|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **pH** | **Heavy Chain** | **2m** | **KD,Eq (REq) (nM)** | **KD,Kin (kd/ka) (nM)** | **ka (M-1s-1) x 105** | **kd (s-1) x 10-2** | **t1/2 (s)** | **2** |
| 7.4 | H-2Kb | human | 2300 (±200)c,d | 480 (±70)c | 2.5 (±0.4) | 12 (±4) | 6 (±2) | 4.9/0.18 |
| 7.4 | H-2Db | human | 730 (±20) | 200 (±10) | 3.7 (±0.2) | 7.7 (±0.1) | 9.0 (±0.2) | 2.0/0.80 |
| 7.4 | H-2Dq | human | ≥1400 (±200)e | 97 (±2) | 8.2 (±0.1) | 7.93 (±0.06) | 8.74 (±0.07) | 0.8/0.13 |
| 7.4 | H-2Kd | human | ≥12850 (±20)e | 6600 (±400) | 1.18 (±0.06) | 78.4 (±0.8) | 0.884 (±0.009) | 0.03/0.10 |
| 7.4 | H-2Ld | human | 390 (±20) | 82 (±2) | 8.2 (±0.1) | 6.67 (±0.09) | 10.4 (±0.1) | 2.3/0.50 |
| 7.4 | TL (T3b) | human | 2200 (±200) | 630 (±40) | 0.88 (±0.04) | 5.5 (±0.1) | 12.6 (±0.3) | 0.7/0.13 |
| 7.4 | Ceat-B\*-12a | human | ≥30000 (±6000)e | 10500 (±100) | 0.945 (±0.008) | 98.9 (±0.4) | 0.701 (±0.003) | 0.13/0.17 |
| 6.0 | H-2Kb | murine | -f | 64 (±1) | 17.4 (±0.2) | 11.02 (±0.08) | 6.29 (±0.04) | 0.24 |
| 6.0 | H-2Kb | human | - | 10 (±2)c | 10 (±2) | 1.0 (±0.1) | 73 (±9) | 0.13 |
| 6.0 | H-2Dk | murine | - | 17.8 (±0.4) | 35.1 (±0.4) | 6.26 (±0.06) | 11.1 (±0.1) | 0.20 |
| 6.0 | H-2Dk | human | - | 7.20 (±0.09) | 36.1 (±0.3) | 2.60 (±0.01) | 26.7 (±0.1) | 0.18 |
| 6.0 | H-2Kk | human | - | 8.2 (±0.5) | 67 (±2) | 5.5 (±0.2) | 12.7 (±0.4) | 0.27 |
| 6.0 | H-2Dd | human | - | 4.56 (±0.07) | 61.6 (±0.5) | 2.81 (±0.02) | 24.7 (±0.2) | 0.17 |
| 6.0 | H-2Kd | human | - | 10.0 (±0.2) | 20.7 (±0.2) | 2.06 (±0.02) | 33.7 (±0.3) | 0.21 |
| 6.0 | Mamu-A\*01a | human | - | 22.2 (±0.9) | 38.3 (±0.7) | 8.5 (±0.2) | 8.1 (±0.2) | 0.16 |
| 6.0 | Patr-B\*0802a | human | - | 6.28 (±0.07) | 54.7 (±0.3) | 3.43 (±0.02) | 20.2 (±0.1) | 0.26 |
| 6.0 | H2-Q9-H-2Db | human | - | 18.0 (±0.8) | 53 (±1) | 9.6 (±0.2) | 7.2 (±0.2) | 0.17 |
| 6.0 | H-2Kb-HLA-Ab | human | - | 6.03 (±0.07) | 24.2 (±0.1) | 1.458 (±0.008) | 47.5 (±0.2) | 0.23 |
| 6.0 | HLA-Ab-H-2Kb | human | - | 15.2 (±0.7) | 17.0 (±0.5) | 2.57 (±0.05) | 27.0 (±0.5) | 0.17 |

**Table S1. SPR analysis of CPXV203/MHCI binding.**

SPR assays were run at pHER 7.4 and pHGolgi 6.0 in triplicate (≥8 curves/KD,Eq, ≥5 curves/KD,Kin) on a Biacore T100 and fit to a 1:1 Langmuir binding model. Mammalian CPXV203 was used unless otherwise noted.

aPrimate alleles.

bHuman allele HLA-A\*0201.

cSimilar constants obtained for mammalian & bacterially produced CPXV203.

dAverage from experiments on multiple days with multiple protein batches.

e10X KD,Eq was not reached for these alleles.

fSigmoidal binding at low pH (see SUPPLEMENTAL METHODS) negated the use of a simple 1:1 Langmuir equilibrium binding model.