Mean Epitope Residue Frequencies Across Checkpoints ALA 2 0.58 1.5 1 ARG -2 0.89 1.9 0.83 1 2 ASN 0.94 0.75 0.25 2 ASP -1.2 2.8 0.17 2 1 - 4 0.083 2 GLN -1.5 0.92 0.88 1 GLU 1.4 2 2 2 GLY 0.28 1.4 0.83 1 1.5 - 3 HIS -0.88 0.5 Amino Acid LEU ILE 1.7 1.4 1.5 2 1.2 0.62 0.5 1.1 1.7 1 2 2 - 2 MET 0.11 1.9 1.8 1 PHE 0.38 0.17 2 0.83 1 1 PRO 2.1 1 2 SER 0.75 0.67 2 3.5 - 1 THR 0.72 0.38 1.5 1 TRP -0.17 0.12 TYR 0.44 0.5 2.8 2.9 2 - AL 0.83 1.8 0.92 1 2 - 0 KIR PD1 PDL1 CTLA4 ı TIM3 LAG3 Checkpoint