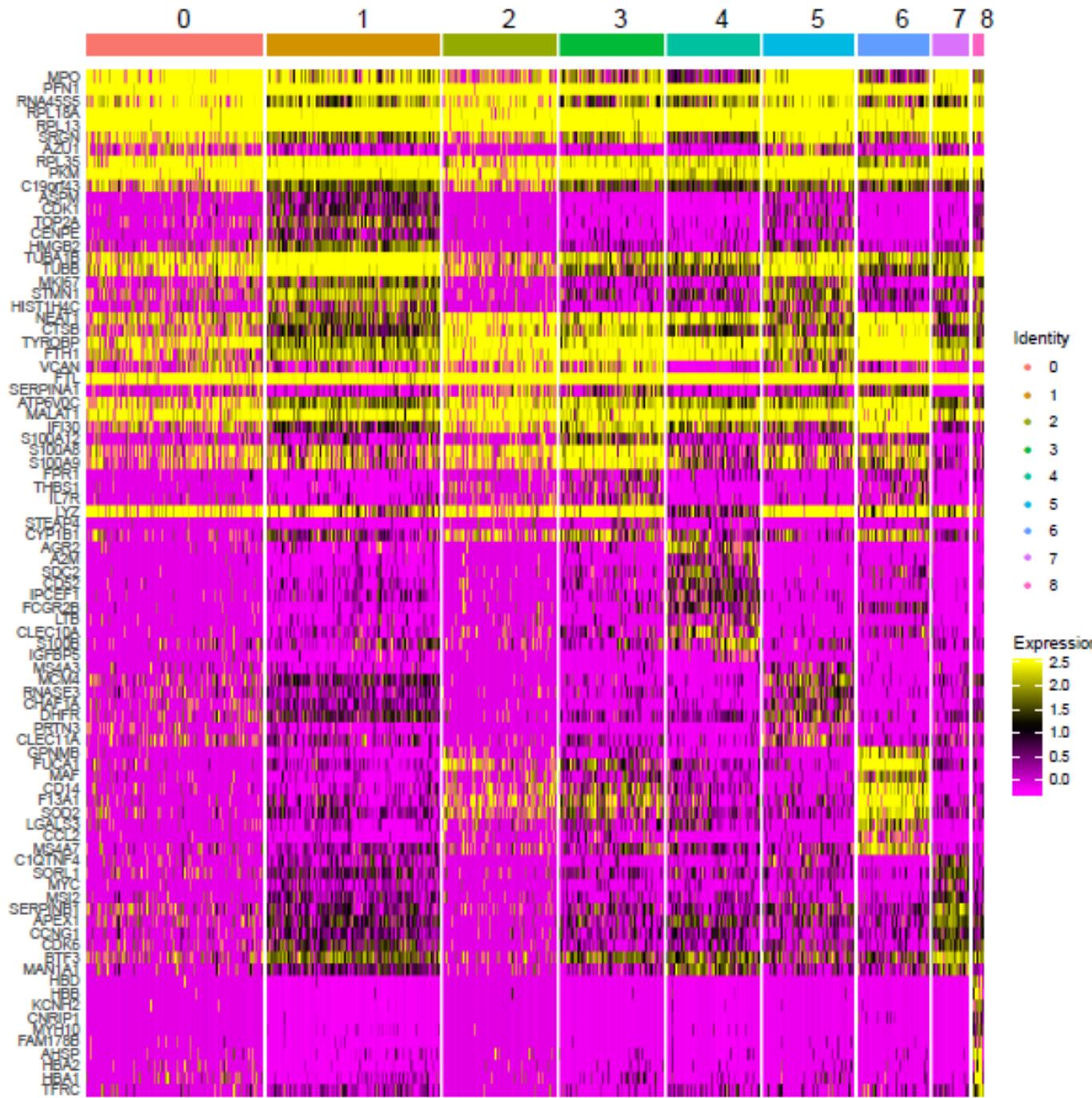


# Supplementary Figure S1

cl 0	GO:0016071 mRNA metabolic process GO:0044265 cellular macromolecule catabolic process GO:0008380 RNA splicing GO:0006397 mRNA processing GO:0034622 cellular protein-containing complex assembly	cl 5 GO:0006614 SRP-dependent cotranslational protein targeting to membrane GO:0006613 cotranslational protein targeting to membrane GO:0000184 nuclear-transcribed mRNA catabolic process, nonsense-mediated decay GO:0045047 protein targeting to ER GO:0019080 viral gene expression
cl 1	GO:0000278 mitotic cell cycle GO:0140014 mitotic nuclear division GO:1903047 mitotic cell cycle process GO:0007049 cell cycle GO:0000280 nuclear division	cl 6 GO:0002274 myeloid leukocyte activation GO:0001775 cell activation GO:0002252 immune effector process GO:0002444 myeloid leukocyte mediated immunity GO:0043299 leukocyte degranulation
cl 2	GO:0002444 myeloid leukocyte mediated immunity GO:0002274 myeloid leukocyte activation GO:0016050 vesicle organization GO:0043299 leukocyte degranulation GO:0002275 myeloid cell activation involved in immune response	cl 7 GO:0006413 translational initiation GO:0006414 translational elongation GO:0006412 translation GO:0043043 peptide biosynthetic process GO:0000184 nuclear-transcribed mRNA catabolic process, nonsense-mediated decay
cl 3	GO:0001775 cell activation GO:0002274 myeloid leukocyte activation GO:0043299 leukocyte degranulation GO:0045321 leukocyte activation GO:0002444 myeloid leukocyte mediated immunity	cl 8 GO:0042254 ribosome biogenesis GO:0006364 rRNA processing GO:0018072 rRNA metabolic process GO:0022613 ribonucleoprotein complex biogenesis GO:0034660 ncRNA metabolic process
cl 4	GO:0016032 viral process GO:0044403 symbiotic process GO:0044419 interspecies interaction between organisms GO:0002252 immune effector process GO:0016050 vesicle organization	

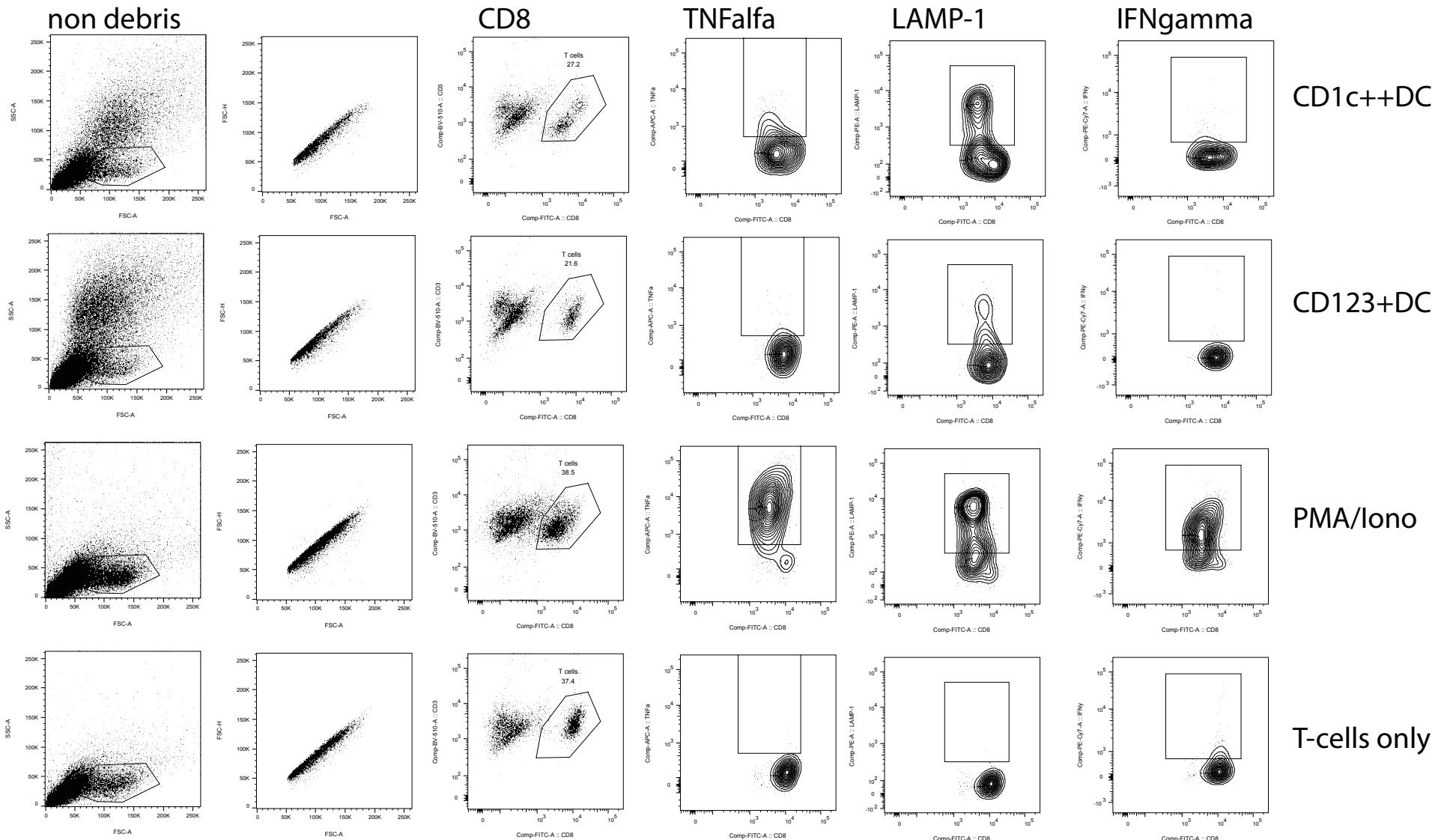
**Supplementary Figure S1.** Top 5 Gene ontology terms obtained from the differentially expressed genes (DEGs) of the clusters obtained from single cell RNA sequence data. The GO terms of candidate DEGs were analyzed using ToppGene.

## Supplementary Figure S2



**Supplementary Figure S2.** Heatmap of the top 10 differentially expressed genes (DEGs) of the clusters obtained from single cell RNA sequence data.

## Supplementary Figure S3



**Supplementary Figure S3.** Gating strategy for WT1-specific T-cell assay. One experiment is shown out of 5. Live lymphocytes are gated followed by CD8 and accordingly TNF $\alpha$ , LAMP-1 or IFNgamma.