**FOR THE RECORD**

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# Distribution of HUMACTBP2 (SE33) Alleles in Three North American Populations

**POPULATION:** North American Black, Caucasian, and Hispanic

**KEYWORDS:** forensic science, SE33, population genetics, human identification, short tandem repeats

DNA samples were isolated from unrelated individuals from three North American populations: Black, Caucasian, and Hispanic, using a modified alkaline lysis method (1). The SE33 locus was amplified using the PowerPlex® ES Monoplex System, SE33 (Promega Corp., Madison, WI) according to the manufacturer's recommendations. Amplified DNA was analyzed with an ABI Prism 3100 Genetic Analyzer (Applied Biosystems, Foster City, CA). Population data were analyzed for Hardy-Weinberg equilibrium (2) and other population parameters with DNA-View software, version 25.05 (3). The complete dataset is available upon request via e-mail from tmr@dnacenter.com.

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**References**

1. Rudbeck L, Jorgen D. Rapid, simple alkaline extraction of human genomic DNA from whole blood, buccal epithelial cells, semen and forensic stains for PCR. Biotechniques 1998;25:588–92.
2. Gou SW, Thompson EA. Performing the exact tests of Hardy-Weinberg proportion for multiple alleles. Biometrics 1992;48:361–72.
3. http://dna-view.com

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TABLE 1—*SE33 allele frequencies in three North American populations.*

| Allele | Black Number | Black Frequency | Caucasian Number | Caucasian Frequency | Hispanic Number | Hispanic Frequency |
|---|---|---|---|---|---|---|
| 11 | | | | | 1 | 0.005 |
| 11.2 | 1 | 0.005 | | | 1 | 0.005 |
| 12 | 1 | 0.005 | | | | |
| 13 | 2 | 0.01 | 2 | 0.01 | | |
| 13.2 | 1 | 0.005 | | | | |
| 14 | 12 | 0.06 | 11 | 0.055 | 3 | 0.015 |
| 15 | 8 | 0.04 | 10 | 0.05 | 6 | 0.03 |
| 16 | 12 | 0.06 | 10 | 0.05 | 8 | 0.04 |
| 16.2 | 1 | 0.005 | | | | |
| 17 | 18 | 0.09 | 7 | 0.035 | 28 | 0.14 |
| 18 | 24 | 0.12 | 13 | 0.065 | 31 | 0.155 |
| 19 | 29 | 0.145 | 20 | 0.1 | 16 | 0.08 |
| 20 | 18 | 0.09 | 10 | 0.05 | 12 | 0.06 |
| 20.2 | 1 | 0.005 | 2 | 0.01 | 1 | 0.005 |
| 21 | 10 | 0.05 | 6 | 0.03 | 9 | 0.045 |
| 21.2 | | | 2 | 0.01 | 2 | 0.01 |
| 22 | 3 | 0.015 | | | 1 | 0.005 |
| 22.2 | 1 | 0.005 | 7 | 0.035 | 5 | 0.025 |
| 23 | | | 1 | 0.005 | | |
| 23.2 | 4 | 0.02 | 7 | 0.035 | 5 | 0.025 |
| 24 | 1 | 0.005 | | | | |
| 24.2 | 3 | 0.015 | 13 | 0.065 | 6 | 0.03 |
| 25.2 | 6 | 0.03 | 5 | 0.025 | 2 | 0.01 |
| 26 | 2 | 0.01 | | | | |
| 26.2 | 5 | 0.025 | 13 | 0.065 | 14 | 0.07 |
| 27.2 | 10 | 0.05 | 10 | 0.05 | 12 | 0.06 |
| 28 | | | 1 | 0.005 | | |
| 28.2 | 13 | 0.065 | 19 | 0.095 | 9 | 0.045 |
| 29.2 | 9 | 0.045 | 12 | 0.06 | 16 | 0.08 |
| 30.2 | 4 | 0.02 | 9 | 0.045 | 5 | 0.025 |
| 31.2 | | | 8 | 0.04 | 2 | 0.01 |
| 32.2 | | | 1 | 0.005 | 2 | 0.01 |
| 33 | 1 | 0.005 | 1 | 0.005 | 1 | 0.005 |
| 33.2 | | | | | 1 | 0.005 |
| 34 | | | | | 1 | 0.005 |
| *n* | 200 | | 200 | | 200 | |

TABLE 2—*SE33 population parameters in three North American populations.*

| Parameter | Black | Caucasian | Hispanic |
|---|---|---|---|
| H-W Equilibrium, exact test ($p$) | 0.081 | 0.080 | 0.701 |
| Observed Heterozygosity | 0.940 | 0.930 | 0.940 |
| Expected Heterozygosity | 0.927 | 0.944 | 0.924 |
| Power of Discrimination (PD) | 0.990 | 0.994 | 0.989 |
| Power of Exclusion (PE) | 0.847 | 0.882 | 0.838 |
| Typical Paternity Index (PI) | 7.290 | 8.590 | 7.310 |