

Materials List for

Quantification of Global Histone Post Translational Modifications Using Intranuclear Flow Cytometry in Isolated Mouse Brain Microglia

Morgan Towriss¹, Jennifer Kim², Annie Vogel Ciernia¹

¹Department of Biochemistry and Molecular Biology, Djavad Mowafaghian Centre for Brain Health, University of British Columbia ²Graduate Program in Neuroscience, Djavad Mowafaghian Centre for Brain Health, University of British Columbia

Corresponding Author

Annie Vogel Ciernia
annie.ciernia@ubc.ca

Citation

Towriss, M., Kim, J., Vogel Ciernia, A. Quantification of Global Histone Post Translational Modifications Using Intranuclear Flow Cytometry in Isolated Mouse Brain Microglia. *J. Vis. Exp.* (199), e65080, doi:10.3791/65080 (2023).

Date Published

September 15, 2023

DOI

10.3791/65080

URL

jove.com/video/65080

Materials

| Name | Company | Catalog Number | Comments |
|---|----------------------------|----------------|-----------------|
| 0.5M EDTA | Invitrogen | AM9260G | |
| 15 mL Falcon Centrifuge Tubes, Polypropylene, Sterile | Falcon | 352196 | |
| 24-well Clear Not Treated Plates | Costar | 3738 | |
| 2-Mercaptoethanol | Gibco | 21985023 | |
| 96 Well Clear Polystyrene Microplate, clear round bottom, non treated surface | Corning | 3788 | |
| Acetyl Histone 3 K9 (C5B11) | Cell Signalling Technology | 9649S | Dilution: 1:100 |
| Acetyl Histone H4 K8 (2594) | Cell Signalling Technology | 2594S | Dilution: 1:100 |
| Acetyl-Histone H3 K27 (D5E4) | Cell Signalling Technology | 8173S | Dilution: 1:100 |
| Acetyl-Histone H3 Lys27 (MA523516) | Invitrogen | MA523516 | Dilution: 1:100 |
| Actinomycin D | New England Biolabs | 15021S | |
| Anisomycin | New England Biolabs | 2222S | |
| Anti-Histone H3 (tri methyl K4) | Abcam | ab213224 | Dilution: 1:100 |
| Anti-Lactyl-Histone H4 (Lys 12) Rabbit mAb | PTM Biolabs | PTM-1411RM | Dilution: 1:250 |
| Anti-L-Lactyllysine Rabbit pAb | PRM Biolabs | PTM-1401RM | Dilution: 1:250 |
| Apc anti-P2RY12 Antibody, Clone: S16007D | BioLegend | 848006 | |
| BSA | Tocris | 5217 | |
| Cyto-Last Buffer | BioLegend | 422501 | |
| dimethylsulfoxide, sterile | Cell Signalling Technology | 12611S | |
| DNase I | STEMCELL Technologies | 07900 | |
| Donkey Anti Mouse AlexaFluor488 | Jackson ImmunoResearch | 715-546-150 | Dilution: 1:500 |
| Donkey Anti Rabbit AlexaFluor488 | ABclonal | AS035 | Dilution: 1:500 |

| | | | |
|--|------------------------|--------------|-----------------|
| Donkey Anti Rabbit AlexaFluor568 | Invitrogen | A10042 | Dilution: 1:500 |
| Donkey Anti Rabbit Brilliant Violet 421 | BioLegend | 406410 | Dilution: 1:500 |
| Fisherbrand Disposable Graduated Transfer Pipettes | Fisherbrand | 13-711-9AM | |
| Fisherbrand Disposable PES Filter Unit, 250mL | Fisherbrand | FB12566502 | |
| H3K18ac Polyclonal Antibody | Invitrogen | 720095 | Dilution: 1:100 |
| HBSS (10X), no calcium, no magnesium, no phenol red | Gibco | 14185052 | |
| HBSS, no calcium, no magnesium, no phenol red | Gibco | 14175103 | |
| Histone 3 Trimethyl K27 (ab6002) | Abcam | ab6002 | Dilution: 1:100 |
| KONTES Dounce Tissue Grinders 125mm 7mL | VWR | 885300-0007 | |
| Lactyl-Histone H3 (Lys 18) Rabbit mAb | PTM Biolabs | PTM-1406RM | Dilution: 1:250 |
| Lipopolysaccharide | Sigma-Aldrich | L5418 | |
| Normal Donkey Serum | Jackson ImmunoResearch | 017-000-121 | |
| OneComp eBeads Compensation Beads | Invitrogen | 01-1111-41 | |
| PDS Kit, Papain Vial - Worthington Biochemical | Cedarlane | LK003178 | |
| Percoll | Sigma-Aldrich | GE17-0891-02 | |
| Phenol Red | VWR | RC57004 | |
| QIAshredder | Qiagen | 79656 | |
| Rainbow Fluorescent Particles, 1 peak (3.0-3.4 uM - Mid Range Intensity) | BioLegend | 422905 | |
| RNase-free Microfuge Tubes, 1.5 mL | Invitrogen | AM12400 | |
| Rneasy Plus Micro Kit | Qiagen | 74034 | |
| Round Bottom Polypropylene Tubes with Caps, 5 mL | Corning | 352063 | |
| Triptolide | New England Biolabs | 97539 | |
| True Nuclear Transcription Factor Buffer Set | BioLegend | 424401 | |
| TruStain FcX PLUS (anti-mouse CD16/32) Antibody | BioLegend | 156604 | |
| Trypan Blue | VWR | 97063-702 | |
| Zombie Aqua Fixable Viability Kit | BioLegend | 423102 | |