

Resource Summary Report

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Adult mouse kidney dissociation (on ice)

DOI:10.17504/protocols.io.rnmd5c6

Type: Protocol

Proper Citation

Andrew Potter 2018. Adult mouse kidney dissociation (on ice). protocols.io
[dx.doi.org/10.17504/protocols.io.rnmd5c6](https://doi.org/10.17504/protocols.io.rnmd5c6)

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.rnmd5c6>

Authors: Andrew Potter

Group: Human Cell Atlas Method Development Community

Summary: Protocol for adult (8-10 week) mouse kidney dissociation performed on ice to reduce artifact gene expression. The first layer, consisting of collagenase digestion, breaks down the tissue and releases some cells and glomeruli and tubules. The second layer consists of bacillus licheniformis digestion for 15 min. augmented with a thermomixer at 1400 RPM and passaging with a 27 gauge needle. The second layer is meant to thoroughly break up remaining tubules and glomeruli, releasing cells such as podocytes. The final yield is 250K cells from 18 mg tissue with 98% viability, approximately 14,000 cells/mg tissue. Approximately 1% of released cells are podocytes (visualized using kidneys from MAFB-GFP+ mice using a hemocytometer).

Affiliations: Cincinnati Children's Hospital Medical Center

Version: 6

Publication Date: 2018

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