# Supplementary tables

| Allele | $p$ | $n$ | $p_{mid}$ | AA | AB | BB | $p_{mid}$ |
|--------|-------|-----|-----------|-----|-----|-----|-----------|
| — | | 97 | 0.0285 | | | | |
| A11 | 0.201 | 63 | 0.0108 | 5 | 29 | 63 | 0.4357 |
| A12 | 0.005 | 96 | 0.0284 | 0 | 1 | 96 | 0.5000 |
| A14 | 0.010 | 95 | 0.0195 | 0 | 2 | 95 | 0.5026 |
| A15 | 0.309 | 49 | 0.1216 | 12 | 36 | 49 | 0.1950 |
| A16 | 0.227 | 55 | 0.0097 | 2 | 40 | 55 | 0.1141 |
| A17 | 0.222 | 64 | **0.3601** | 10 | 23 | 64 | **0.0042** |
| A18 | 0.021 | 93 | 0.0372 | 0 | 4 | 93 | 0.5155 |
| A19 | 0.005 | 96 | 0.0268 | 0 | 1 | 96 | 0.5000 |

Table S1: Allele frequency ($p$), sample size ($n$ individuals) and mid $p$-value of tests for HWP after deletion of an allele (first four columns) and after bi-allelification (last four columns: genotype counts and mid $p$-value) of the STR D22S1045 of the Asian sample.

| | African American | | | | Asian | | | | Caucasian | | | | Hispanic | | | |
|--------|-----|-----|-----|-----------|-----|-----|-----|-----------|-----|-----|-----|-----------|-----|-----|-----|-----------|
| Allele | AA | AB | BB | $p_{mid}$ | AA | AB | BB | $p_{mid}$ | AA | AB | BB | $p_{mid}$ | AA | AB | BB | $p_{mid}$ |
| A8 | 0 | 5 | 337 | 0.5073 | – | – | – | – | – | – | – | – | – | – | – | – |
| A10 | 1 | 26 | 315 | 0.2692 | – | – | – | – | – | – | – | – | 0 | 7 | 229 | 0.5221 |
| A11 | 6 | 87 | 249 | 0.7454 | 5 | 29 | 63 | 0.4357 | 7 | 87 | 267 | 0.9135 | 1 | 28 | 207 | 0.8036 |
| A12 | 3 | 31 | 308 | 0.0385 | 0 | 1 | 96 | 0.5000 | 0 | 9 | 352 | 0.5246 | 0 | 6 | 230 | 0.5158 |
| A13 | 0 | 2 | 340 | 0.5007 | – | – | – | – | 0 | 5 | 356 | 0.5069 | 0 | 4 | 232 | 0.5064 |
| A14 | 1 | 51 | 290 | 0.5735 | 0 | 2 | 95 | 0.5026 | 0 | 41 | 320 | 0.4668 | 2 | 9 | 225 | 0.0047 |
| A15 | 23 | 126 | 193 | 0.6167 | 12 | 36 | 49 | 0.1950 | 36 | 160 | 165 | 0.7636 | 39 | 123 | 74 | 0.3198 |
| A16 | 20 | 91 | 231 | **0.0108** | 2 | 40 | 55 | 0.1141 | 44 | 188 | 129 | **0.0515** | 20 | 125 | 91 | **0.0123** |
| A17 | 13 | 117 | 212 | 0.5688 | 10 | 23 | 64 | **0.0042** | 2 | 50 | 309 | 0.8538 | 1 | 41 | 194 | 0.5605 |
| A18 | 0 | 10 | 332 | 0.5323 | 0 | 4 | 93 | 0.5155 | 0 | 4 | 357 | 0.5042 | 0 | 3 | 233 | 0.5032 |
| A19 | 0 | 4 | 338 | 0.5044 | 0 | 1 | 96 | 0.5000 | – | – | – | – | – | – | – | – |

Table S2: Bi-allelic exact tests results (exact mid $p$-values) for HWP for bi-allelified versions of D22S1045 for four ethnicities.