Cell specificity

The specificity score S is defined as $S_{c,i} = 1 - JSD(p_c, \hat{q}_i)$, where JSD is the Jensen-Shannon distance, p_c is the expression profile of a given circRNA c expressed as a density of $(RPM + 1)$, and $\hat{q}_i$ is the unit vector of 'perfect expression' in a particular cell type i (e.g. [1, 0, 0, 0, 0] for i=1). Like the ref.[1], a circRNA is defined as cell-type specific if its specificity score $S \geq 0.5$ and mean expression in a cell type is larger than the mean + one standard deviation (s.d.) of overall expression.

1. Zheng, Q. *et al.* Circular RNA profiling reveals an abundant circHIPK3 that regulates cell growth by sponging multiple miRNAs. *Nature Communications* **7**, 11215 (2016).