



Supplementary Figure 5. Correlated expression amongst protein-coding genes and lncRNAs associated with promoter or enhancer *cis*-regulatory elements

A, Violin plot of Pearson correlation coefficients between the expression profiles of protein-coding genes and lncRNAs associated with *cis*-regulatory elements with promoter-like signatures, binned by genomic distance. The overlaid GAM fit summarizes the trend between distance and expression correlation between coding gene and promoter-associated lncRNA pairs (e.d.f=6.492, $P < 2e-16$). **B**, Violin plot of Pearson correlation coefficients between expression profiles of protein-coding gene and enhancer-associated lncRNAs. As in **A**, the GAM fit summarizes the trend between distance and expression correlation of the coding gene and enhancer-associated lncRNA pairs (e.d.f=6.733, $P < 2e-16$). In both **A** and **B**, a simulation envelope, generated using a block-bootstrap approach (see Methods), demonstrates the expected trend under the null hypothesis that distance and correlation are unrelated. For both promoter-associated and enhancer-associated lncRNAs, the trend in correlation against separation distance lies well outside the simulation envelope indicating a relationship unlikely to be due to chance. **C**, Distance between the TSS of each enhancer-associated and promoter-associated lncRNA and the TSS of the nearest activated protein-coding gene.