Apr 18, 2024

10x Protocols: Chromium Next GEM Single Cell 3' -- University of Minnesota TMCs (CG000315 Rev E)

DOI
dx.doi.org/10.17504/protocols.io.261ge5ozdg47/v1

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Cellular Senescence Net...

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Protocol Citation: Laura J Niedernhofer, David A Bernlohr 2024. 10x Protocols: Chromium Next GEM Single Cell 3' -- University of Minnesota TMCs (CG000315 Rev E). **protocols.io https://dx.doi.org/10.17504/protocols.io.261ge5ozdg47/v1**

Protocol status: Working
We use this protocol and it's working

Created: April 18, 2024

Last Modified: April 18, 2024

Protocol Integer ID: 98430

Keywords: chromium next gem single cell, chromium next gem single cell 3', 10x genomic, minnesota genomics center, barcoded cdna, cdna, sequencing, nuclei isolation, 10x protocol, cell, chromium, next gem, nuclei, specific barcode, cell dissociation

Funders Acknowledgements:
NIH
Grant ID: 5U54AG076041-03
NIH
Grant ID: 5U54AG079754-02

Abstract

Following single-cell dissociation or nuclei isolation, the Next GEM 3' assay uses microfluidics to partition and assign cell- or nuclei-specific barcodes to transcript cDNA at the 3' end. Barcoded cDNA is prepared with adaptors for sequencing by synthesis (SBS). The following protocol has been adapted from protocols developed by 10x Genomics and Illumina to be used at the University of Minnesota TMCs in collaboration with the University of Minnesota Genomics Center. These protocols are owned by their respective companies and are subject to periodic revision.

Troubleshooting

Tissue Preparation

1 Complete single cell or nuclei isolation prior to starting this protocol

Library Preparation

2 CG000315_Rev-E (4).pdf 4.2MB

Note

Sequence with the read format 29,10,10,89

Note

Sequencers used at UMN Genomics Center:
- Illumina NextSeq 2000
- Illumina NovaSeq 6000
- Illumina NovaSeq X Plus

FASTQ Generation

3 BCL data from Illumina sequencer is demultiplexed and converted into FASTQ format using bcl2fastq version 2.20.0