Miltenyi Biotec

Reference list

gentleMACS™ Dissociators, Tubes, and Kits

The gentleMACS™ Dissociators are a family of bench top instruments used for automated and standardized dissociation or homogenization of virtually any tissue. Viable single-cell suspensions are efficiently obtained by using our unique C Tubes in combination with our tissue-specific enzyme kits, whereas thorough homogenates are easily obtained by using the unique M Tubes. After processing, samples can be used for any cellular and molecular downstream analysis.

Over 2,500 publications citing gentleMACS Technology proves that our devices can assist your research in multiple ways, such as

- generation of highly viable single-cell suspensions in a fast, standardized, automated, and user-independent way,
- ready-to-use tissue specific enzyme combinations with lot-to-lot consistency,
- optimized protocols preserve cellular composition and surface epitopes,
- single-use consumables minimize cross-contamination and allow easy disposal,
- closed and sterile system reduces handling hazards.

Tissue dissociation

Human tumor

Tumor Dissociation kit, human (130-095-929)

Dissociation of human pancreatic tumor tissue into single cells for flow cytometry
Baumann, D. et al. (2020) Proimmunogenic impact of MEK inhibition synergizes with agonist anti-CD40 immunostimulatory antibodies in tumor therapy. Nat Commun. doi: 10.1038/s41467-020-15979-2.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7195409/

Dissociation of healthy and diseased human gastric tissue into single cells for flow cytometry and scRNA sequencing
Fu, K. *et al.* (2020) Single-cell RNA sequencing of immune cells in gastric cancer patients. Aging. 12:2747–2763. doi: 10.18632/aging.102774.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7041746/

Dissociation of lung tumor tissue into single cells for tumor cell cultures
Kodack, DP. *et al.* (2017) Primary patient-derived cancer cells and their potential for personalized cancer patient care. Cell Rep. 21:3298–3309. doi: 10.1016/j.celrep.2017.11.051.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5745232/

Dissociation of healthy and diseased human lung tissue into single cells for scRNA sequencing
Laughney, AM. *et al.* (2020) Regenerative lineages and immune-mediated pruning in lung cancer metastasis. Nat Med. 26:259–269. doi: 10.1038/s41591-019-0750-6.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7021003/

Dissociation of healthy and diseased human gastric tissue into single cells to obtain tumor-associated macrophages
Li, W. *et al.* (2019) Gastric cancer-derived mesenchymal stromal cells trigger M2 macrophage polarization that promotes metastasis and EMT in gastric cancer. Cell Death Dis. doi: 10.1038/s41419-019-2131-y.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6892854/

Dissociation of healthy and diseased human mammary gland tissue for mass cytometry
Wagner, J. *et al.* (2019) A single-cell atlas of the tumor and immune ecosystem of human breast cancer. Cell. doi: 10.1016/j.cell.2019.03.005.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6526772/

Dissociation of human and non-human primate diseased lung tissue into single cells for scRNA sequencing
Ziegler, CGK. *et al.* (2020) SARS-CoV-2 receptor ACE2 Is an interferon-stimulated gene in human airway epithelial cells and is detected in specific cell subsets across tissues. Cell. doi: 10.1016/j.cell.2020.04.035.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7252096/

Dissociation of human lung cancer tissue into single cells for scRNA sequencing
Zilionis, R. *et al.* (2019) Single-cell transcriptomics of human and mouse lung cancers reveals conserved myeloid populations across individuals and species. Immunity. doi: 10.1016/j.immuni.2019.03.009.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6620049#

Xenograft tumor

Tumor Dissociation Kit, human (130-095-929)

Dissociation of oral, oropharyngeal and oesophageal cancer xenografts into single cells for flow cytometry
Kossatz, S. *et al.* (2020) Validation of the use of a fluorescent PARP1 inhibitor for the detection of oral, oropharyngeal and oesophageal epithelial cancers. Nat Biomed Eng. 4:272–285. doi: 10.1038/s41551-020-0526-9.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7136849/

Dissociation of breast cancer xenografts into single cells for RNA sequencing and surviving assays
Jewer, M. *et al.* (2020) Translational control of breast cancer plasticity. Nat Commun. doi: 10.1038/s41467-020-16352-z.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7237473/

Dissociation of breast cancer xenografts into single cells for FACS analysis
Frank, A-C. *et al.* (2019) Apoptotic tumor cell-derived microRNA-375 uses CD36 to alter the tumor-associated macrophage phenotype. Nat Commun. doi: 10.1038/s41467-019-08989-2.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6408494/

Dissociation of lung cancer xenografts into single cells for the establishment of cell lines
Xue, Y. *et al.* (2017) An approach to suppress the evolution of resistance in BRAFV600E-mutant cancer. Nat Med. 23:929–937. doi: 10.1038/nm.4369.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5696266/

Dissociation of prostate cancer xenografts into single cells to establish an organoid biobank
Beshiri, ML. *et al.* (2018) A PDX/organoid biobank of advanced prostate cancers captures genomic and phenotypic heterogeneity for disease modeling and therapeutic screening. Clin Cancer Res. 24:4332–4345. doi: 10.1158/1078-0432.ccr-18-0409.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6125202/

Dissociation of breast cancer xenografts into single cells for cultivation of organoids
Cairns, J. *et al.* (2018) Differential roles of ERRFI1 in EGFR and AKT pathway regulation affect cancer proliferation. EMBO Rep. doi: 10.15252/embr.201744767.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5835844/

Dissociation of glioblastoma xenografts into single cells for sequencing and tumor cell cultures
Miller, TE. *et al.* (2017) Transcription elongation factors represent *in vivo* cancer dependencies in glioblastoma. Nature. 547:355–359. doi: 10.1038/nature23000.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5896562/

Mouse tumor

Tumor Dissociation Kit, mouse (130-096-730)

Dissociation of murine tumor tissue into single cells for scRNA sequencing
Buqué, A. *et al.* (2020) Immunoprophylactic and immunotherapeutic control of hormone receptor-positive breast cancer. Nat Commun. doi: 10.1038/s41467-020-17644-0.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7393498/

Dissociation of murine tumor tissue into single cells for flow cytometry
Imbert, C. *et al.* (2020) Resistance of melanoma to immune checkpoint inhibitors is overcome by targeting the sphingosine kinase-1. Nat Commun. doi: 10.1038/s41467-019-14218-7.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6978345/

Dissociation of murine tumor tissue into single cells for flow cytometry of tumor infiltrating lymphocytes
Chen, J. *et al.* (2019) NR4A transcription factors limit CAR T cell function in solid tumours. Nature. 567:530–534. doi: 10.1038/s41586-019-0985-x.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6546093/

Dissociation of murine tumor tissue into single cells for flow cytometry
Jackstadt, R. *et al.* (2019) Epithelial NOTCH signaling rewires the tumor microenvironment of colorectal cancer to drive poor-prognosis subtypes and metastasis. Cancer Cell. doi: 10.1016/j.ccell.2019.08.003.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6853173/

Dissociation of murine tumor tissue into single cells for flow cytometry of tumor infiltrating lymphocytes
Liu, P. *et al.* (2019) Crizotinib-induced immunogenic cell death in non-small cell lung cancer. Nat Commun. doi: 10.1038/s41467-019-09415-3.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6445096/

Dissociation of murine tumor tissue into single cells for flow cytometry of tumor infiltrating lymphocytes
André, P. *et al.* (2018) Anti-NKG2A mAb is a checkpoint inhibitor that promotes anti-tumor immunity by unleashing both T and NK cells. Cell. doi: 10.1016/j.cell.2018.10.014.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6292840/

Dissociation of murine tumor tissue into single cells for flow cytometry of cytotoxic T lymphocytes
Cha, J-H. *et al.* (2018) Metformin promotes antitumor immunity via endoplasmic-reticulum-associated degradation of PD-L1. Mol Cell. doi: 10.1016/j.molcel.2018.07.030.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6786495/

Dissociation of murine mammary tumor tissue into single cells for tumor cell cultures
de Cárcer, G. *et al.* (2018) Plk1 overexpression induces chromosomal instability and suppresses tumor development. Nat Commun. doi: 10.1038/s41467-018-05429-5.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6070485/

Adult brain

Adult Brain Dissociation Kit, mouse and rat (130-107-677)

Dissociation of murine brain tissue into single cells for flow cytometry
Wang, Y. *et al.* (2020) A virus-induced conformational switch of STAT1-STAT2 dimers boosts antiviral defenses. Cell Res. doi: 10.1038/s41422-020-0386-6.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7405385/

Dissociation of murine brain tissue into single cells for astrocyte enrichment and RNA isolation
Early, AN. *et al.* (2020) Effects of advanced age upon astrocyte-specific responses to acute traumatic brain injury in mice. J Neuroinflammation. doi: 10.1186/s12974-020-01800-w.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7158022/

Dissociation of murine brain tissue into single cells to isolate neurons and glia
Anwar, M. *et al.* (2018) The organization of mitochondrial supercomplexes is modulated by oxidative stress *in vivo* in mouse models of mitochondrial encephalopathy. Int J Mol Sci. 19:1582. doi: 10.3390/ijms19061582.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6032222/

Dissociation of murine spinal cord tissue into single cells to isolate microglia and macrophages
Sabirzhanov, B. *et al.* (2019) Inhibition of NOX2 signaling limits pain-related behavior and improves motor function in male mice after spinal cord injury: Participation of IL-10/miR-155 pathways. Brain Behav Immun. 80:73–87. doi: 10.1016/j.bbi.2019.02.024.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6660361/

Dissociation of murine brain tissue into single cells to isolate microglia
Sepulveda-Rodriguez, A. *et al.* (2019) Electroconvulsive shock enhances responsive motility and purinergic currents in microglia in the mouse hippocampus. eNeuro. doi: 10.1523/eneuro.0056-19.2019.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6498419/

Dissociation of murine brain tissue into single cells to isolate microglia, macrophages and endothelial cells
Bennett, RE. *et al.* (2018) Tau induces blood vessel abnormalities and angiogenesis-related gene expression in P301L transgenic mice and human Alzheimer's disease. Proc Natl Acad Sci. doi: 10.1073/pnas.1710329115.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5819390/

Dissociation of murine brain tissue into single cells to isolate oligodendrocyte progenitor cells for cell cultures
Hagemeyer, N. *et al.* (2017) Microglia contribute to normal myelinogenesis and to oligodendrocyte progenitor maintenance during adulthood. Acta Neuropathol. 134:441–458. doi: 10.1007/s00401-017-1747-1.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5951721/

Neural tissue

Neural Tissue Dissociation Kit (P) (130-092-628)

Dissociation of murine brain tissue into single cells to isolate microglia
Eede, P. *et al.* (2020) Interleukin-12/23 deficiency differentially affects pathology in male and female Alzheimer's disease-like mice. EMBO Rep. doi: 10.15252/embr.201948530.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7054677/

Dissociation of murine brain tissue into single cells to isolate microglia for RNA sequencing
Hwang, H-W. *et al.* (2017) cTag-PAPERCLIP reveals alternative polyadenylation promotes cell-type specific protein diversity and shifts araf isoforms with microglia activation. Neuron. doi: 10.1016/j.neuron.2017.08.024.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5637551/

Dissociation of murine brain tissue into single cells to isolate oligodendrocyte progenitor cells for RNA sequencing
Li, L. *et al.* (2018) GFAP mutations in astrocytes impair oligodendrocyte progenitor proliferation and myelination in an hiPSC model of Alexander disease. Cell Stem Cell. doi: 10.1016/j.stem.2018.07.009.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6230521/

Dissociation of murine brain tissue into single cells to culture adult microglia
Otxoa-de-Amezaga, A. *et al.* (2018) Microglial cell loss after ischemic stroke favors brain neutrophil accumulation. Acta Neuropathol. 137:321–341. doi: 10.1007/s00401-018-1954-4.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6513908/

Dissociation of murine brain tissue into single cells for flow cytometry of immune cells
Pägelow, D. *et al.* (2018) The olfactory epithelium as a port of entry in neonatal neurolisteriosis. Nat Commun. doi: 10.1038/s41467-018-06668-2.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6189187/

Dissociation of murine brain tissue into single cells to culture cortical neurons
Sun, Z. *et al.* (2019) EGR1 recruits TET1 to shape the brain methylome during development and upon neuronal activity. Nat Commun. doi: 10.1038/s41467-019-11905-3.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6715719/

Neural Tissue Dissociation Kit (T) (130-093-231)

Dissociation of murine brain tissue into single cells for RNA isolation and isolation of microglia and astrocytes
Dostal, CR. *et al.* (2017) Glial and tissue-specific regulation of Kynurenine Pathway dioxygenases by acute stress of mice. Neurobiol Stress. 7:1–15. doi: 10.1016/j.ynstr.2017.02.002.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5840960/

Dissociation of murine ventricular-subventricular zone tissue into single cells for flow cytometry
Garcia-Garrote, M. *et al.* (2019) Interaction between angiotensin type 1, Type 2, and mas receptors to regulate adult neurogenesis in the brain ventricular–subventricular zone. Cells. 8:1551. doi: 10.3390/cells8121551.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6952803/

Dissociation of murine hippocampus tissue into single cells to isolate astrocytes
Tertil, M. *et al.* (2018) Glucocorticoid receptor signaling in astrocytes is required for aversive memory formation. Transl Psychiatry. doi: 10.1038/s41398-018-0300-x.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6261947/

Dissociation of embryonal zebrafish brain tissue into single cells to isolate and culture neuronal-restricted progenitor cells
Welzel, G. *et al.* (2015) Magnetic-activated cell sorting (MACS) can be used as a large-scale method for establishing zebrafish neuronal cell cultures. Sci Rep. doi: 10.1038/srep07959.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4302367/

Neural Tissue Dissociation Kit - Postnatal Neurons (130-094-802)

Dissociation of murine brain tissue into single cells to isolate and culture microglia
Carroll, JA. *et al.* (2020) Prion protein N1 cleavage peptides stimulate microglial interaction with surrounding cells. Sci Rep. doi: 10.1038/s41598-020-63472-z.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7171115/

Dissociation of murine spinal cords to isolate microglia and astrocytes
Komine, O. *et al.* (2018) Innate immune adaptor TRIF deficiency accelerates disease progression of ALS mice with accumulation of aberrantly activated astrocytes. Cell Death Differ. 25:2130–2146. doi: 10.1038/s41418-018-0098-3.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6261996/

Dissociation of murine brain tissue into single cells to isolate astrocytes
Leite, JA. *et al.* (2020) The α2 Na+/K+-ATPase isoform mediates LPS-induced neuroinflammation. Sci Rep. doi: 10.1038/s41598-020-71027-5.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7447643/

Dissociation of bioprinted neural tissue into single cells to determine cell viability
Sharma, R. *et al.* (2020) 3D bioprinting pluripotent stem cell derived neural tissues using a novel fibrin bioink containing drug releasing microspheres. Front Bioeng Biotechnol. doi: 10.3389/fbioe.2020.00057.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7026266/

Neurosphere Dissociation Kit (P) (130-095-943)

Dissociation of retinal organoids into single cells to prepare single-cell cDNA libraries
Pasquini, G. *et al.* (2020) Using transcriptomic analysis to assess double-strand break repair activity: towards precise *in vivo* genome editing. Int J Mol Sci. 21:1380. doi: 10.3390/ijms21041380.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7073035/

Dissociation of embryoid bodies into single cells for FACS sorting
Pearson, RA. *et al.* (2016) Donor and host photoreceptors engage in material transfer following transplantation of post-mitotic photoreceptor precursors. Nat Commun. doi: 10.1038/ncomms13029.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5059468/

Dissociation of mouse retinas into single cells for cell sorting
Villacampa, P. *et al.* (2019) Stabilization of myeloid-derived HIFs promotes vascular regeneration in retinal ischemia. Angiogenesis. 23:83–90. doi: 10.1007/s10456-019-09681-1.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7160070/

Brain tumor

Brain Tumor Dissociation Kit (P) (130-095-942)

Dissociation of murine brain tumors into single cells for flow cytometry
Braun, CJ. *et al.* (2017) Coordinated splicing of regulatory detained introns within oncogenic transcripts creates an exploitable vulnerability in malignant glioma. Cancer Cell. doi: 10.1016/j.ccell.2017.08.018.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5929990/

Dissociation of several human tissue samples into single cells for cell culture
Calistri, NL. *et al.* (2018) Microfluidic active loading of single cells enables analysis of complex clinical specimens. Nat Commun. doi: 10.1038/s41467-018-07283-x.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6235965/

Dissociation of PDX glioblastoma from mice into single cells for cell culture
Chien, C-H. *et al.* (2019) Enrichment of superoxide dismutase 2 in glioblastoma confers to acquisition of temozolomide resistance that is associated with tumor-initiating cell subsets. J Biomed Sci. doi: 10.1186/s12929-019-0565-2.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6800988/

Dissociation of human glioblastoma into single cells to collect tumor infiltrating lymphocytes
Davidson, TB. *et al.* (2018) Expression of PD-1 by T cells in malignant glioma patients reflects exhaustion and activation. Clin Cancer Res. 25:1913–1922. doi: 10.1158/1078-0432.ccr-18-1176.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6420851/

Dissociation of human brain tumors into single cells for flow cytometry
Hung, AL. *et al.* (2018) TIGIT and PD-1 dual checkpoint blockade enhances antitumor immunity and survival in GBM. Oncoimmunology. doi: 10.1080/2162402x.2018.1466769.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6136875/

Dissociation of human glioblastoma into single cells for cell culture
Hübner, M. *et al.* (2020) The IL-1 antagonist anakinra attenuates glioblastoma aggressiveness by dampening tumor-associated inflammation. Cancers. 12:433. doi: 10.3390/cancers12020433.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7072290/

Dissociation of human glioblastoma into single cells for cell culture
Samson, A. *et al.* (2018) Intravenous delivery of oncolytic reovirus to brain tumor patients immunologically primes for subsequent checkpoint blockade. Sci Transl Med. doi: 10.1126/scitranslmed.aam7577.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6276984/

Dissociation of murine brain tumors into single cells for flow cytometry
Wadajkar, AS. *et al.* (2017) Decreased non-specific adhesivity, receptor targeted (DART) nanoparticles exhibit improved dispersion, cellular uptake, and tumor retention in invasive gliomas. J Control Release. 267:144–153. doi: 10.1016/j.jconrel.2017.09.006.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5723214/

Liver

Liver Dissociation Kit, mouse (130-105-807)

Dissociation of murine liver tissue into single cells for flow cytometry
Buler, M. *et al.* (2020) The regulatory role of PGC1α-related coactivator in response to drug-induced liver injury. FASEB Bioadv. 2:453–463. doi: 10.1096/fba.2020-00003.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7429352/

Dissociation of murine liver tissue into single cells for flow cytometry
Böning, MA. *et al.* (2020) ADAP promotes degranulation and migration of NK cells primed during *in vivo* Listeria monocytogenes infection in mice. Front Immunol. doi: 10.3389/fimmu.2019.03144.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6987423/

Dissociation of murine liver tissue into single cells for flow cytometry
Kim, SY. *et al.* (2017) Pro-inflammatory hepatic macrophages generate ROS through NADPH oxidase 2 via endocytosis of monomeric TLR4–MD2 complex. Nat Commun. doi: 10.1038/s41467-017-02325-2.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5740170/

Dissociation of murine liver tissue into single cells for flow cytometry
Liao, C-Y. *et al.* (2018) Hepatocyte-derived lipotoxic extracellular vesicle sphingosine 1-phosphate induces macrophage chemotaxis. Front Immunol. doi: 10.3389/fimmu.2018.02980.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6305739/

Dissociation of murine liver tissue into single cells for flow cytometry
Valbuena Perez, JV. *et al.* (2020) Altered glucocorticoid metabolism represents a feature of macroph-aging. Aging Cell. doi: 10.1111/acel.13156.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7294787/

Dissociation of murine liver tissue into single cells for flow cytometry
Van Bockstal, L. *et al.* (2020) Interferon alpha favors macrophage infection by visceral leishmania species through upregulation of sialoadhesin expression. Front Immunol. doi: 10.3389/fimmu.2020.01113.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7296180/

Dissociation of murine liver tissue into single cells for flow cytometry
Wang, C. *et al.* (2019) Inducing and exploiting vulnerabilities for the treatment of liver cancer. Nature. 574:268–272. doi: 10.1038/s41586-019-1607-3.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6858884/

Dissociation of murine liver tissue into single cells for flow cytometry
Xu, Y. *et al.* (2019) Translation control of the immune checkpoint in cancer and its therapeutic targeting. Nat Med. 25:301–311. doi: 10.1038/s41591-018-0321-2.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6613562/

Lung

Lung Dissociation Kit, mouse (130-095-927)

Dissociation of murine lung tissue into single cells to isolate pulmonary endothelial cells
Barabutis, N. *et al.* (2018) Wild-type p53 enhances endothelial barrier function by mediating RAC1 signaling and RhoA inhibition. J Cell Mol Med. 22:1792–1804. doi: 10.1111/jcmm.13460.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5824363/

Dissociation of murine lung tissue into single cells for flow cytometry
Clancy-Thompson, E. *et al.* (2019) Transnuclear mice reveal Peyer's patch iNKT cells that regulate B-cell class switching to IgG1. EMBO J. doi: 10.15252/embj.2018101260.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6627243/

Dissociation of murine lung tissue into single cells for flow cytometry
Claser, C. *et al.* (2019) Lung endothelial cell antigen cross-presentation to CD8+T cells drives malaria-associated lung injury. Nat Commun. doi: 10.1038/s41467-019-12017-8.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6751193/

Dissociation of murine lung tissue into single cells for flow cytometry
Jia, J. *et al.* (2018) Cholesterol metabolism promotes B-cell positioning during immune pathogenesis of chronic obstructive pulmonary disease. EMBO Mol Med. doi: 10.15252/emmm.201708349.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5938615/

Dissociation of murine lung tissue into single cells for scRNA sequencing of regulatory T cells
Lu, DR. *et al.* (2020) Dynamic changes in the regulatory T-cell heterogeneity and function by murine IL-2 mutein. Life Sci Alliance. doi: 10.26508/lsa.201900520.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7156283/

Dissociation of murine lung tissue into single cells for single-cell sorting and scRNA sequencing
Steuerman, Y. *et al.* (2018) Dissection of influenza infection *in vivo* by single-cell RNA sequencing. Cell Syst. doi: 10.1016/j.cels.2018.05.008.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7185763/

Dissociation of murine lung tissue into single cells for flow cytometry
Tiwari, PM. *et al.* (2018) Engineered mRNA-expressed antibodies prevent respiratory syncytial virus infection. Nat Commun. doi: 10.1038/s41467-018-06508-3.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6167369/

Dissociation of murine lung tissue into single cells for single-cell sorting and scRNA sequencing
Wallrapp, A. *et al.* (2017) The neuropeptide NMU amplifies ILC2-driven allergic lung inflammation. Nature. 549:351–356. doi: 10.1038/nature24029.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5746044/

Lamina propria

Lamina Propria Dissociation Kit, mouse (130-097-410)

Dissociation of murine colon tissue into single cells to isolate immune cells for flow cytometry
Delacher, M. *et al.* (2020) Precursors for nonlymphoid-tissue Treg cells reside in secondary lymphoid organs and are programmed by the transcription factor BATF. Immunity. doi: 10.1016/j.immuni.2019.12.002.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7026712/

Dissociation of murine intestinal tissue into single cells to isolate lamina propria immune cells
Denny, JE. *et al.* (2019) Differential sensitivity to plasmodium yoelii infection in C57BL/6 mice impacts gut-liver axis homeostasis. Sci Rep. doi: 10.1038/s41598-019-40266-6.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6401097/

Dissociation of murine intestinal tissue into single cells for flow cytometry, cell sorting and cell culture
Liang, J. *et al.* (2016) Inflammatory Th1 and Th17 in the intestine are each driven by functionally specialized dendritic cells with distinct requirements for MyD88. Cell Rep. 17:1330–1343. doi: 10.1016/j.celrep.2016.09.091.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5123685/

Dissociation of murine jejunum and colon tissue into single cells for flow cytometry
Noval Rivas, M. *et al.* (2019) Intestinal permeability and IgA provoke immune vasculitis linked to cardiovascular inflammation. Immunity. doi: 10.1016/j.immuni.2019.05.021.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6751009/

Dissociation of murine colon tissue into single cells for flow cytometry
Pan, P. *et al.* (2017) Black raspberries enhance natural killer cell infiltration into the colon and suppress the progression of colorectal cancer. Front Immunol. doi: 10.3389/fimmu.2017.00997.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5561013/

Dissociation of murine colon tissue into single cells for flow cytometry
Pan, P. *et al.* (2018) Loss of FFAR2 promotes colon cancer by epigenetic dysregulation of inflammation suppressors. Int J Cancer. 143:886–896. doi: 10.1002/ijc.31366.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6041131/

Dissociation of murine intestinal tissue into single cells to isolate colonic lamina propria lymphocytes
Sin, JH. *et al.* (2019) The epigenetic regulator ATF7ip inhibits Il2 expression, regulating Th17 responses. J Exp Med. 216:2024–2037. doi: 10.1084/jem.20182316.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6719416/

Dissociation of murine intestinal tissue into single cells for flow cytometry
Singh, A. *et al.* (2020) CD122-targetted IL-2 signals cause acute and selective apoptosis of B cells in Peyer's Patches. Sci Rep. doi: 10.1038/s41598-020-69632-5.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7391758/

Spleen

Spleen Dissociation Kit, mouse (130-095-926)

Dissociation of murine spleen tissue into single cells for flow cytometry
Biddlecome, A. *et al.* (2019) Delivery of self-amplifying RNA vaccines in *in vitro* reconstituted virus-like particles. PLoS One. doi: 10.1371/journal.pone.0215031.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6548422/

Dissociation of murine spleen tissue into single cells for plasmacytoid dendritic cell isolation
Chen, C. *et al.* (2020) Plasmacytoid dendritic cells protect against middle cerebral artery occlusion induced brain injury by priming regulatory T cells. Front Cell Neurosci. doi: 10.3389/fncel.2020.00008.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7006436/

Dissociation of murine spleen tissue into single cells for flow cytometry of splenocytes
Däbritz, J. *et al.* (2016) Altered gp130 signaling ameliorates experimental colitis via myeloid cell-specificSTAT3 activation and myeloid-derived suppressor cells. Sci Rep. doi: 10.1038/srep20584.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4742831/

Dissociation of murine spleen tissue into single cells for splenocyte cell culture
Hall, LS. *et al.* (2018) Combination peptide immunotherapy suppresses antibody and helper T-cell responses to the major human platelet autoantigen glycoprotein IIb/IIIa in HLA-transgenic mice. Haematologica. 104:1074–1082. doi: 10.3324/haematol.2017.179424.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6518892/

Dissociation of murine spleen tissue into single cells for flow cytometry of splenocytes
Iwabuchi, R. *et al.* (2018) Introduction of human Flt3-L and GM-CSF into humanized mice enhances the reconstitution and maturation of myeloid dendritic cells and the development of $Foxp3^{+}CD4^{+}$ T cells. Front Immunol. doi: 10.3389/fimmu.2018.01042.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985304/

Whole skin

Whole Skin Dissociation Kit, human (130-101-540)

Dissociation of human skin biopsies into single cells for scRNA sequencing
Apostolidis, SA. *et al.* (2018) Single-cell RNA sequencing identifies HSPG2 and APLNR as markers of endothelial cell injury in systemic sclerosis skin. Front Immunol. doi: 10.3389/fimmu.2018.02191.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6174292/

Dissociation of human skin biopsies into single cells for scRNA sequencing
Kim, D. *et al.* (2020) Targeted therapy guided by single-cell transcriptomic analysis in drug-induced hypersensitivity syndrome: a case report. Nat Med. 26:236–243. doi: 10.1038/s41591-019-0733-7.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7105105/

Dissociation of human skin biopsies into single cells for immunological assays
Solé-Boldo, L. *et al.* (2020) Single-cell transcriptomes of the human skin reveal age-related loss of fibroblast priming. Commun Biol. doi: 10.1038/s42003-020-0922-4.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7181753/

Dissociation of human skin biopsies into single cells for scRNA sequencing
Sun, Z. *et al.* (2019) A Bayesian mixture model for clustering droplet-based single-cell transcriptomic data from population studies. Nat Commun. doi: 10.1038/s41467-019-09639-3.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6456731/

Dissociation of human skin biopsies into single cells for scRNA sequencing
Winkel, BM. *et al.* (2020) Plasmodium sporozoites induce regulatory macrophages. PLoS Pathog. doi: 10.1371/journal.ppat.1008799.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7500643/

Neonatal heart

Neonatal Heart Dissociation Kit, mouse and rat (130-098-373)

Dissociation of murine hearts into single cells for primary cardiac cultures
Bassat, E. *et al.* (2017) The extracellular matrix protein agrin promotes heart regeneration in mice. Nature. 547:179–184. doi: 10.1038/nature22978.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5769930/

Dissociation of murine hearts into single cells to isolate mouse cardiac endothelial cells
Castellan, RFP. *et al.* (2020) miR-96 and miR-183 differentially regulate neonatal and adult postinfarct neovascularization. JCI Insight. doi: 10.1172/jci.insight.134888.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7453899/

Dissociation of neonatal rat hearts into single cells for cell culture
Haftbaradaran Esfahani, P. *et al.* (2019) Cell shape determines gene expression: cardiomyocyte morphotypic transcriptomes. Basic Res Cardiol. doi: 10.1007/s00395-019-0765-7.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6928094/

Dissociation of murine hearts into single cells for primary cardiac cultures
Honkoop, H. *et al.* (2019) Single-cell analysis uncovers that metabolic reprogramming by ErbB2 signaling is essential for cardiomyocyte proliferation in the regenerating heart. eLife. doi: 10.7554/elife.50163.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7000220/

Dissociation of murine hearts into single cells to isolate mononuclear cells
Miteva, K. *et al.* (2017) Mesenchymal stromal cells modulate monocytes trafficking in Coxsackievirus B3-induced myocarditis. Stem Cells Transl Med. 6:1249–1261. doi: 10.1002/sctm.16-0353.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5442851/

Dissociation of neonatal rat hearts into single cells for cell culture
Shekhar, A. *et al.* (2018) ETV1 activates a rapid conduction transcriptional program in rodent and human cardiomyocytes. Sci Rep. doi: 10.1038/s41598-018-28239-7.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6028599/

Dissociation of neonatal rat hearts into single cells for cell culture
Trembinski, DJ. *et al.* (2020) Aging-regulated anti-apoptotic long non-coding RNA Sarrah augments recovery from acute myocardial infarction. Nat Commun. doi: 10.1038/s41467-020-15995-2.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7184724/

Dissociation of neonatal rat hearts into single cells for cell culture
Veeraraghavan, R. *et al.* (2018) The adhesion function of the sodium channel beta subunit (β1) contributes to cardiac action potential propagation. eLife. doi: 10.7554/elife.37610.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6122953/

Skeletal muscle

Skeletal Muscle Dissociation Kit, mouse and rat (130-098-305)

Dissociation of murine muscle tissue into single cells for flow cytometry
Andreani, C. *et al.* (2018) Combination of coenzyme Q10 intake and moderate physical activity counteracts mitochondrial dysfunctions in a SAMP8 mouse model. Oxid Med Cell Longev. 2018:1–15. doi: 10.1155/2018/8936251.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6220380/

Dissociation of murine muscle tissue into single cells for cell culture
Aykul, S. *et al.* (2020) Activin A forms a non-signaling complex with ACVR1 and type II Activin/BMP receptors via its finger 2 tip loop. eLife. doi: 10.7554/elife.54582.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7326492/

Dissociation of murine muscle tissue into single cells to isolate satellite cells for cell culture
Gatta, L. *et al.* (2017) Modulating the metabolism by trimetazidine enhances myoblast differentiation and promotes myogenesis in cachectic tumor-bearing c26 mice. Oncotarget. 8:113938–113956. doi: 10.18632/oncotarget.23044.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5768376/

Dissociation of murine muscle tissue into single cells for flow cytometry of leukocyte infiltrates
Klotzsche - von Ameln, A. *et al.* (2017) Endogenous developmental endothelial locus-1 limits ischaemia- related angiogenesis by blocking inflammation. Thromb Haemost. 117:1150–1163. doi: 10.1160/th16-05-0354.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5502105/

Dissociation of murine muscle tissue into single cells to isolate satellite cells
Marroncelli, N. *et al.* (2018) HDAC4 regulates satellite cell proliferation and differentiation by targeting P21 and Sharp1 genes. Sci Rep. doi: 10.1038/s41598-018-21835-7.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5823886/

Dissociation of murine muscle tissue into single cells for immune cell recruitment studies
Shah, RR. *et al.* (2019) The droplet size of emulsion adjuvants has significant impact on their potency, due to differences in immune cell-recruitment and -activation. Sci Rep. doi: 10.1038/s41598-019-47885-z.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6687744/

Dissociation of murine muscle tissue into single cells for flow cytometry
Thorne, AH. *et al.* (2020) Adjuvant screen identifies synthetic DNA-encoding Flt3L and CD80 immunotherapeutics as candidates for enhancing anti-tumor T cell responses. Front Immunol. doi: 10.3389/fimmu.2020.00327.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7052369/

Dissociation of murine muscle tissue into single cells for flow cytometry
Watson, NB. *et al.* (2015) SHP-1–dependent macrophage differentiation exacerbates virus-induced myositis. J Immunol. 194:2796–2809. doi: 10.4049/jimmunol.1402210.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4361939/

Adipose tissue

Adipose Tissue Dissociation Kit, mouse and rat (130-105-808)

Dissociation of murine adipose tissue into single cells to isolate stromal vascular fraction cells
Bayindir, I. *et al.* (2015) Transcriptional pathways in cPGI2-induced adipocyte progenitor activation for browning. Front Endocrinol. doi: 10.3389/fendo.2015.00129.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4538297/

Dissociation of murine adipose tissue into single cells to isolate stromal vascular fraction cells
Hanna Kazazian, N. *et al.* (2019) Lupus autoimmunity and metabolic parameters are exacerbated upon high fat diet-induced obesity due to TLR7 signaling. Front Immunol. doi: 10.3389/fimmu.2019.02015.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6738575/

Dissociation of murine brown adipose tissue into single cells for FACS analysis
Hettich, M. *et al.* (2016) High-resolution PET imaging with therapeutic antibody-based PD-1/PD-L1 checkpoint tracers. Theranostics. 6:1629–1640. doi: 10.7150/thno.15253.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4955062/

Dissociation of murine subcutaneous white adipose tissue into single cells to isolate stromal vascular cells
Kobayashi, M. *et al.* (2018) The RNA Methyltransferase Complex of WTAP, METTL3, and METTL14 regulates mitotic clonal expansion in adipogenesis. Mol Cell Biol. doi: 10.1128/mcb.00116-18.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6066751/

Dissociation of visceral murine adipose tissue into single cells for flow cytometry
Sharma, M. *et al.* (2019) Netrin-1 alters adipose tissue macrophage fate and function in obesity. Immunometabolism. doi: 10.20900/immunometab20190010.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6699780/

Dissociation of murine subcutaneous fat tissue into single cells for mass cytometry
Yousefzadeh, MJ. *et al.* (2018) Fisetin is a senotherapeutic that extends health and lifespan. EBioMedicine. 36:18–28. doi: 10.1016/j.ebiom.2018.09.015.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6197652/

Umbilical cord

Umbilical Cord Dissociation Kit, human (130-105-737)

Dissociation of human colonic biopsies into single cells to isolate stromal cells
Kinchen, J. *et al.* (2018) Structural remodeling of the human colonic mesenchyme in inflammatory bowel disease. Cell. doi: 10.1016/j.cell.2018.08.067.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6176871/

Dissociation of human placenta tissue into single cells for scRNA sequencing
Lin, X. *et al.* (2018) Cell type-specific DNA methylation in neonatal cord tissue and cord blood: a 850K-reference panel and comparison of cell types. Epigenetics. 13:941–958. doi: 10.1080/15592294.2018.1522929.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6284779/

Dissociation of human umbilical cord tissue into single cells for flow cytometry
Pique-Regi, R. *et al.* (2019) Single-cell transcriptional signatures of the human placenta in term and preterm parturition. eLife. doi: 10.7554/elife.52004.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6949028/

Dissociation of human placenta tissue into single cells for scRNA sequencing
Pique-Regi, R. *et al.* (2020) Does the human placenta express the canonical cell entry mediators for SARS-CoV-2? eLife. doi: 10.7554/elife.58716.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7367681/

Epidermal tissue

Epidermis Dissociation Kit, human (130-103-464)

Epidermis Dissociation Kit, mouse (130-095-928)

Dissociation of murine epidermal sheets into single cells to collect Langerhans cells
Gomez Perdiguero, E. *et al.* (2014) Tissue-resident macrophages originate from yolk-sac-derived erythro-myeloid progenitors. Nature. 518:547–551. doi: 10.1038/nature13989.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5997177/

Dissociation of murine epidermal tissue into single cells to enrich for specific cell types
Liang, H. *et al.* (2020) Topical nanoparticles interfering with the DNA-LL37 complex to alleviate psoriatic inflammation in mice and monkeys. Sci Adv. doi: 10.1126/sciadv.abb5274.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7457336/

Dissocation of murine tail tissue into single cells for flow cytometry and Western blotting
Marciel, MP. *et al.* (2018) Selenoprotein K deficiency inhibits melanoma by reducing calcium flux required for tumor growth and metastasis. Oncotarget. 9:13407–13422. doi: 10.18632/oncotarget.24388.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5862587/

Dissociation of murine epidermal and dermal tissue into single cells to isolate immature myeloid cells
Ortiz, ML. *et al.* (2015) Immature myeloid cells directly contribute to skin tumor development by recruiting IL-17–producing CD4$^+$ T cells. J Exp Med. 212:351–367. doi: 10.1084/jem.20140835.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4354367/

Separation of murine dermis from epidermis
Schmidt, MO. *et al.* (2018) The role of fibroblast growth factor-binding protein 1 in skin carcinogenesis and inflammation. J Invest Dermatol. 138:179–188. doi: 10.1016/j.jid.2017.07.847.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5742071/

Embryoid bodies

Embryoid Body Dissociation Kit, human and mouse (130-096-348)

Dissociation of retinal organoids into single cells scRNA sequencing
Collin, J. *et al.* (2019) CRX expression in pluripotent stem cell-derived photoreceptors marks a transplantable subpopulation of early cones. Stem Cells. 37:609–622. doi: 10.1002/stem.2974.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6519156/

Dissociation of embryoid bodies into single cells for flow cytometry
Gao, X. *et al.* (2017) Toxicity of nano- and ionic silver to embryonic stem cells: a comparative toxicogenomic study. J Nanobiotechnology. doi: 10.1186/s12951-017-0265-6.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387260/

Dissociation of embryoid bodies into single cells for flow cytometry
Lai, Y-L. *et al.* (2018) Loss of heme oxygenase-1 accelerates mesodermal gene expressions during embryoid body development from mouse embryonic stem cells. Redox Biol. 15:51–61. doi: 10.1016/j.redox.2017.11.019.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5722471/

Dissociation of human cardiac spheroids into single cells for cell culture
Mei, Q. *et al.* (2019) Manipulating energy migration within single lanthanide activator for switchable upconversion emissions towards bidirectional photoactivation. Nat Commun. doi: 10.1038/s41467-019-12374-4.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6764961/

Dissociation of embryoid bodies into single cells for cell culture
Yang, F-C. *et al.* (2018) Short term development and fate of MGE-like neural progenitor cells in jaundiced and non-jaundiced rat brain. Cell Transplant. 27:654–665. doi: 10.1177/0963689718766327.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6041884/

Other tissues

Multi Tissue Dissociation Kit 1 (130-110-201)

Multi Tissue Dissociation Kit 2 (130-110-203)

Multi Tissue Dissociation Kit 3 (130-110-204)

Dissociation of murine kidney tissue into single cells for flow cytometry
Christensen, M. *et al.* (2019) Metformin modulates immune cell infiltration into the kidney during unilateral ureteral obstruction in mice. Physiol Rep. doi: 10.14814/phy2.14141.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6597795/

Dissociation of murine kidney tissue into single cells for scRNA sequencing
Denisenko, E. *et al.* (2020) Systematic assessment of tissue dissociation and storage biases in single-cell and single-nucleus RNA-seq workflows. Genome Biol. doi: 10.1186/s13059-020-02048-6.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7265231/

Dissociation of human lung biopsies into single cells for scRNA sequencing
Habermann, AC. *et al.* (2020) Single-cell RNA sequencing reveals profibrotic roles of distinct epithelial and mesenchymal lineages in pulmonary fibrosis. Sci Adv. doi: 10.1126/sciadv.aba1972.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7439444/

Dissociation of murine kidney tissue into single cells for flow cytometry
Nørgård, MØ. *et al.* (2020) Phenformin attenuates renal injury in unilateral ureteral obstructed mice without affecting immune cell infiltration. Pharmaceutics. 12:301. doi: 10.3390/pharmaceutics12040301.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7238166/

Dissociation of murine synovial tissue into single cells for flow cytometry and restimulation assays
Royzman, D. *et al.* (2019) Soluble CD83 triggers resolution of arthritis and sustained inflammation control in IDO dependent manner. Front Immunol. doi: 10.3389/fimmu.2019.00633.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6455294/

Dissociation of murine brain tissue and spinal cord into single cells to isolate mononuclear cells
Sutton, CE. *et al.* (2017) Loss of the molecular clock in myeloid cells exacerbates T cell-mediated CNS autoimmune disease. Nat Commun. doi: 10.1038/s41467-017-02111-0.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5727202/

Dissociation of human lung slice cultures into single cells for flow cytometry
Vijayaraj, P. *et al.* (2019) Modeling progressive fibrosis with pluripotent stem cells identifies an anti-fibrotic small molecule. Cell Rep. doi: 10.1016/j.celrep.2019.11.019.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6927560/

Dissociation of murine kidney tissue into single cells for scRNA sequencing
Zhao, Z. *et al.* (2020) XJB-5-131 inhibited ferroptosis in tubular epithelial cells after ischemia–reperfusion injury. Cell Death Dis. doi: 10.1038/s41419-020-02871-6.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7429848/

Tissue homogenization

Isolation of nucleic acids (RNA and DNA)

Homogenization of murine tongue tissue for RNA isolation
Amatya, N. *et al.* (2018) IL-17 integrates multiple self-reinforcing, feed-forward mechanisms through the RNA binding protein Arid5a. Sci Signal. doi: 10.1126/scisignal.aat4617.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6188668/

Homogenization of frozen tissue blocks for RNA isolation
Bluemn, EG. *et al.* (2017) Androgen receptor pathway-independent prostate cancer is sustained through FGF signaling. Cancer Cell. doi: 10.1016/j.ccell.2017.09.003.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5750052/

Homogenization of frozen murine pancreatic tissue for RNA isolation
Candido, JB. *et al.* (2018) CSF1R^{+} macrophages sustain pancreatic tumor growth through T cell suppression and maintenance of key gene programs that define the squamous subtype. Cell Rep. 23:1448–1460. doi: 10.1016/j. celrep. 2018.03.131.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5946718/

Homogenization of frozen murine brain tissue for RNA isolation
Eede, P. *et al.* (2020) Interleukin-12/23 deficiency differentially affects pathology in male and female Alzheimer's disease-like mice. EMBO Rep. doi: 10.15252/embr.201948530.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7054677/

Homogenization of frozen murine heart tissue for RNA isolation
Kallikourdis, M. *et al.* (2017) T cell costimulation blockade blunts pressure overload-induced heart failure. Nat Commun. doi: 10.1038/ncomms14680.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5343521/

Homogenization of several murine organs for DNA isolation
Keller, L. *et al.* (2019) Preclinical safety study of a combined therapeutic bone wound dressing for osteoarticular regeneration. Nat Commun. doi: 10.1038/s41467-019-10165-5.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6517440/

Homogenization of frozen healthy and diseased murine tissue samples for RNA isolation
Maniati, E. *et al.* (2020) Mouse ovarian cancer models recapitulate the human tumor microenvironment and patient response to treatment. Cell Rep. doi: 10.1016/j. celrep.2019.12.034.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6963791/

Homogenization of frozen murine tumor tissue for RNA isolation
Mullins, SR. *et al.* (2019) Intratumoral immunotherapy with TLR7/8 agonist MEDI9197 modulates the tumor microenvironment leading to enhanced activity when combined with other immunotherapies. J Immunother Cancer. doi: 10.1186/s40425-019-0724-8.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6739946/

Homogenization of several frozen murine organs for RNA isolation
Rogers, KJ. *et al.* (2020) Acute plasmodium infection promotes interferon-gamma-dependent resistance to ebola virus infection. Cell Rep. doi: 10.1016/j.celrep.2020.02.104.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7172281/

Homogenization of murine tumor tissue for RNA isolation
Sharma, N. *et al.* (2019) TLR1/2 ligand enhances antitumor efficacy of CTLA-4 blockade by increasing intratumoral Treg depletion. Proc Natl Acad Sci. 116:10453–10462. doi: 10.1073/pnas.1819004116.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6534983/

Extraction of proteins

Homogenization of murine tissue for cytokine/chemokine quantification
Anker, JF. *et al.* (2018) Multi-faceted immunomodulatory and tissue-tropic clinical bacterial isolate potentiates prostate cancer immunotherapy. Nat Commun. doi: 10.1038/s41467-018-03900-x.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5913311/

Homogenization of murine heart tissue to extract heart-derived extracellular matrix
Bassat, E. *et al.* (2017) The extracellular matrix protein agrin promotes heart regeneration in mice. Nature. 547:179–184. doi: 10.1038/nature22978.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5769930/

Homogenization of mouse footpads for cytokine/chemokine quantification
Chan, YH. *et al.* (2019) Mutating chikungunya virus non-structural protein produces potent live-attenuated vaccine candidate. EMBO Mol Med. doi: 10.15252/emmm.201810092.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6554673/

Homogenization of murine brain and intestinal tissue for protein and RNA isolation
Croes, L. *et al.* (2019) Determination of the potential tumor-suppressive effects of Gsdme in a chemically induced and in a genetically modified intestinal cancer mouse model. Cancers. 11:1214. doi: 10.3390/cancers11081214.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6721630/

Homogenization of cultured cells to enrich for membranes
Fujinaka, CM. *et al.* (2017) Mass spectrometry-based identification of extracellular domains of cell surface N-glycoproteins: defining the accessible surfaceome for immunophenotyping stem cells and their derivatives. Methods Mol Biol. 57–78. doi: 10.1007/978-1-4939-7553-2_4.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5791894/

Homogenization of cultures cells for protein extraction
Horn, LA. *et al.* (2017) Soluble CD80 protein delays tumor growth and promotes tumor-infiltrating lymphocytes. Cancer Immunol Res. 6:59–68. doi: 10.1158/2326-6066.cir-17-0026.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7262951/

Homogenization of murine brain tissue for protein extraction
Liebsch, F. *et al.* (2019) Aβ34 is a BACE1-derived degradation intermediate associated with amyloid clearance and Alzheimer's disease progression. Nat Commun. doi: 10.1038/s41467-019-10152-w.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6527709/

Homogenization of frozen PDX tumor tissue for protein extraction
Sale, MJ. *et al.* (2019) Targeting melanoma's MCL1 bias unleashes the apoptotic potential of BRAF and ERK1/2 pathway inhibitors. Nat Commun. doi: 10.1038/s41467-019-12409-w.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6856071/

Homogenization of murine lung tissue for protein extraction and IFN-γ determination
van der Weyden, L. *et al.* (2017) Genome-wide *in vivo* screen identifies novel host regulators of metastatic colonization. Nature. 541:233–236. doi: 10.1038/nature20792.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5603286/

Homogenization of murine lung tissue for protein extraction
Van Dyken, SJ. *et al.* (2017) Spontaneous chitin accumulation in airways and age-related fibrotic lung disease. Cell. doi: 10.1016/j.cell.2017.03.044.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5444468/

Determination of bacterial or viral load

Homogenization of murine lung tissue to determine virus titers using plaque assays
Castaño-Rodriguez, C. *et al.* (2018) Role of severe acute respiratory syndrome coronavirus viroporins E, 3a, and 8a in replication and pathogenesis. mBio. doi: 10.1128/mbio.02325-17.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5964350/

Homogenization of murine lung tissue to determine virus titers using plaque assays
Chai, N. *et al.* (2017) A broadly protective therapeutic antibody against influenza B virus with two mechanisms of action. Nat Commun. doi: 10.1038/ncomms14234.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5253702/

Homogenization of several tissues from non-human primates to determine the quantity of bacterial CFUs
Darrah, PA. *et al.* (2020) Prevention of tuberculosis in macaques after intravenous BCG immunization. Nature. 577:95–102. doi: 10.1038/s41586-019-1817-8.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7015856/

Homogenization of lung tissue from non-human primates to determine the quantity of bacterial CFUs
Dijkman, K. *et al.* (2019) Disparate tuberculosis disease development in macaque species is associated with innate immunity. Front Immunol. doi: 10.3389/fimmu.2019.02479.
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Miltenyi Biotec

Miltenyi Biotec B.V. & Co. KG | Friedrich-Ebert-Straße 68 | 51429 Bergisch Gladbach | Germany | Phone +49 2204 8306-0 | Fax +49 2204 85197
macsde@miltenyi.com | **www.miltenyibiotec.com**

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