**Figure S6: Dimerization of the MC4R-chim6 and chim7 in living cells by bimolecular fluorescence complementation assay (BiFC) approach.**

To investigate dimerization properties in living cells HEK293 cells were transiently co-transfected with equal amounts of carboxy-terminally YFP1- and YFP2-tagged receptors and fluorescence intensity was measured with an excitation of 480 ± 20 nm and emission of 530 ± 20 nm. The MC4R-WT homodimer served as positive control (MC4R-WT-YFP1 + MC4R-WT-YFP2, black bar). The co-expressed MC4R-WT-YFP1 with CB1R-WT-YFP2 served as negative control (48 % of MC4R-WT homodimerization, white bar) as well as heterodimerization with the rM3R (21 % - 29 % of MC4R-WT homodimerization, striped bars). MC4R-chim6 and chim7 showed a significantly decreased homodimerization capacity compared to the MC4R-WT (73 % and 78 %) (p<0.0001). The continuous line marked 100 % homodimer formation of the MC4R-WT and the dotted line indicate the negative control (MC4R-WT-YFP1). For homodimers the YFP1- and YFP2-tags were not indicated. Values are given as percentage of the MC4R-WT homodimer [fluorescence/ mg/ml of protein: 146.4 ± 49.18 MC4R-WT homodimer]. Data are means ± SEM of four independent experiments performed in triplicates.

**References**
