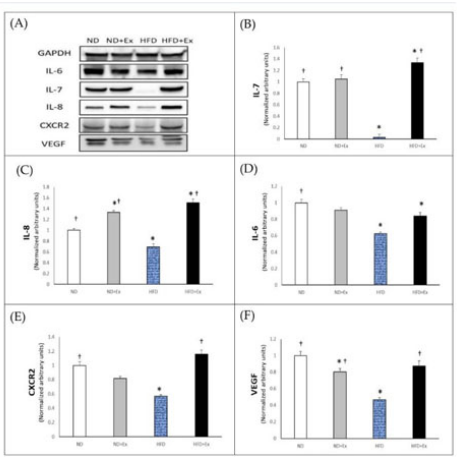
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1 X
Buffer:	See application note.
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

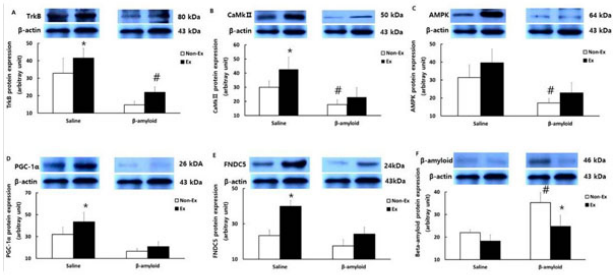
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store container at room temperature (18° to 26° C) prior to opening. Protect from light (store in the dark).
Expiration:	Expiration date is six (6) months from date of receipt.

Images



Western Blot
Comparison of myokines protein expression in the normal diet, normal diet + exercise, high fat diet, and high fat diet + exercise groups. (A) Myokines levels in skeletal muscle lysates were analyzed by western blot. (B–F) IL-7, IL-8, IL-6, CXCR2, and VEGF levels. Total proteins were extracted using RIPA lysis buffer (p/n MB-030-0050) containing protease inhibitor cocktail, and 10 µg of protein was resolved by sodium dodecyl sulfate-polyacrylamide gel electrophoresis and transferred to nitrocellulose membranes using the Trans-Blot Turbo Transfer System. Results represent the mean ± SE. *, $p < 0.05$ vs. the ND group by one-way ANOVA; †, $p < 0.05$ vs. the HFD group by one-way ANOVA. ND, normal diet; ND+Ex, normal diet + exercise; HFD, high fat diet; HFD+Ex, high fat diet + exercise. Figure 3. PMID: 32295130.



Western Blot
Comparisons of protein expressions of (A) TrkB, (B) CaMkII, (C) AMPK, (D) PGC-1α, (E) FNDC5, and (F) β-amyloid in the cerebral cortex after the 12-week intervention. Total proteins were extracted using RIPA lysis buffer (p/n MB-030-0050) containing a protease inhibitor cocktail, and 10 µg of protein was resolved by sodium dodecyl sulfate-polyacrylamide gel electrophoresis and transferred to nitrocellulose membranes using the Trans-Blot Turbo Transfer System. (* $p < 0.05$ Significant difference as compared to Non-Ex group; # $p < 0.05$ Significant difference as compared to Saline group). Fig 9. PMID: 35805580.

Bottle
1X RIPA Lysis Buffer

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