

Supplementary information

Epigenomic heterogeneity as a source of tumour evolution

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Year	Publication	Sample	Sample2	Fresh_Frozen	Omics	Technology	Techno_Mode	Throughput	Type of epigenomic modification	Mono or Multiple omics
2019	Satpathy 2019 Nat Biotech	Basal cell carcinoma - immune cells	CTC_Hemato	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2019	Wang 2019 Cancer Discovery	Glioma	Glioma	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2019	Granja 2019 Nat Biotech	Mixed phenotype acute leukemia	CTC_Hemato	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2020	Shu 2020 Mol Cell	TNBC - cell lines	CellLine	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Frede 2021 Nat Cell Biol	Multiple myeloma	CTC_Hemato	Fresh/Frozen	Chromatin Accessibility	scATACseq	NA	NA	Chromatin Accessibility	Mono
2021	Taavitsainen 2021 Nat Comm	Prostate cancer cell lines	CellLine	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Zhang 2021 Cancer Cell	Triple negative cancer (TNBC) - immune cells	CTC_Hemato	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Kashima 2021 Cancer Research	Drug resistant lung cancer cell lines	CellLine	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Regner 2021 Mol Cell	Ovarian & endometrial cancers	Multiple	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Nikolic 2021 Sci Adv	Glioma	Glioma	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Guilhamon 2021 eLife	Glioma	Glioma	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Zhang 2021 Nature Commun	Spinal ependymomas	Ependymomas	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Mei 2021 Clin Trans Med	Colorectal cancer	Colorectal	Fresh (CryoP after disso)	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Xu 2021 Hum Mol Genet	Breast metastasis	Breast	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Singh 2021 Gastroenterology	Barret metaplasia	Oesophagus	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Wang 2021 Clin Cancer Research	Bladder cancer	Bladder	Fresh (CryoP after disso)	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Schwartz 2021 Cell Reports	Drug resistant leukemic T cells	CellLine	NA	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2021	Pierce 2021 Nature Commun	Human cancer cell lines	CellLine	Fresh	Chromatin Accessibility	Spear-Seq	Droplet	High	Chromatin Accessibility	Mono
2021	Babikir 2021 Genome Biol	Glioma	Glioma	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2022	Wang 2022 Nature Communications	Papillary renal cell carcinoma (pRCC)	Renal	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2022	Wang 2022 Nat Cancer	Glioma	Glioma	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2022	Becker 2022 Nat Genetics	Colorectal cancer	Colorectal	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2022	Long 2022 Cell discovery	Clear cell renal carcinoma	Renal	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2022	Kumegawa 2022 NPJ Breast Cancer	Breast Cancer	Breast	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2022	Itahashi 2022 Sci Immunol	Immune cells from NSCLC	CTC_Hemato	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Fan 2023 Mol Ther Nucleic Acids	Prostate cancer cell line	CellLine	NA	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono

2023	Zhu 2023 Nat Comm	Human cancer cell lines	CellLine	NA	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Riegel 2023 Mol Cell	Immune cells from 4 cancer types	CTC_Hemato	Fresh	Chromatin Accessibility	scATACseq	Plate	Low	Chromatin Accessibility	Mono
2023	Craig 2023 Cell Rep	Liver cancer	Liver	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Yu 2023 Cancer Res	Clear cell renal carcinoma	Renal	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Leblay 2023 Blood	Multiple myeloma	CTC_Hemato	Fresh (CryoP after enrichment)	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Poos 2023 Blood	Multiple myeloma (therapy)	CTC_Hemato	Fresh (CryoP after enrichment)	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Li Pharmacol 2023 Res	Colorectal cancer (PDX)	Colorectal	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	John 2023 Nature Commun	Multiple myeloma	CTC_Hemato	Fresh (CryoP after enrichment)	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Sun 2023 J Pharm anal	Colorectal cancer (PDX)	Colorectal	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Zou 2023 Elife	Squamous cell carcinoma & in situ lesions	Skin	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Kim 2023 Int J Mol Sci	Male Breast cancer	Breast	Fresh	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2023	Pratt 2023 Clin Trans Med	PDAC	Pancreas	Frozen	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	Mono
2019	Liu 2019 Nat Comm	Cell lines & PDX	Multiple	Fresh	Multi-modal RNA/Chromatin acc.	scCAT-seq	Plate	Low	Chromatin Accessibility	MultiRNA/DNA
2019	Chen 2019 Nat Biotechno	Cell lines	CellLine	Fresh	Multi-modal RNA/Chromatin acc.	SNARE-seq	Droplet	High	Chromatin Accessibility	MultiRNA/DNA
2021	Lareau 2021 Nat Biotech	Chronic lymphocytic leukemia + CRC	Multiple	Frozen (CCL) + Fresh (CRC)	Chromatin Accessibility	scATACseq	Droplet	High	Chromatin Accessibility	MultiRNA/DNA
2022	Anadon Cancer Cell 2022	Immune cells from ovarian cancers	CTC_Hemato	Fresh	Multi-modal RNA/Chromatin acc.	snRNA/snATAC	Droplet	High	Chromatin Accessibility	MultiRNA/DNA
2022	Foster 2022 Cancer Cell	Breast cancer	Breast	Fresh	Multi-modal RNA/Chromatin acc.	snRNA/snATAC	Droplet	High	Chromatin Accessibility	MultiRNA/DNA
2023	Liu 2023 Nature Commun	Rhabdoid tumors	Rhabdoid	NA	Multi-modal RNA/Chromatin acc.	snRNA/snATAC	Droplet	High	Chromatin Accessibility	MultiRNA/DNA
2023	Turkajl 2023 Cell Stem Cell	AML (& AML cell lines)	CTC_Hemato	Frozen (CryoP)	Multi-modal DNA / Chromatin acc	GTAC	Plate	Low	Chromatin Accessibility	MultiDNA/DNA
2023	Otto 2023 Mol Cell	AML cell lines	CellLine	Fresh	Multi-modal RNA/Chromatin acc.	SHARE-seq	Combinatorial	High	Chromatin Accessibility	MultiRNA/DNA
2023	Lambo 2023 Cancer Cell	Pediatric AML	CTC_Hemato	Frozen (CryoP)	Multi-modal RNA/Chromatin acc.	snRNA/snATAC	Droplet	High	Chromatin Accessibility	MultiRNA/DNA
2023	Derrien 2023 Nat Cancer	Multiple myeloma	CTC_Hemato	Frozen (CryoP)	Multi-modal RNA/Chromatin acc.	snRNA/snATAC	Droplet	High	Chromatin Accessibility	MultiRNA/DNA

2023	Terekhanova Nature 2023	Multiple tumor types	Multiple	Frozen	Multi-modal RNA/Chromatin acc.	snRNA/snATAC	Droplet	High	Chromatin Accessibility	MultiRNA/DNA
2023	Raviram 2023 PNAS	Glioma	Glioma	Frozen	Multi-modal RNA/Chromatin acc.	Paired-seq	Combinatorial	High	Chromatin Accessibility	MultiRNA/DNA
2015	Kind 2015 Cell	Chronic myelogenous leukemia (KBM-7)	CellLine	Fresh	Chromatin conformation	single cell DamID	Tube	Low	Chromatin conformation	Mono
2017	Ramani 2017 Nat Methods	Chronic lymphocytic leukemia cell lines (K562)	CellLine	Fresh	Chromatin conformation	single-cell Hi-C	Combinatorial	High	Chromatin conformation	Mono
2015	Farlik 2015 Cell Reports	Chronic myeloid leukemia cell line (K562)	CellLine	Fresh	DNA methylation	scWGBS	Tube	Low	DNA methylation	Mono
2017	Han 2017 NAR	Chronic myeloid leukemia cell line (K562)	CellLine	Fresh	DNA methylation	scCGI-seq	Manual picking	Low	DNA methylation	Mono
2017	Pixberg 2017 Oncogene	Circulating tumor cells	CTC_Hemato	Fresh	DNA methylation	scAEBS	Tube	Low	DNA methylation	Mono
2019	Gkoutela 2019 Cell	Circulating tumor cells	CTC_Hemato	Fresh	DNA methylation	scWGBS	Tube	Low	DNA methylation	Mono
2020	Grants 2020 Blood	Acute myeloid leukemia	CTC_Hemato	Fresh	DNA methylation	PBAL	Plate	Low	DNA methylation	Mono
2020	Meir 2020 Nat Genet	CRC cell line	CellLine	Fresh	DNA methylation	snmC-seq	Plate	Low	DNA methylation	Mono
2021	Johnson 2021 Nat Genet	Glioma	Glioma	Fresh	DNA methylation	scRRBS	Plate	Low	DNA methylation	Mono
2021	Shareef 2021 Nat Biotech	Chronic myeloid leukemia cell line (K562)	CellLine	Fresh	DNA methylation	scXRBS	Plate	Low	DNA methylation	Mono
2021	Chen 2021 Chin J Cancer Res	Circulating tumor cells	CTC_Hemato	Fresh	DNA methylation	scBS-seq	micromanipulation	Low	DNA methylation	Mono
2021	Huang 2021 Brief Bioinform	Colorectal cancer (CRC)	Colorectal	Fresh	DNA methylation	scBS-seq	Tube	Low	DNA methylation	Mono
2021	Niemöller 2021 Communication Biology	Acute myeloid leukemia cell line	CellLine	Fresh	DNA methylation	epi-gSCAR	Plate	Low	DNA methylation	Mono
2022	Hunt 2022 Science Report	Acute myeloid leukemia cell line and primary cells	CellLine	Fresh	DNA methylation	scTEM-seq	Plate	Low	DNA methylation	Mono
2016	Hou 2016 Cell Research	Hepatocellular carcinoma	Liver	Fresh	Multi-modal RNA/DNA met./CNV	scTrio-seq	Tube	Low	DNA methylation	MultiRNA/DNA
2016	Cheow 2016 Nature Methods	Lung adenocarcinoma	Lung	Fresh (cryoP)	Multi-modal DNA met./RNA/genotype	sc-GEM	Fluidigm	Low	DNA methylation	MultiRNA/DNA
2018	Bian 2018 Science	Colorectal cancer	Colorectal	Fresh	Multi-modal RNA/DNA met./CNV	scTrio-seq 2	Tube	Low	DNA methylation	MultiRNA/DNA
2019	Pastore 2019 Nat Comm	Chronic lymphocytic leukemia	CTC_Hemato	CryoP	Multi-modal RNA/DNA met.	Join MscRRBS + RNA	Plate	Low	DNA methylation	MultiRNA/DNA
2019	Gaiti 2019 Nature	Chronic lymphocytic leukaemia	CTC_Hemato	Fresh	Multi-modal RNA/DNA met.	Join scRRBS + RNA	Plate	Low	DNA methylation	MultiRNA/DNA
2021	Chaligné 2021 Nat Genet	Glioma	Glioma	Fresh	Multi-modal RNA/DNA met./SVs	Join MscRRBS + RNA	Plate	Low	DNA methylation	MultiRNA/DNA
2018	Harada 2018 Nat Cell Bio	Breast cancer cell lines	CellLine	Fresh	Histone modifications	scChIL-seq	Plate	Low	Histone modifications	Mono
2019	Grosselin 2019 Nat Genet	TNBC (PDX)	Breast	Fresh	Histone modifications	scChIPseq	Droplet	High	Histone modifications	Mono
2021	Bartlett 2021 J Cell Biol	CRC cell line	CellLine	Fresh	Histone modifications	sciTIP-seq	Split-Pool	High	Histone modifications	Mono
2021	Wu 2021 Nat Biotech	Glioma	Glioma	Frozen	Histone modifications	scCUT&Tag	Droplet	High	Histone modifications	Mono
2021	Janssens 2021 Nat Genet	Leukemia	CTC_Hemato	Fresh (CryoP)	Histone modifications	autoCUT&Tag	Plate	Low	Histone modifications	Mono

2022	Marsolier 2022 Nat Genet	TNBC cell lines	CellLine	Fresh	Histone modifications	scChIPseq	Droplet	High	Histone modifications	Mono
2022	Harpaz 2022 Mol Cell	Pediatric Glioma primary culture	CellLine	Fresh	Histone modifications	CyTOF	Droplet	High	Histone modifications	Mono
2017	Pott 2017 Elife	Leukemia cell lines (K562, GM12878)	CellLine	Fresh	Multi-modal DNA met./Chromatin acc.	scNOME-seq	Plate	Low	MultiEpi	MultiEpi
2022	Tedesco 2021 Nat Biotech	CRC cell lines	CellLine	Fresh	Multi-modal Heterochromatin/Eu chromatin	scGETseq	Droplet	High	MultiEpi	MultiEpi
2022	Fan 2022 Cell Discovery	Pancreatic ductal adenocarcinoma	Pancreas	Fresh	Multi-modal RNA/DNA met./Chromatin acc.	scCOOL-seq/STRT-seq	Plate	Low	MultiEpi	MultiEpi
2023	Bobadilla 2023 Nat Biotech	HER2 breast cancer	Breast	Frozen	Spatial Chromatin Accessibility	spatial ATAC	Solid phase capture	Not single cell	Spatial Epi	Mono