

## Supplementary information, Table S1

### Cryo-EM data collection, refinement and validation statistics of C5aR1-G<sub>i</sub> complexes.

Parameters	C5a-C5aR1-G <sub>i</sub> complex	C5a <sup>pep</sup> -C5aR1-G <sub>i</sub> complex	BM213-C5aR1-G <sub>i</sub> complex	C089-C5aR1 <sup>III6A</sup> - G <sub>i</sub> complex
<b>Data collection and processing</b>				
Magnification	165,000	165,000	165,000	165,000
Voltage (kV)	300	300	300	300
Electron exposure (e <sup>-</sup> /Å <sup>2</sup> )	66	62	67	63
Defocus range (μm)	-1 to -1.8	-1 to -1.8	-1 to -1.8	-1 to -1.8
Pixel size (Å)	0.85	0.85	0.85	0.85
Symmetry imposed	C1	C1	C1	C1
Initial particle images (no.)	4,588,123	4,329,443	6,361,876	2,955,107
Final particle images (no.)	623,262	191,664	899,978	298,883
Map resolution (Å)	2.9	3.2	2.9	2.8
FSC threshold	0.143	0.143	0.143	0.143
Map resolution range (Å)	2.8-5.0	2.7-6.5	2.7-4.5	2.6-4.5
<b>Refinement</b>				
Initial model used (PDB code)	5O9H,7EW3	C5a-C5aR1-G <sub>i</sub>	C5a-C5aR1-G <sub>i</sub>	C5a-C5aR1-G <sub>i</sub>
Model resolution (Å)	3.2	3.6	3.1	3.4
FSC threshold	0.5	0.5	0.5	0.5
<b>Model composition</b>				
Non-hydrogen atoms	9520	8726	8917	8889
Protein residues	1218	1109	1139	1134
Ligands	0	3 (ZAL:1/DAR:2)	2 (DAL: 1/ACE:1)	2 (ZAL:1/DAR:1)
<b>B factors (Å)</b>				
Protein	58.18	51.57	52.84	53.18
Ligand	--	90.06	73.72	74.76
<b>R.m.s. deviations</b>				
Bond lengths (Å)	0.002	0.002	0.002	0.004
Bond angles (°)	0.560	0.544	0.571	1.035
<b>Validation</b>				
MolProbity score	1.36	1.61	1.43	1.49
Clash score	4.89	7.93	6.46	6.99
Poor rotamers (%)	0	0.11	0	0.31
<b>Ramachandran plot</b>				
Favored (%)	97.50	96.96	97.68	97.49
Allowed (%)	2.50	3.04	2.32	2.51
Disallowed (%)	0	0	0	0