**S8 Table. Association of α-thalassemia and rs11865131 with RBC traits in the Cooperative Study of Sickle Cell Disease (CSSCD).**

| | α-thalassemia | | | rs11865131 | | | rs11865131 adjusted for α-thalassemia | | |
|---|---|---|---|---|---|---|---|---|---|
| **Trait** | **Beta (SE)** | ***P*** | **N HbSS/HbSS+α-thalassemia** | **Beta (SE)** | ***P*** | **N** | **Beta (SE)** | ***P*** | **N** |
| **RBC Count (x $10^6$ cells/μl)** | 0.424 (0.036) | $1.17x10^{-29}$ | 716/318 | -0.040 (0.030) | 0.181 | 1034 | 0.020 (0.029) | 0.490 | 1034 |
| **MCV (fL)** | -7.543 (0.492) | $6.41x10^{-48}$ | 716/318 | 1.349 (0.419) | 0.001 | 1034 | 0.309 (0.386) | 0.425 | 1034 |
| **MCH (pg/dL)** | -2.693 (0.177) | $1.02x10^{-46}$ | 611/307 | 0.238 (0.158) | 0.133 | 918 | -0.163 (0.144) | 0.255 | 918 |
| **Hematocrit (%)** | 1.566 (0.241) | $1.29x10^{-10}$ | 789/342 | -0.184 (0.189) | 0.330 | 1131 | 0.041 (0.189) | 0.827 | 1131 |
| **Hemoglobin (g/dL)** | 0.352 (0.077) | $5.62x10^{-6}$ | 789/342 | -0.060 (0.060) | 0.318 | 1131 | -0.010 (0.060) | 0.871 | 1131 |

Abbreviations: RBC=red blood cell; MCV = mean corpuscular volume; MCH = mean corpuscular hemoglobin; SE: Standard Error; OR = odds ratio; CI = confidence interval.

For the α-thalassemia model, beta coefficients correspond to estimates of mean difference between HbSS patients without α-thalassemia compared to HbSS patients with α-thalassemia. For rs11865131, beta coefficients correspond to estimates of mean difference associated with carrying each additional copy of the rs11865131 A-allele compared to the reference group of individuals carrying the rs11865131 G/G genotype. All models were adjusted for age, sex, and the first 10 principal components of genetic