

Resource Summary Report

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High-Yield Skeletal Muscle Protein Recovery from TRIzol® after RNA and DNA Extraction

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Proper Citation

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Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.bii3kcgn>

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Summary: Extraction of DNA, RNA, and protein from the same sample would allow for direct comparison of genomic, transcriptomic, and proteomic information. Commercially available kits exhibit poor protein yield and TRIzol® reagent produces a protein pellet that is extremely difficult to solubilize. In response to these limitations, this study presents an optimized method for the extraction of protein from the organic phase of TRIzol® reagent that allows for higher yield recovery of skeletal muscle protein compared to direct homogenization in a common protein lysis buffer. The presented method is inexpensive, simple and fast; requires no additional treatment of the protein pellet for dissolution; and is compatible with downstream western blot applications.

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