



**Figure S21** Summary of differences in the site-frequency spectra for amplicons associated to at least one phenotype and those unassociated to a phenotype. Amplicons associated to at least one phenotype have too many rare variants at nonsynonymous sites, whereas they have too few rare variants at noncoding sites. This pattern causes Tajima's  $D$  to be more negative for nonsynonymous sites and less negative for noncoding sites.