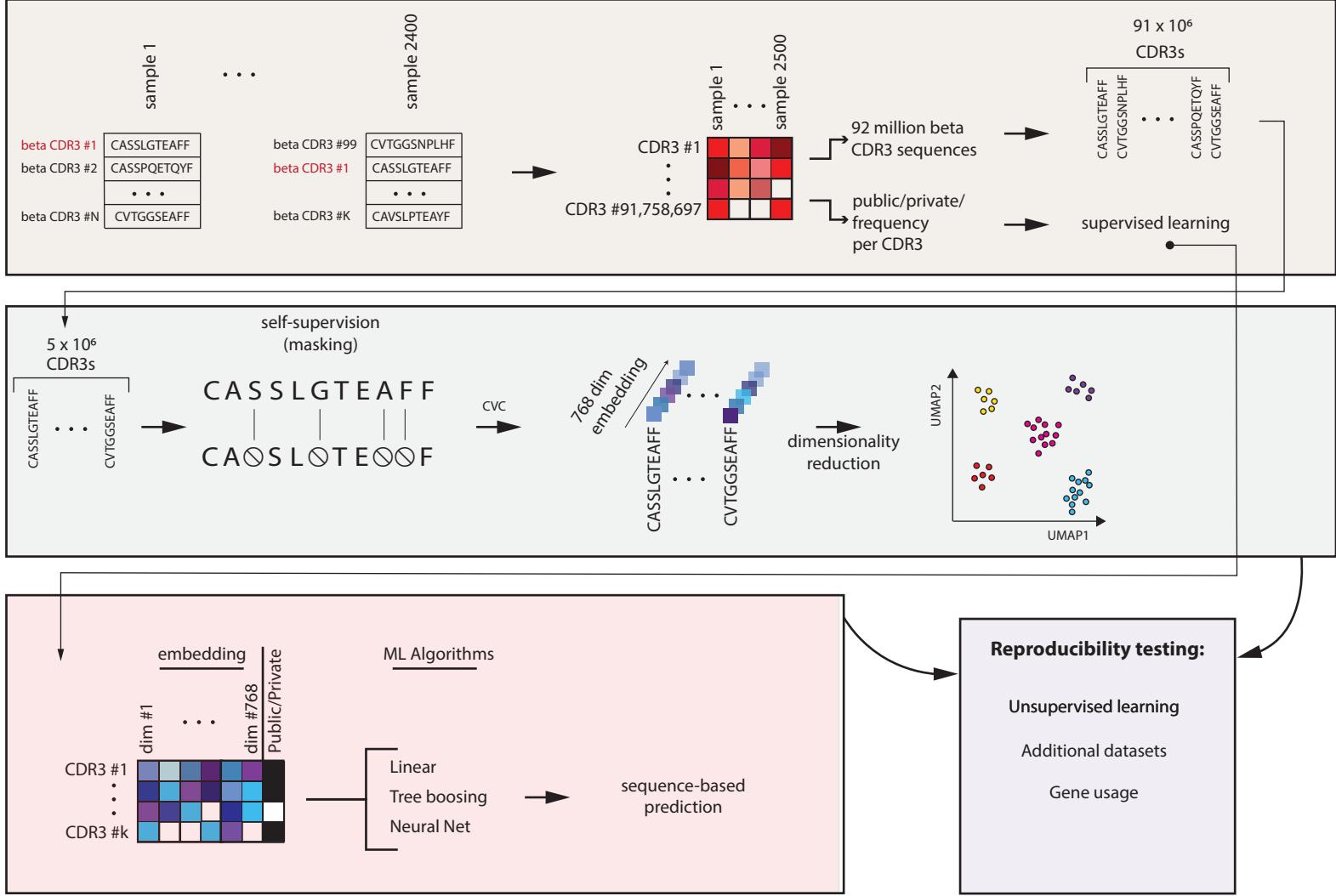
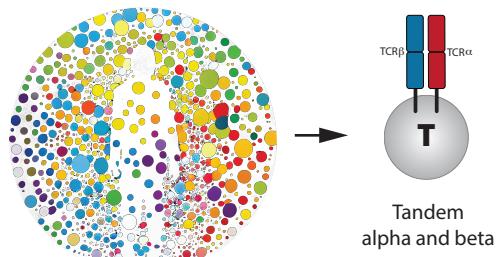


A



B

Human Single T cell data

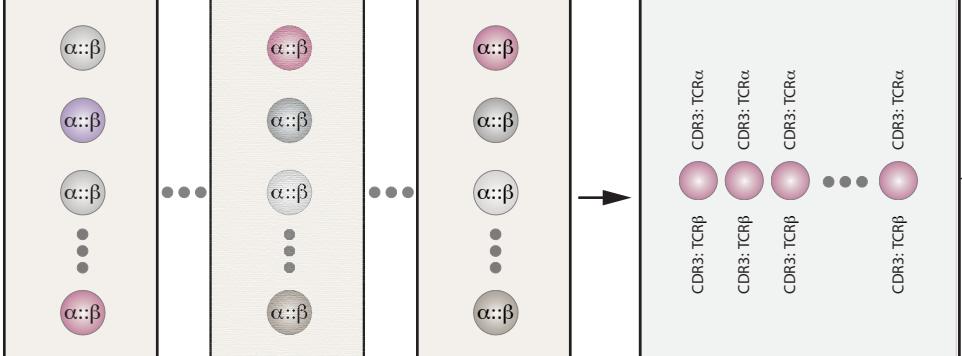
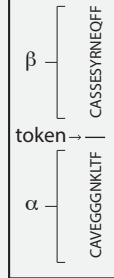
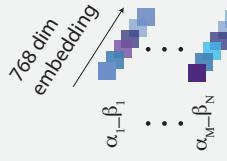


Sample 1

Sample N

Sample 458

2,120,565 cells

 $2 \times 10^6$  $\alpha \& \beta$ self supervised training  
of  
scCVC transformerPreviously unseen sequence:  
 $\alpha_{M+1}\beta_{N+1}$ 