A closed chromatin / open chromatin — Tn5 transpose — a fragment

Single cell sequencing

Barcoded gel beads — Transposition of nuclei in bulk — a droplet

Gene
Transcription factor
Nucleosome
Transposase Tn5
Peak

B cell / a droplet / bead — barcode

AAAGGGCCCCTTT
AGCTAGCTACGT
GGGAAATTTAAA
AGAGAGTCTCTC

C Sequencing

D DNA

AAAGGGCCCCTTT
Cell 1

a fragment

AGAGAGTCTCTC
Cell n

Peak 1   Peak 2   Peak s

Library construction

E

scATAC	cell$_1$	cell$_2$	$\cdots$	cell$_n$
peak$_1$	0	0	$\cdots$	1
peak$_2$	2	0	$\cdots$	1
$\vdots$	$\vdots$	$\vdots$	$\cdot\cdot\cdot$	$\vdots$
peak$_s$	1	0	$\cdots$	0

Fragment peak matrix