

Supplementary Table 1. ECL1 distance constraints and other constraints used in Modeller. The ECL1 constraints were used to control the orientation of the ECL1 helix in line with the variability data (Baldwin et al., 1997; Vohra et al., 2013) and were chosen by visual analysis. Torsional constraints applied to the C α coordinates were also used to constrain the backbone conformation of the 4 C-terminal residues of Gs, namely Y391-L394.

GLP-1/GLP-1R position (A)	GLP-1R/GLP-1 position (B)	constraint
TM2; M204; C _i	GLP-1; V26; C _{1,1}	$r_{AB} \leq 8.0$
ECL1; W214; C _{2,2}	GLP-1; V16; C _{1,1}	$r_{AB} \geq 12.0$
ECL1; W214; C _{2,2}	TM2; W203; C _{3,3}	$r_{AB} \geq 5.0$
ECL1; H212; C _{1,1}	GLP-1; F12; C _i	$r_{AB} \geq 10.0$
ECL1; H212; C _{1,1}	GLP-1; V16; C _i	$r_{AB} \geq 12.0$
ECL1; H212; C _{1,1}	GLP-1; M13; C _i	$r_{AB} \geq 12.0$
ECL1; H212; C _{1,1}	GLP-1; L20; C _i	$r_{AB} \geq 12.0$
ECL1; Q213; C _i	GLP-1; H19; C _i	$r_{AB} \geq 10.0$
ECL1; D215; C _i	GLP-1; V16; C _i	$r_{AB} \geq 12.0$
TM3; C226; C _i	ECL2; C296; C _i	disulfide
GLP-1; D15	GLP-1; L33	helix
Helix 8; T378	Helix 8; S392	helix
TM2; V194	TM3; A209	helix
TM3; A221	TM3; F232	helix

Baldwin, J. M.; Schertler, G. F.; Unger, V. M. An alpha-carbon template for the transmembrane helices in the rhodopsin family of G-protein-coupled receptors. *Journal of Molecular Biology* **1997**, 272, 144-164.

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