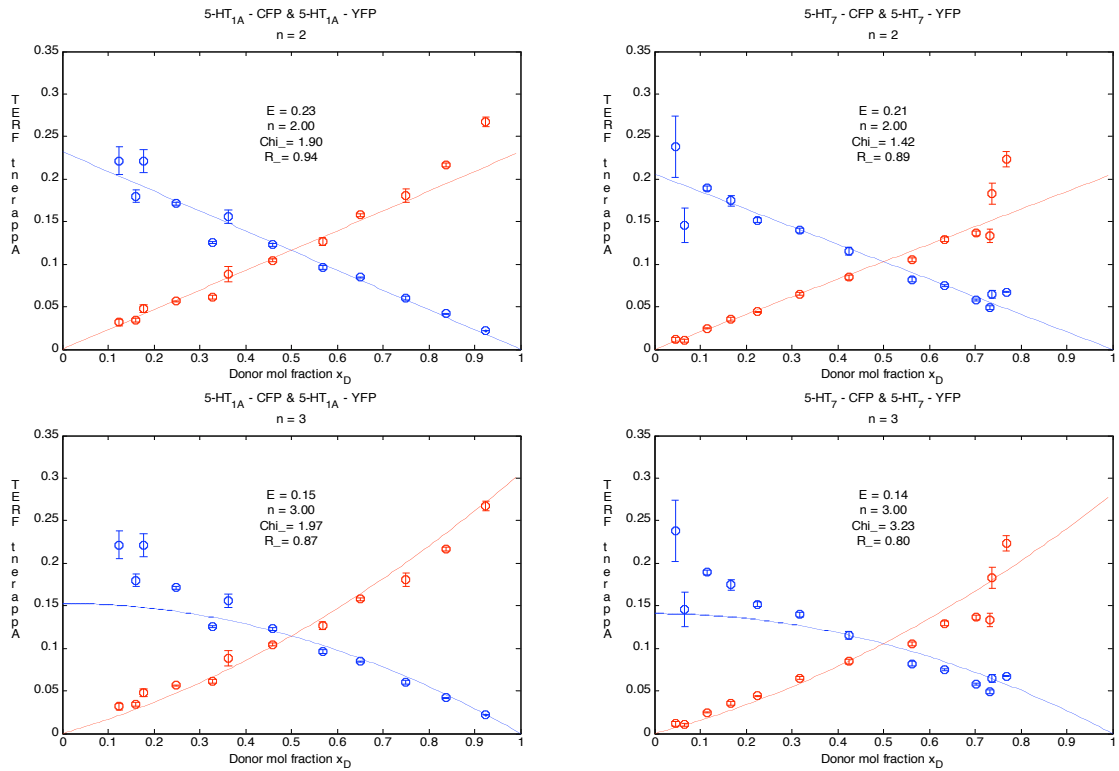

Fig. S1. Apparent FRET efficiencies Ef_D (blue) and Ef_A (red) as functions of the donor mole fraction x_D for homomers of 5-HT$_{1A}$ and 5-HT$_7$ receptors fitted for different n values by eq. 3.

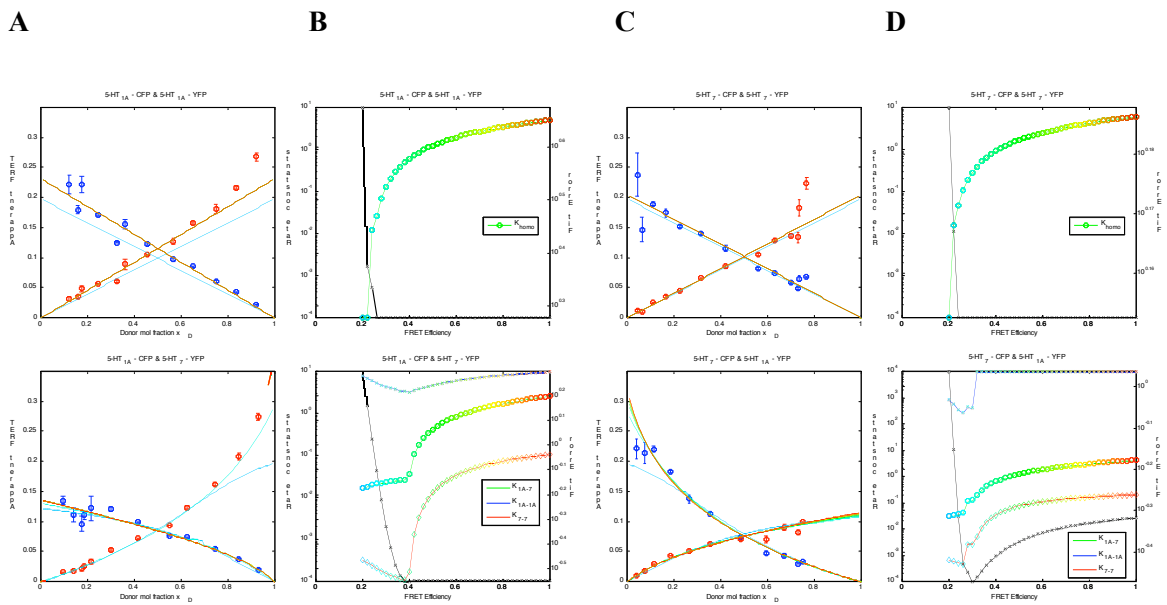

Fig. S2. (**A** and **C**) Distriburion of apparent FRET efficiencies Ef_D and Ef_A over x_D is shown for different receptor combinations. (**B** and **D**) Graphs show dependence of fitted K values (left axis) and errors of fit (black line, right axis) as function of FRET efficiency.

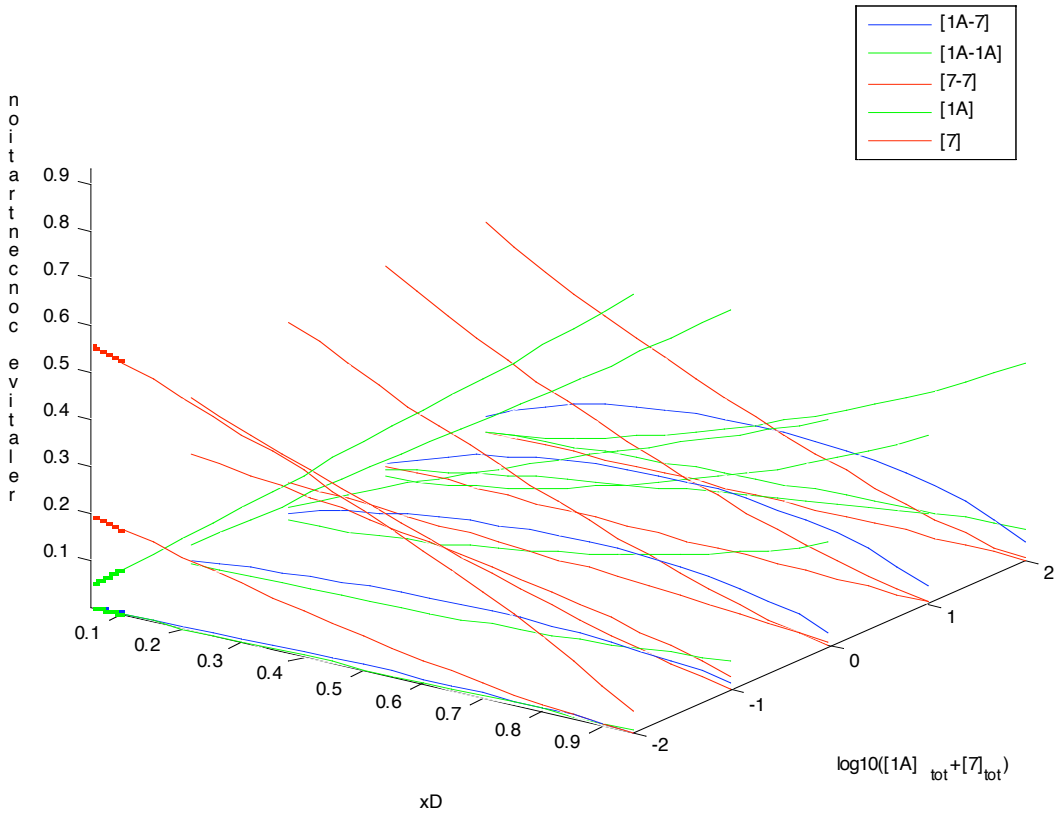

Fig. S3. Graph represents the simulation of the relative concentrations of hetero- and homodimers as well as corresponding monomers as function of the total concentration. The concentrations are scaled by the total concentration $[1A]_{tot} + [7]_{tot}$.

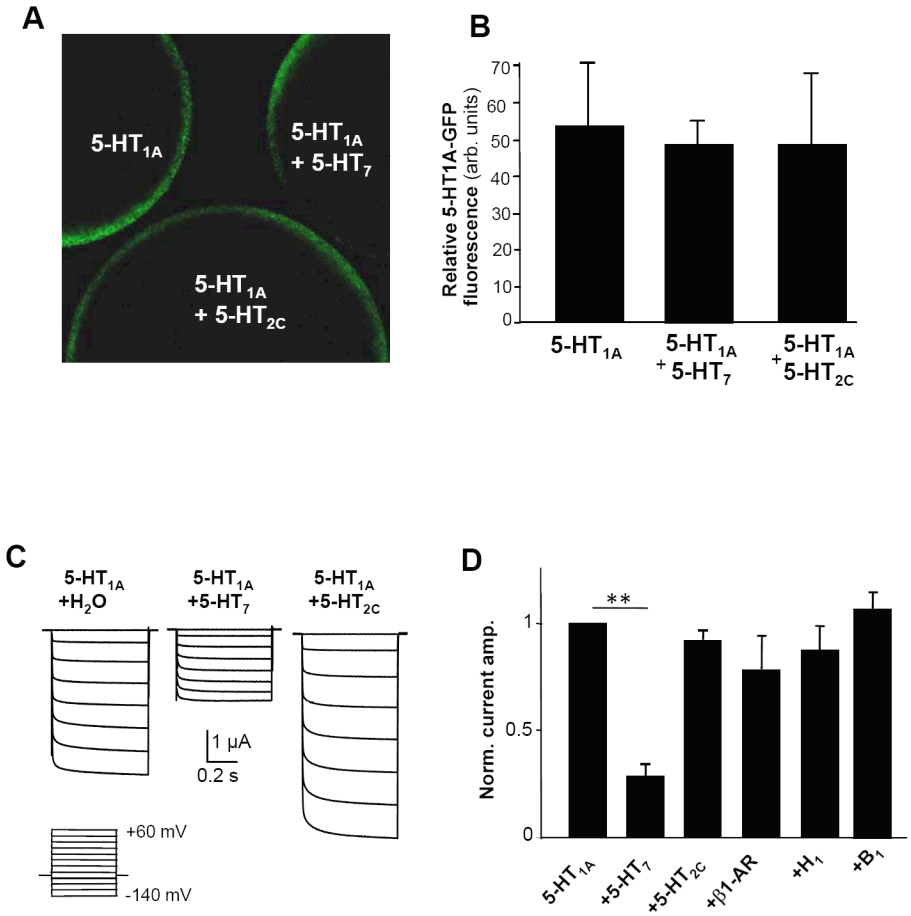

Fig. S4. (**A**) Co-injection of 5-HT_7 or 5-HT_{2C} receptors does not influence distribution of GFP-tagged 5-HT_{1A} receptor. (**B**) Bar graph illustrates quantification of relative fluorescences of 5-HT_{1A}-GFP receptor injected either alone or together with 5-HT_7 or 5-HT_{2C} receptors. (**C**) Two-electrode voltage-clamp recordings from oocytes either injected with $5HT_{1A}$ receptor alone (*left*), co-injected with 5-HT_{1A} and 5-HT_7 receptors (*middle*) or with 5-HT_{1A} and 5-HT_{2C} receptors (*right*) reveal large inward currents upon hyper- and depolarizing steps from -140 to +60 mV (V_H=-70mV) only in case of 5-HT_{1A} receptor and 5-HT_{1A}+5-HT_{2C} receptors injections. Kir3.1/3.2 was present in all experiments. (**D**) Bar graph illustrates normalized current amplitudes from experiments with co-injection of 5-HT_{1A} receptors with different GPCRs after activation with 5-HT. Reduction of current activation was only significant for co-expression of 5-HT_{1A} with 5-HT_7 receptors. Each value represents the mean ± S.E.M. (n = 4). A statistically significant difference between values is noted (**, $p < 0.01$).

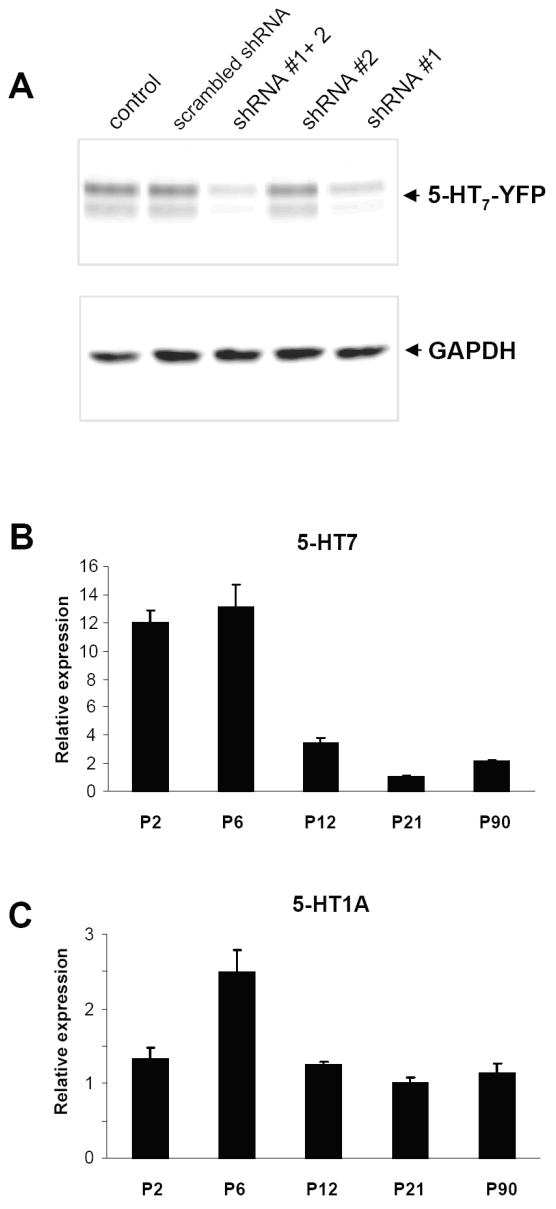

Fig. S5. (A) Analysis of siRNA directed against the 5-HT_7 receptor. The 5-HT_7-YFP receptor was expressed in neuroblastoma N1E-115 cells, which then were co-transfected with scrambled or anti-5-HT_7 receptor shRNAs constructs. After SDS-PAGE gels were analysed by fluorescence scanner Typhoon 9400 (*upper panel*). Expression of GAPDH was analysed in parallel by western blot (*lower panel*). Representative image is shown. (**B-C**) Analysis of the expression level of 5-HT_{1A} and 5-HT_7 receptors in hippocampus during development. Changes in the expression level of the 5-HT_7 (**B**) and 5-HT_{1A} (**C**) receptors mRNA in the mouse hippocampus were determined at different stages of the postnatal development using real-time RT-PCR and $\Delta\Delta C_t$ method. The 5-HT_7 receptor is strongly expressed at early postnatal stages and down-regulated during later stages of development, while expression of 5-HT_{1A} receptor remains relative constant.