RTT12 dataset benchmark (AUCROC) RTT12 dataset benchmark (AUCPRC) sgRNA sgRNA gene gene method method 1.00 -1.00 1.00 -1.00 +method method CC2 CC2 O.75 O.50 O.25 0.75 -0.75 CC2 CC2 mageck mageck DESeq2 PBNPA 0.50 0.50 -DESeq2 0.50 -PBNPA RSA RSA edgeR edgeR 0.25 -0.25 screenBEAM screenBEAM mageck mageck sgRSEA 0.00 0.00 0.00 sgRSEA 0.00 method method 1.00 -1.00 1.00 1.00 method method — CC2 — CC2 Drecision 0.75 0.50 0.25 O.75 0.50 0.25 0.75 -0.75 — CC2 — CC2 mageck mageck **PBNPA** DESeq2 DESeq2 0.50 -0.50 **PBNPA RSA RSA** edgeR edgeR 0.25 -0.25 screenBEAM screenBEAM mageck mageck True 0.00 0.00 0.00 0.00 sgRSEA sgRSEA 0.00 0.25 0.50 0.75 1.00 $0.00\,0.25\,0.50\,0.75\,1.00$ 0.000.250.500.751.00 0.000.250.500.751.00 False Positive Rate Recall **False Positive Rate** Recall **UMUC3 dataset benchmark (AUCROC) UMUC3 dataset benchmark (AUCPRC)** sgRNA sgRNA gene gene method method 1.00 -1.00 -1.00 -1.00 method method CC2 CC2 O 0.75 · 0.50 · 0.25 · RC 0.75 -0.75 0.75 CC2 CC2 mageck mageck O.50 0.25 DESeq2 0.50 -PBNPA DESeq2 0.50 -**PBNPA** edgeR RSA edgeR **RSA** 0.25 -0.25 screenBEAM screenBEAM mageck mageck 0.00 0.00 0.00 0.00 sgRSEA sgRSEA method method 1.00 -1.00 1.00 1.00 method method — CC2 — CC2 Drecision 0.75 0.50 0.25 Dostive 0.75 0.50 0.25 0.75 0.75 — CC2 CC2 mageck mageck DESeq2 - PBNPA 0.50 -DESeq2 0.50 **PBNPA** RSA **RSA** edgeR edgeR 0.25 0.25 screenBEAM screenBEAM mageck mageck True 0.00 0.00 -0.00 0.00 sgRSEA sgRSEA 0.00 0.25 0.50 0.75 1.00 0.000.250.500.751.00 0.00 0.25 0.50 0.75 1.00 0.000.250.500.751.00 **False Positive Rate** False Positive Rate Recall Recall