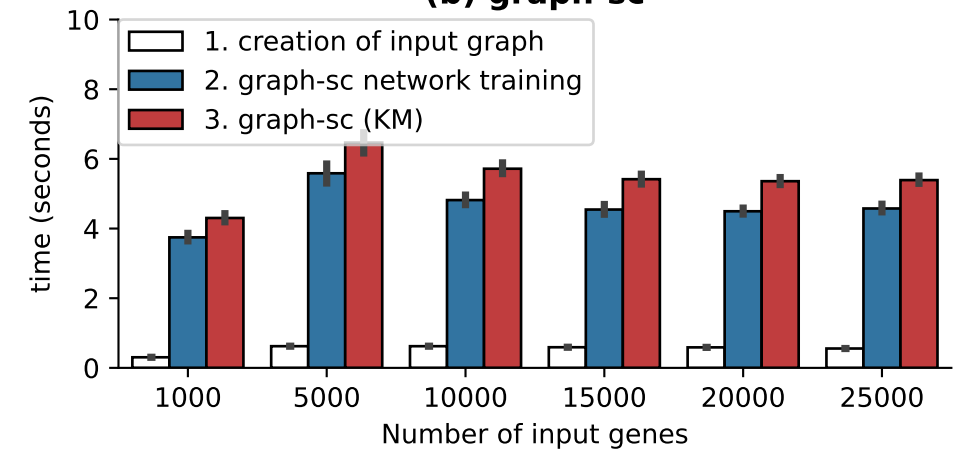


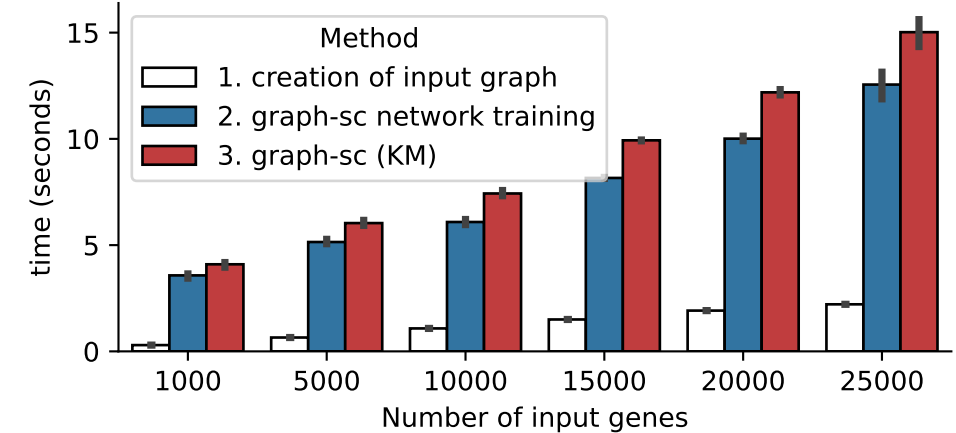
(a)

	Avg time(sec)	Factor
pca_kmeans	1.25	0.07
scrna	9.65	0.55
cidr	10.01	0.57
scanpy-seurat	10.62	0.61
soup	12.9	0.74
raceid	12.98	0.74
<b>graph – sc(KM)</b>	17.49	1.0
<b>graph – sc(LD)</b>	25.19	1.44
<b>graph – sc(KM) (CPU)</b>	30.49	1.74
scedar	37.2	2.13
<b>graph – sc(LD) (CPU)</b>	38.13	2.18
desc	52.91	3.03
scvi	98.41	5.63
scGNN	142.99	8.18
scziDesk	152.11	8.7
scDeepCluster	6121.42	350.01

(b) graph-sc



(c) graph-sc without most variable gene selection



(d) graph-sc

