

Dec 04, 2024



ATAC-seq protocol

DOI

dx.doi.org/10.17504/protocols.io.14egn924ml5d/v1

Renhe Luo¹, Michael Beer², Danwei Huangfu¹

¹Sloan Kettering Institute; ²Johns Hopkins University

IGVF



Michael Beer

Johns Hopkins University

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account





DOI: https://dx.doi.org/10.17504/protocols.io.14egn924ml5d/v1

Protocol Citation: Renhe Luo, Michael Beer, Danwei Huangfu 2024. ATAC-seq protocol. protocols.io https://dx.doi.org/10.17504/protocols.io.14egn924ml5d/v1

License: This is an open access protocol distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited



Protocol status: Working

We use this protocol and it's working

Created: December 04, 2024

Last Modified: December 04, 2024

Protocol Integer ID: 113699

Keywords: seq protocol atac, seq protocol for esc, atac, seq protocol, esc, seq, protocol, de differentiation

Funders Acknowledgements:

NHGRI

Grant ID: U01HG012051

Abstract

ATAC-seq protocol for ESC-DE differentiation

Troubleshooting



ATAC-seq protocol

- 1 50K cryopreserved cells were washed in cold PBS and lysed.
- 2 The transposition reaction containing TDE1 Tagment DNA Enzyme (Illumina; 20034198) was incubated at 37°C for 30 minutes.
- 3 The DNA was purified with the MinElute PCR Purification Kit (QIAGEN; 28004) and amplified for 5 cycles using NEBNext High-Fidelity 2X PCR Master Mix (New England Biolabs; M0541L).
- 4 After evaluation by real-time PCR, 3-14 additional PCR cycles were done.
- 5 The final product was cleaned by AMPure XP beads (Beckman Coulter; A63882) at a 1X ratio, and size selection was performed at a 0.5X ratio.
- 6 Libraries were sequenced on a HiSeq 4000 or NovaSeq 6000 platform in a PE50 run, using the HiSeq 3000/4000 SBS Kit or NovaSeq 6000 S1 Reagent Kit (100 Cycles) (Illumina).