

Materials List for

Carrier-assisted One-pot Sample Preparation for Targeted Proteomics Analysis of Small Numbers of Human Cells

Kendall Martin¹, Tong Zhang¹, Pengfei Zhang², William B. Chrisler¹, Fillmore L. Thomas³, Fen Liu⁴, Tao Liu¹, Wei-Jun Qian¹, Richard D. Smith¹, Tujin Shi¹

¹Biological Sciences Division, Pacific Northwest National Laboratory ²NHC Key Laboratory of Cancer Proteomics, Department of Oncology, Xiangya Hospital, Central South University ³Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory ⁴Department of Critical Care Medicine, The First Affiliated Hospital of Nanchang University

Corresponding Author

Tujin Shi
tujin.shi@pnnl.gov

Citation

Martin, K., Zhang, T., Zhang, P., Chrisler, W.B., Thomas, F.L., Liu, F., Liu, T., Qian, W.J., Smith, R.D., Shi, T. Carrier-assisted One-pot Sample Preparation for Targeted Proteomics Analysis of Small Numbers of Human Cells. *J. Vis. Exp.* (), e61797, doi:10.3791/61797 (2020).

Date Published

November 6, 2020

DOI

10.3791/61797

URL

jove.com/video/61797

Materials

Name	Company	Catalog Number	Comments
2 mL glass LC vial	Microsolv	9502S-WCV	Vessel to hold PCR tube for autosample injection
BSA	Sigma-Aldrich	P0834-10×1mL	Carrier protein for greatly reducing surface adsorption losses
DTT	Thermo Scientific	A39255	Reagent for reduction
Formic acid	Thermo Scientific	28905	Reagent for stopping enzyme reaction
IAA	Thermo Scientific	A39271	Reagent for alkylation
Peptide internal standards	New England peptide		Targeted quantification of EGFR/ MAPK pathway proteins
RT-PCR tube	GeneMate Bioexpress	T-3035-1	0.2 mL PCR tube for one-pot sample preparation
Skyline software	University of Washington		Publicly available for SRM data analysis
Sonicator	Hielscher Ultrasound Technology	UTR200	Sonication on ice for cell lysis
Speed Vac concentrator	Thermo Scientific		Reduction of the percentage of TFE for effective trypsin digestion
TFE	Sigma-Aldrich	18370-10×1mL	60% TFE for cell lysis
Thermocycler w/ heated lid	Peltier Thermal Cycler	PTC-200	Heating for protein denaturation
Trypsin Gold	Promega	V528A	Enzyme for protein digestion
Waters BEH C18 column	Waters		C18 column for peptide separation