

## **Supplementary Figure S1**

An example of the 2x2 matrix used in the  $\chi^2$ -test. a, b, c and d stands for the total number of GG, AG, GA, and AA respectively for the outcome of editing for two different positions. Following the solid arrow, we expect a positively coupled signal if the  $\chi^2$  value is above 10.22 (Adar2) or 7.85 (5-HT<sub>2C</sub>), after the Bonferroni correction. Negatively coupled position would have an over representation along the dotted arrow.