**Supplemental Table S4. *HLA-DPB1* and *HLA-DQA1*Alleles Cumulative Frequency.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***DPB1*** | **USA CAU** | **USA AA** | **China** | **Japan** | **India** | **Mexico** |
| *\*01:01* | 6.200% | 27.200% | 2.100% | 0.030% | 2.100% | 1.100% |
| *\*02:01* | 13.100% | 13.000% | 14.000% | 23.830% | 14.300% | 10.200% |
| *\*02:02* | 0.700% | 0.000% | 9.300% | 3.910% | 0.000% | 0.000% |
| *\*03:01/104:01/124:01* | 9.000% | 5.700% | 6.600% | 5.110% | 3.000% | 0.000% |
| *\*04:01/350:01* | 42.500% | 10.400% | 9.500% | 4.950% | 33.700% | 21.600% |
| *\*04:02/105:01* | 12.100% | 11.100% | 2.700% | 9.830% | 4.600% | 63.600% |
| *\*05:01* | 1.500% | 0.500% | 36.000% | 37.400% | 0.900% | 3.400% |
| *\*06:01* | 2.100% | 0.300% | 0.000% | 0.520% | 0.000% | 0.000% |
| *\*09:01* | 0.400% | 0.500% | 1.500% | 10.250% | 2.100% | 0.000% |
| *\*10:01* | 1.300% | 0.300% | 0.000% | 0.000% | 1.300% | 0.000% |
| *\*11:01* | 3.500% | 3.900% | 0.000% | 0.000% | 0.400% | 0.000% |
| *\*13:01* | 2.400% | 6.000% | 8.700% | 1.790% | 10.800% | 0.000% |
| *\*14:01* | 0.600% | 0.300% | 3.000% | 1.270% | 4.100% | 0.000% |
| *\*15:01* | 0.600% | 1.300% | 0.000% | 0.000% | 0.400% | 0.000% |
| *\*16:01* | 0.700% | 0.300% | 0.200% | 0.000% | 0.000% | 0.000% |
| *\*17:01/131:01* | 0.900% | 7.000% | 1.900% | 0.260% | 1.300% | 0.000% |
| *\*18:01* | 0.000% | 7.300% | 0.000% | 0.000% | 0.900% | 0.000% |
| *\*21:01* | 0.000% | 0.000% | 1.300% | 0.030% | 0.400% | 0.000% |
| *\*23:01* | 0.400% | 0.000% | 0.000% | 0.000% | 1.700% | 0.000% |
| *\*26:01* | 0.000% | 0.000% | 0.000% | 0.000% | 6.300% | 0.000% |
| *\*39:01/584:01* | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| *\*45:01* | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| Total | 98.000% | 95.100% | 96.800% | 99.180% | 88.300% | 99.900% |
| ***DQA1*** | | | | | | |
| *\*01:01* | 14.000% | 7.400% | 11.700% | 6.580% | 17.800% | 8.300% |
| *\*01:02* | 14.900% | 30.700% | 14.300% | 13.410% | 12.700% | 2.800% |
| *\*01:03* | 7.600% | 1.100% | 12.000% | 19.170% | 27.100% | 3.700% |
| *\*01:04* | 3.200% | 1.100% | 0.000% | 4.720% | 0.000% | 10.200% |
| *\*01:05* | 1.500% | 5.700% | 0.000% | 0.550% | 0.000% | 0.000% |
| *\*02:01* | 13.200% | 9.100% | 11.700% | 0.360% | 16.100% | 10.200% |
| *\*03:01* | 9.900% | 3.400% | 27.800% | 11.040% | 6.800% | 29.600% |
| *\*03:02* | 1.500% | 1.700% | 0.000% | 14.390% | 0.000% | 0.000% |
| *\*03:03* | 7.300% | 9.100% | 0.000% | 16.570% | 0.000% | 0.000% |
| *\*04:01* | 2.600% | 8.500% | 0.900% | 2.830% | 1.700% | 13.000% |
| *\*04:02* | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| *\*05:01* | 23.400% | 18.800% | 18.100% | 0.070% | 16.100% | 22.200% |
| *\*05:03* | 0.300% | 0.000% | 0.000% | 2.770% | 0.000% | 0.000% |
| *\*05:05* | 0.300% | 0.000% | 0.000% | 4.430% | 0.000% | 0.000% |
| *\*05:07* | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| *\*06:01* | 0.000% | 0.600% | 3.500% | 2.020% | 1.700% | 0.000% |
| Total | 99.700% | 97.200% | 100.000% | 98.910% | 100.000% | 100.000% |

Frequencies were obtained from http://www.allelefrequencies.net/; last accessed November 10, 2017.

USA CAU: USA Caucasian pop 5 (n=268); USA AA: USA African American pop 7 (n=193); China: China Canton Han (n=264); Japan: Japan pop 17 (n=3078); Mexico: Mexico Chihuahua Tarahumara (n=44).

‡USA CAU: USA Caucasian Bethesda (n=307); USA AA: USA African American Bethesda (n=187); China: China Beijing and Xian (n=171); Japan: Japan pop 17 (n=3078); India: India Bombay (n=59); Mexico: Mexico Guadalajara Mestizo (n=54).