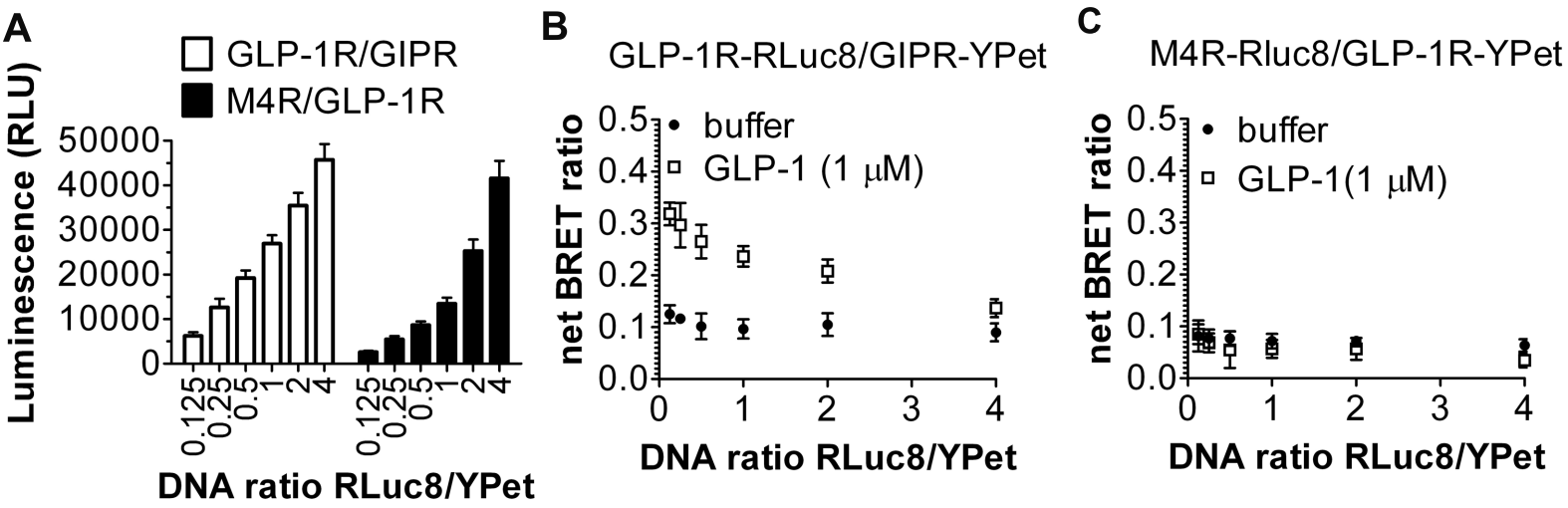
Schelshorn D, Joly F, Mutel S, Hampe C, Breton B, Mutel V, Lütjens R - *Lateral allosterism in the glucagon receptor family: GLP-1 induces GPCR heteromer formation* - Molecular Pharmacology



Supplementary Figure 3: Specificity of the ligand-induced receptor heteromerization between GLP-1R and GIPR was tested in BRET acceptor saturation experiments. Cells were transfected with a fixed amount (0.4 µg) of BRET acceptor plasmid and variable amounts of donor, effectively reducing the amount of luciferase and resulting luminescence by ~10 fold at the lowest concentration of donor used (A). (B) In the BRET experiment, decreasing concentrations of GLP-1R-RLuc8 resulted in an increase of the specific GLP-1R/GIPR BRET interaction in the presence of ligand. This demonstrates that heteromers can form when GLP-1R is expressed at low levels, which are likely to be closer to “physiological levels“. In absence of ligand, a low amount of basal BRET was observed and a small increase of BRET when acceptor was present in excess. (C) M4R/GLP-1R control: GLP-1R-YPet was cotransfected with the M4R-RLuc8. Basal BRET comparable to A was observed, but no GLP-1-inducded BRET increase. Representative experiment, datapoints were measured as octuplicates due to the low levels of RLuc8 (average +/- S.D.).