

Additional file 1

Table S1. A comparison between SCATE and other existing methods

Method	Combine CREs	Combine cells	Adaptively tune resolution	Use public bulk data to model baseline	Use <u>Binary</u> or <u>Count</u> data	Primary goal	Reference
SCATE	✓	✓	✓	✓	C	Reconstruct activities of each individual CRE	This paper
chromVAR	✓				C	Cluster cells, identify TF motifs associated with differential accessibility and variability	[12]
SCRAT	✓				C	Cluster cells, identify CRE pathways associated with differential accessibility	[13]
BROCK-MAN	✓				B	Summarize data by k-mers and perform principal component analysis on k-mer features to identify co-varying TFs, cluster cells	[14]
Dr.seq2		✓			C	Cluster cells, identify peaks (MACS) in each cell subpopulation	[17]
Cicero		✓			B	Identify correlated pairs of CREs	[18]
Scasat					B	Cluster cells, identify peaks (MACS), differential accessibility analysis	[20]
Destin					B	Cluster cells	[21]
scABC					C	Cluster cells	[22]
PRISM					B	Quantify cell-to-cell variation to identify hyper- or hypo-variable genomic features	[23]
cisTopic					B	Represent data using low-dimensional topic-cell and region-topic representation, cluster cells and CREs accordingly	[24]