Figure S7: \textit{SURFDAWave} performance on simulated data trained and tested with simulations conducted with YRI demographic history to differentiate between sweeps and neutrality. \textit{SURFDAWave} parameters using Daubechies’ least-Asymmetric wavelets to estimate spatial distributions of summary statistics and using $\gamma = 1$ or $\gamma = 0$. (Left) Power to differentiate between sweep and neutrality by comparing the probability of a sweep under sweep simulations with the same probability in simulations of neutrality when using varying $\gamma$ penalties in \textit{SURFDAWave}. (Right confusion matrices) Classification rates using \textit{SURFDAWave} when using $\gamma = 1$ and $\gamma = 0$. 