



**Figure S1: Most genes are expressed in most human tissues, and gene expression states are modestly correlated.** **A)** Fraction of protein-coding genes expressed in seven major human (left) and mouse (right) tissues, according to RNA sequencing (rpkm) data from Cardoso-Moreira et al. (2019). **B)** and **C)** show the pairwise correlation  $c$  between genes expressed in different tissues, and its relationship to the Pearson correlation coefficient  $R$  of gene expression, as calculated in File S6 for all 21 pairs of the seven tissues from **A)** in **B)** humans, and **C)** mouse. Note that  $c$  does not fall below 0.5 and is closely related to  $R$ . For this analysis, I considered a gene expressed if its expression level is greater than a fraction  $10^{-5}$  of the maximally observed gene expression level in the same organism, because recent transcriptomic and proteomic analyses show that gene expression varies over approximately five orders of magnitude (Wang et al. 2019)