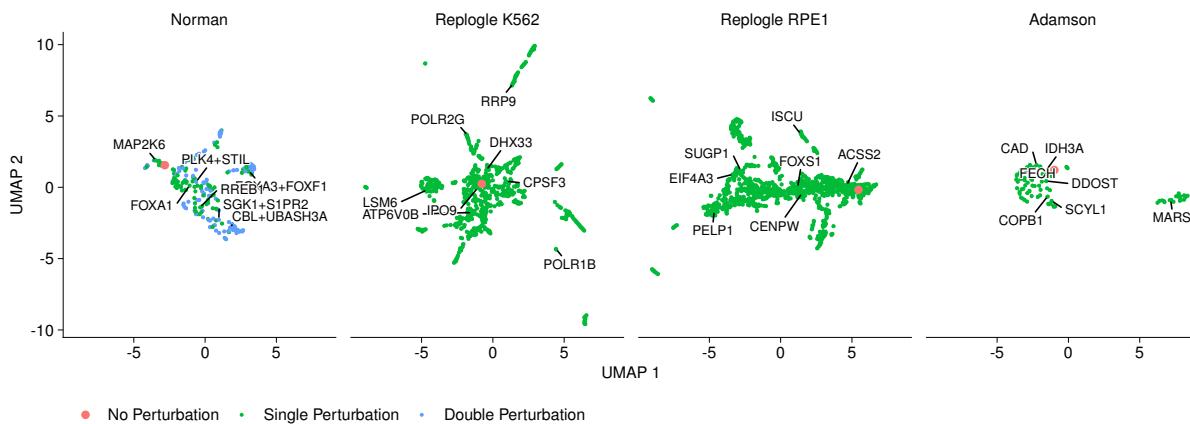


**(A) Table: Dataset overview**

Dataset	Size (Genes × Cells)	Perturbations
Norman (K562)	19 264 × 84 143	124 double and 100 single perturbations
Reprogle (K562)	5 000 × 162 264	1 088 single perturbations
Reprogle (RPE1)	5 000 × 161 423	1 535 single perturbations
Adamson (K562)	5 060 × 65 899	81 single perturbations

**(B) UMAP of the datasets****(C) Change of perturbation target gene expression**