**List of materials available through the FigShare repository**

File S1: Extended Methods

File S2: Compressed directory containing raw data CSV files: for each enhancer within each tissue, lists the values of the calculated metrics and the *p*-values computed from the neutral simulations

File S3: Average lengths of enhancers used in our neutral simulations for all 41 tissues

File S4: Recombination rate parameters used in our neutral simulations for all 41 tissues

File S5-21: *TopGO* enrichment analysis results for each metric

* File S5-7: Biological Process (BP) terms for Africans, Europeans, East Asians
* File S8-10: Molecular Functions (MF) terms for Africans, Europeans, East Asians
* File S11-13: Cellular Components (CC) terms for Africans, Europeans, East Asians
* File S14-15: BP terms for Tajima’s *D*, *F*ST
* File S16-18: MF terms for Tajima’s *D*, *F*ST, H12
* File S19-21: CC terms for Tajima’s *D*, *F*ST, H12

Table S1: Number of autosomal enhancers included in the 41 tissues

Table S2: Proportions of enhancers with significant evidence of recent positive selection according to the calculated metrics in all 41 tissues

Table S3-8: KS test results for comparisons of distributions of lengths of autosomal enhancers between enhancers with and without significant evidence of recent positive selection for each tissue

Table S9-12: *TopGO* enrichment analysis results carried out for Tajima’s *D*, *F*ST, H12 by collapsing the tissues

Table S13-21: Pairwise Semantic Similarity values calculated for the *nS*L metrics

Table S22-27: Chi-square test results for the TE enrichment analyses

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Table S34-39: KS test results for comparisons of distributions of metrics between tissue-specific and tissue-broad enhancers for each tissue

Table S40-41: KS test results for comparisons of distributions of metrics between enhancers associated with tissue-enriched and non-tissue-enriched genes for brain and testis

Table S42-43: GWAS hits overlapping with both variants within enhancers and variants in LD with those inside enhancers for brain and testis

Table S44-45: Chi-square test results for GWAS hits enrichment analyses for brain and testis

Table S46: KS test results for pairwise comparisons of distributions of lengths of autosomal enhancers between tissues

Table S47: KS test results for pairwise comparisons of distributions of recombination rates between tissues

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