Supporting Information

Binding modes and selectivity of cannabinoid 1 (CB1) and cannabinoid 2 (CB2) receptor ligands

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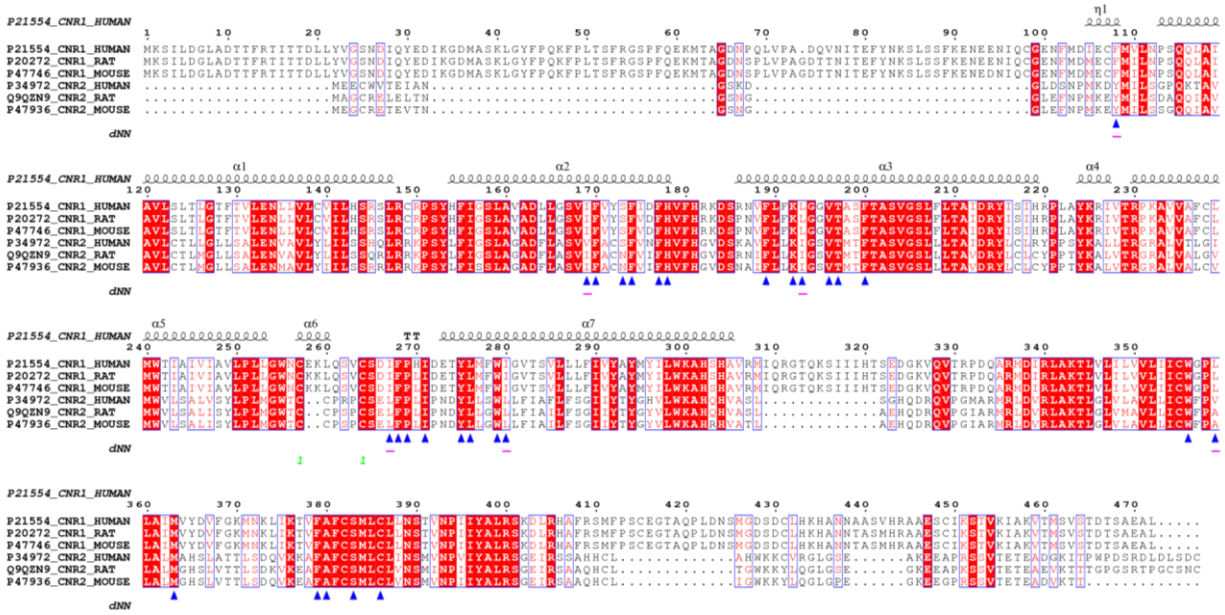

Figure S1. The sequence alignment of CB_1R and CB_2R. The residues around the ligands in 6 Å distance are labeled with blue triangles. The non-conserved interacting residues are further labeled with pink underlines. Based on the sequence alignment (and the corresponding 3D structures), there is no noticeable difference between different species for a given receptor (CB_1R or CB_2R).

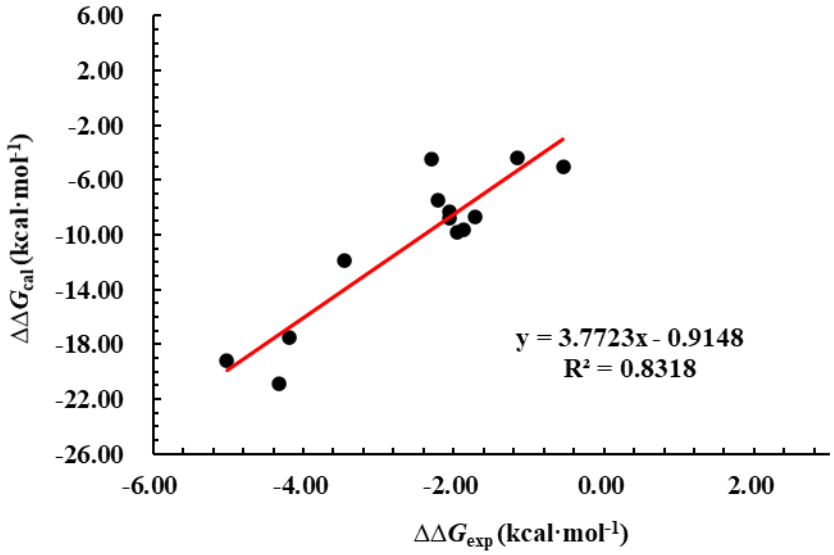

Figure S2. Correlation between the computational and experimental binding free energy change of the long-chain molecules.

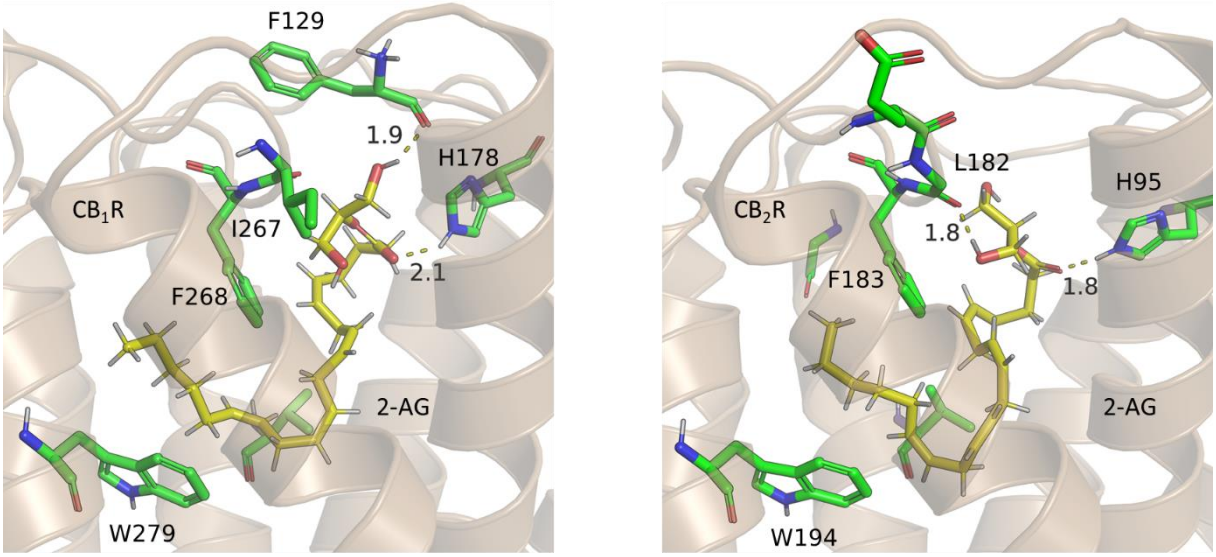

Figure S3. Binding modes of the ligand 2-AG with both the CB_1 and CB_2 receptors.

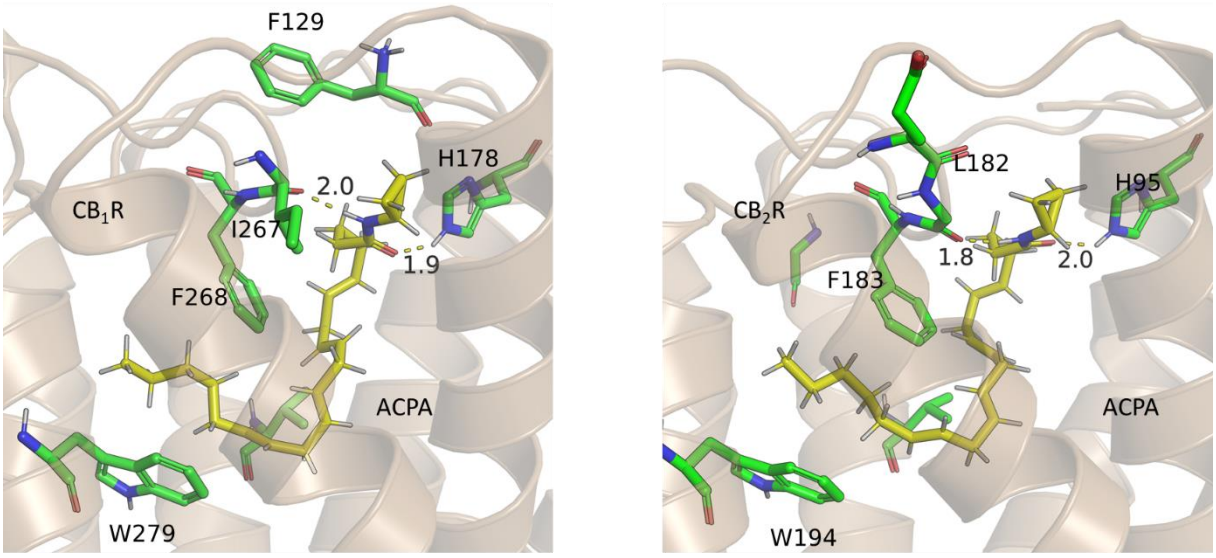

Figure S4. Binding modes of the ligand ACPA with both the CB_1 and CB_2 receptors.

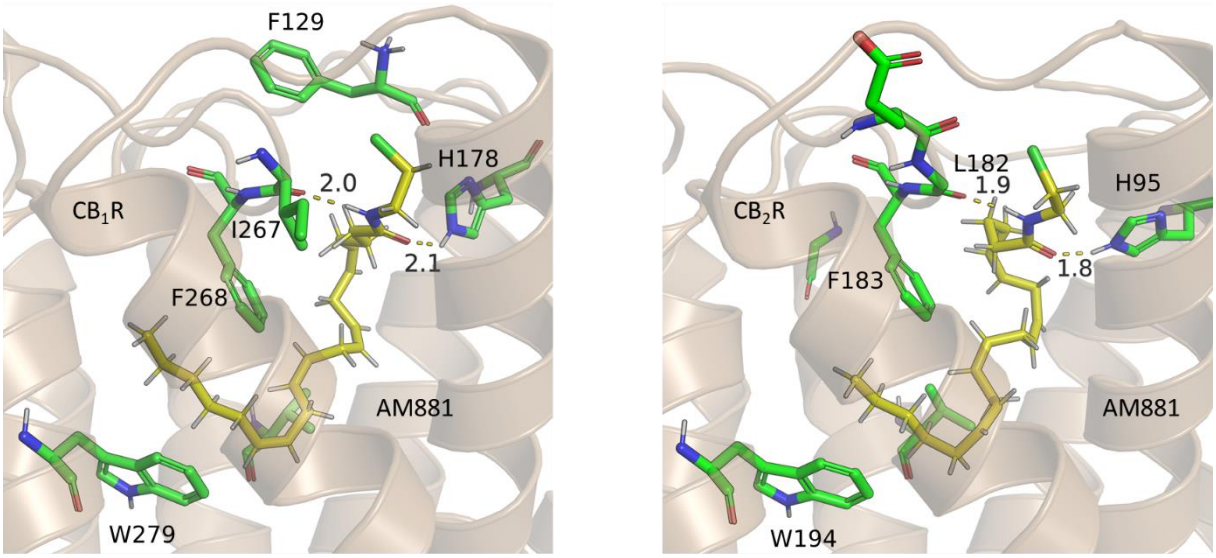

Figure S5. Binding modes of the ligand AM881 with both the CB_1 and CB_2 receptors.

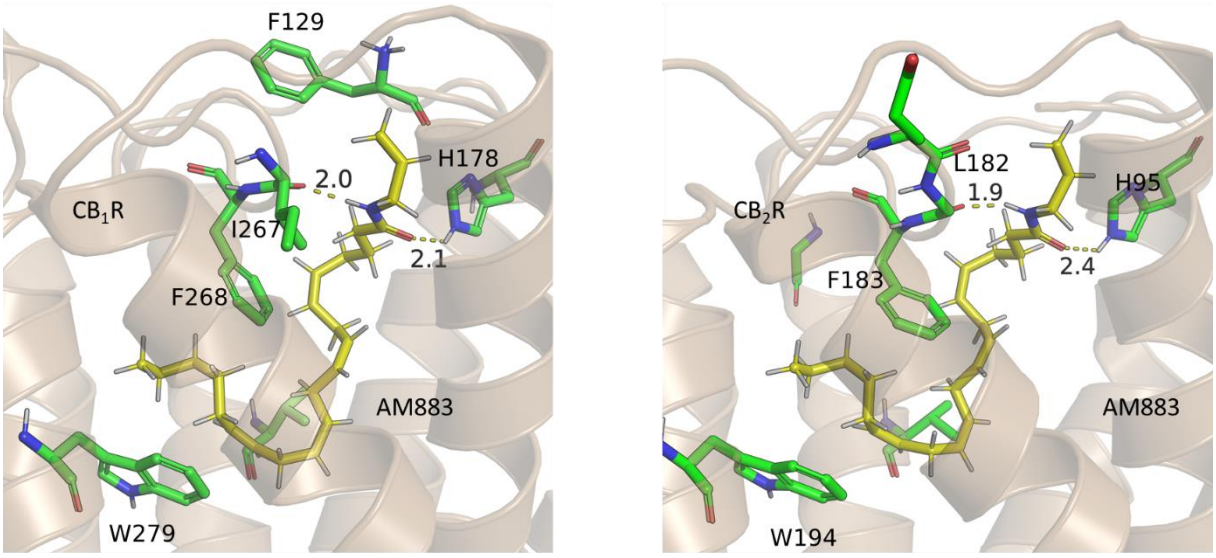

Figure S6. Binding modes of the ligand AM883 with both the CB_1 and CB_2 receptors.

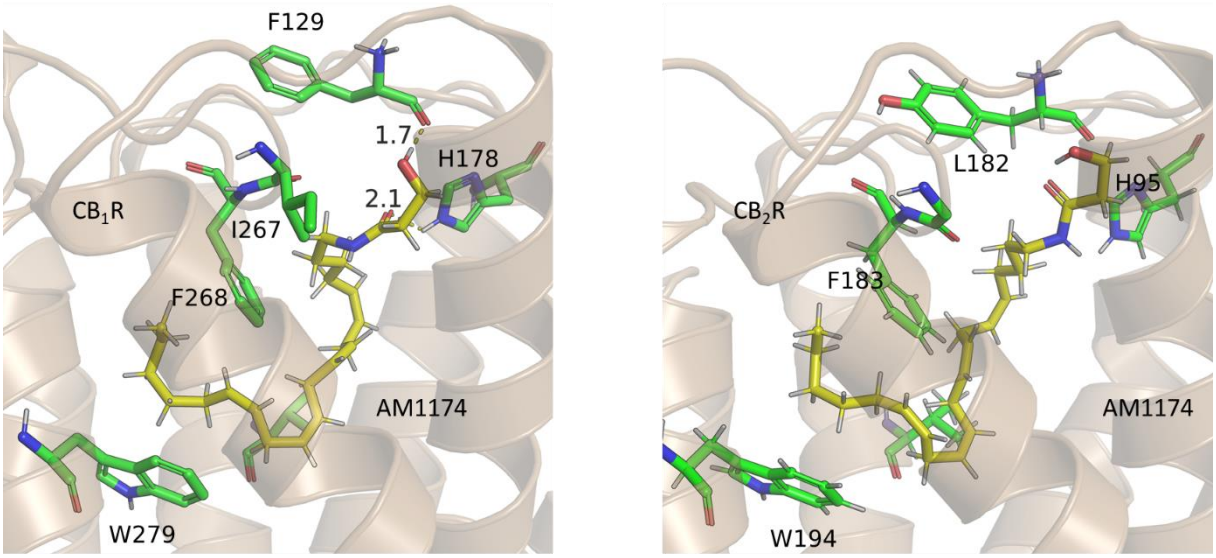

Figure S7. Binding modes of the ligand AM1174 with both the CB_1 and CB_2 receptors.

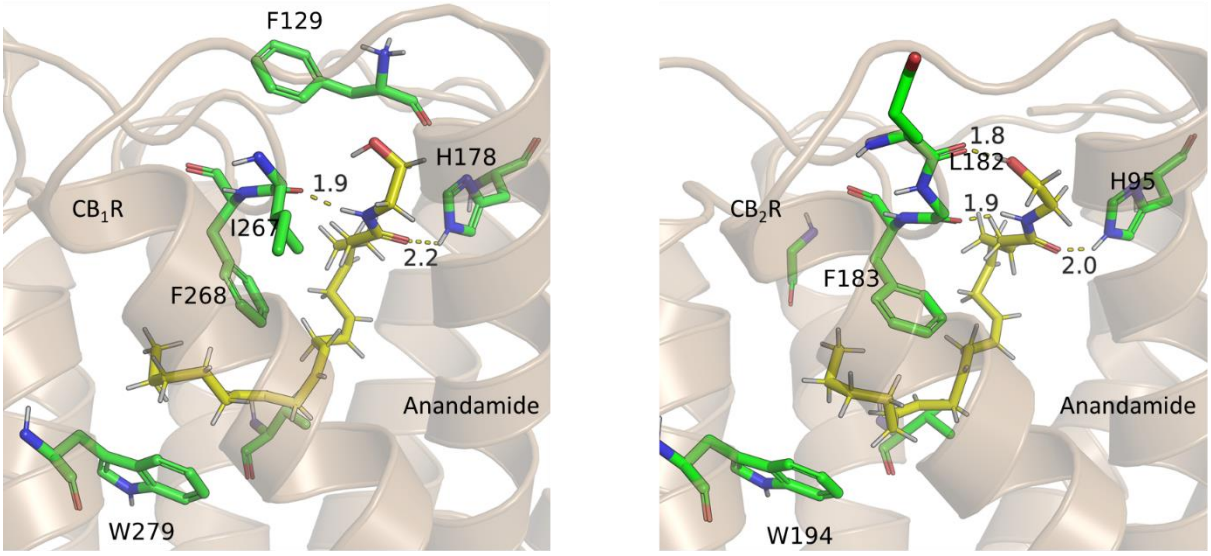

Figure S8. Binding modes of the ligand anandamide with both the CB_1 and CB_2 receptors.

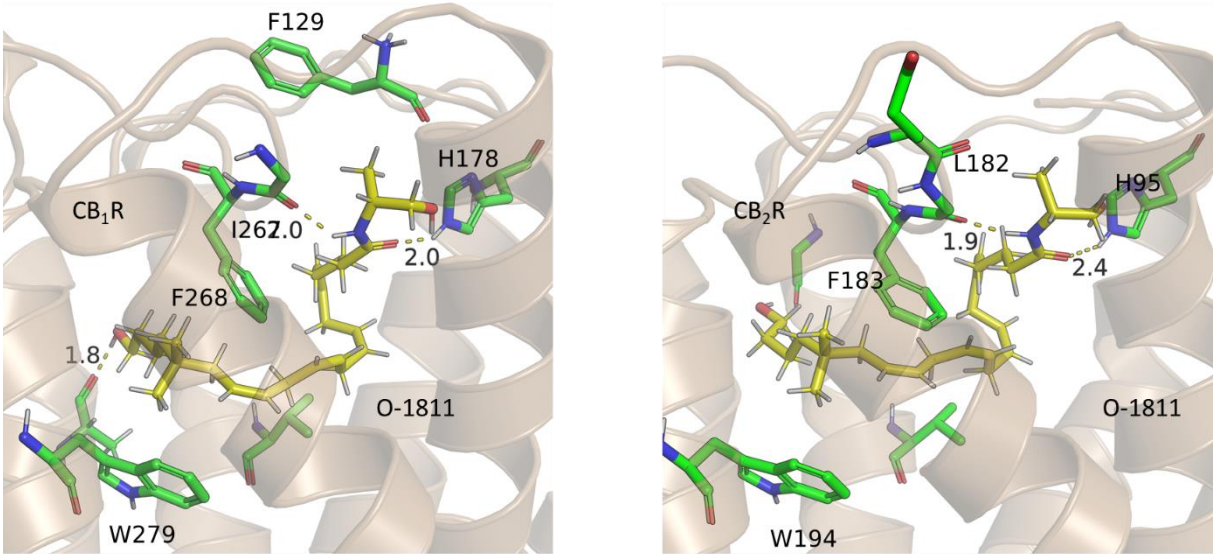

Figure S9. Binding modes of the ligand O-1811 with both the CB_1 and CB_2 receptors.

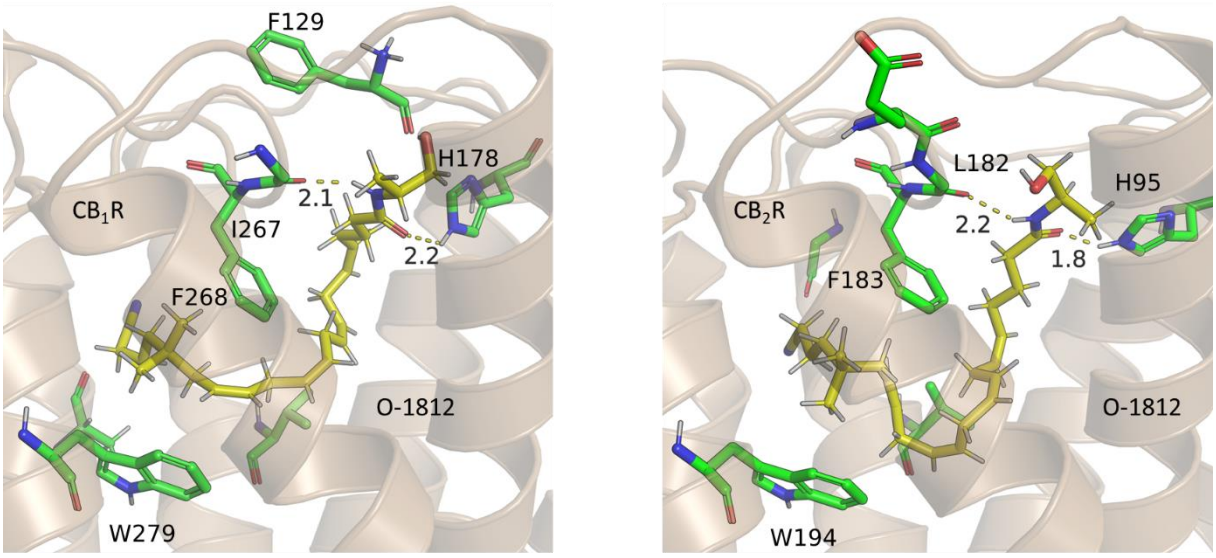

Figure S10. Binding modes of the ligand O-1812 with both the CB_1 and CB_2 receptors.

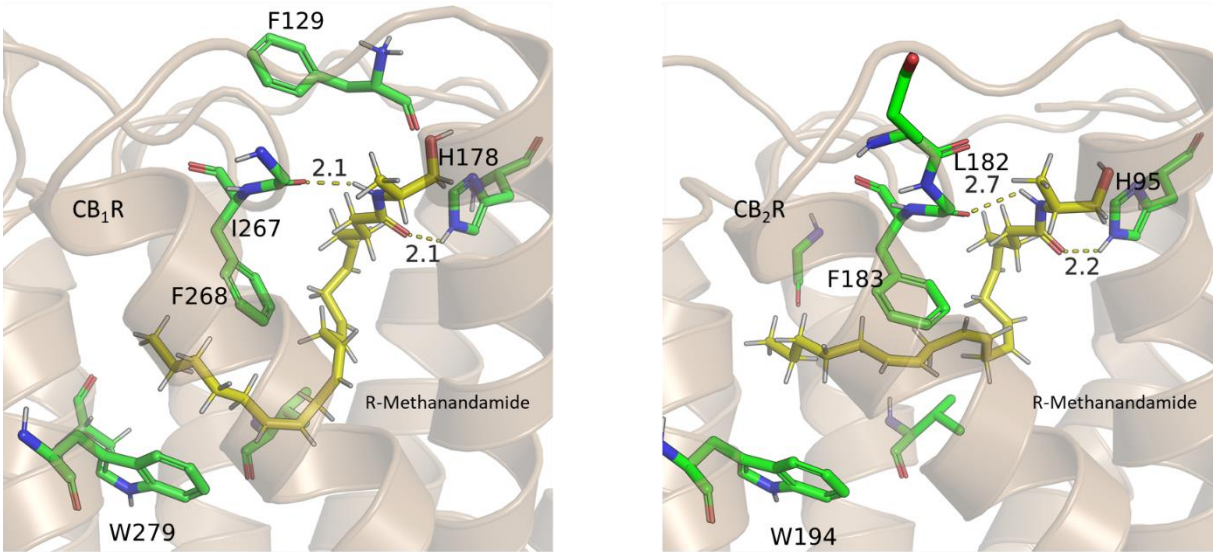

Figure S11. Binding modes of the ligand (R)-Methanandamide with both the CB_1 and CB_2 receptors.

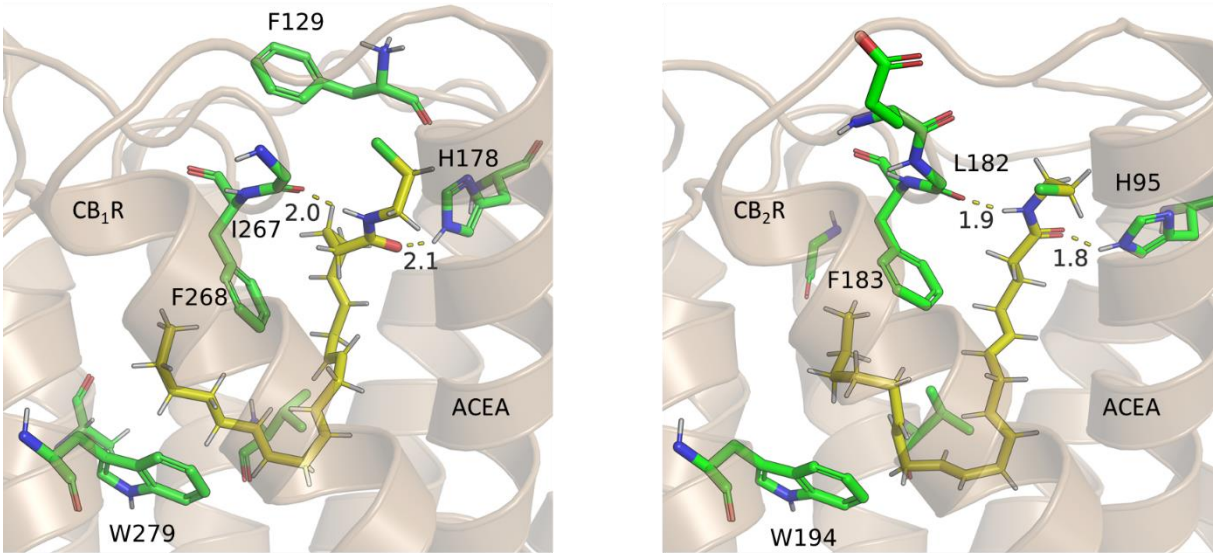

Figure S12. Binding modes of the ligand ACEA with both the CB_1 and CB_2 receptors.

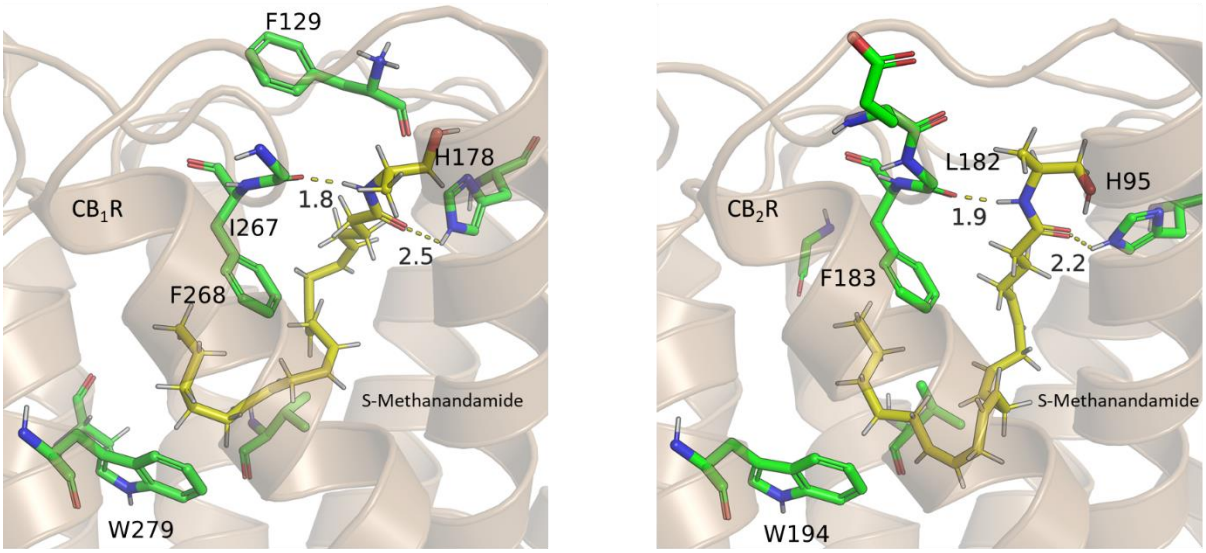

Figure S13. Binding modes of the ligand (S)-Methanandamide with both the CB_1 and CB_2 receptors.

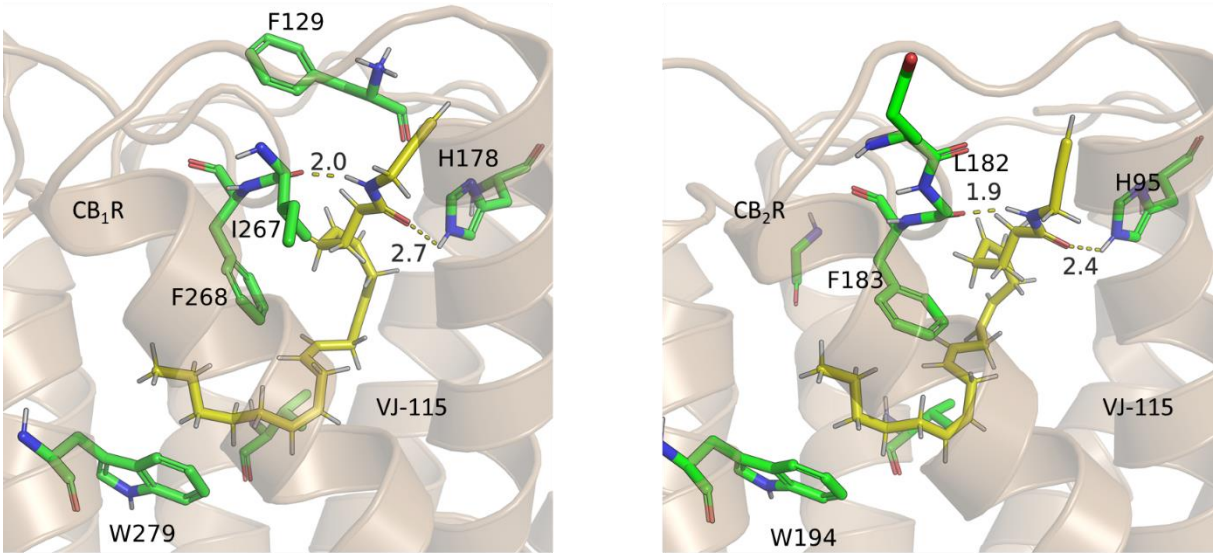

Figure S14. Binding modes of the ligand VJ-115 with both the CB_1 and CB_2 receptors.

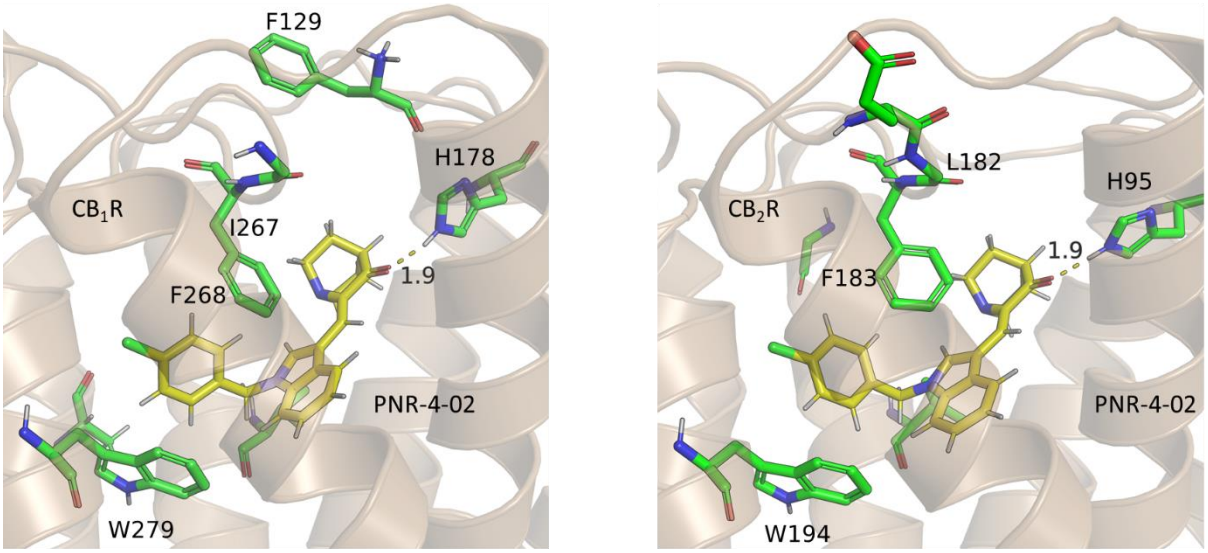

Figure S15. Binding modes of the ligand PNR-4-02 with both the CB_1 and CB_2 receptors.

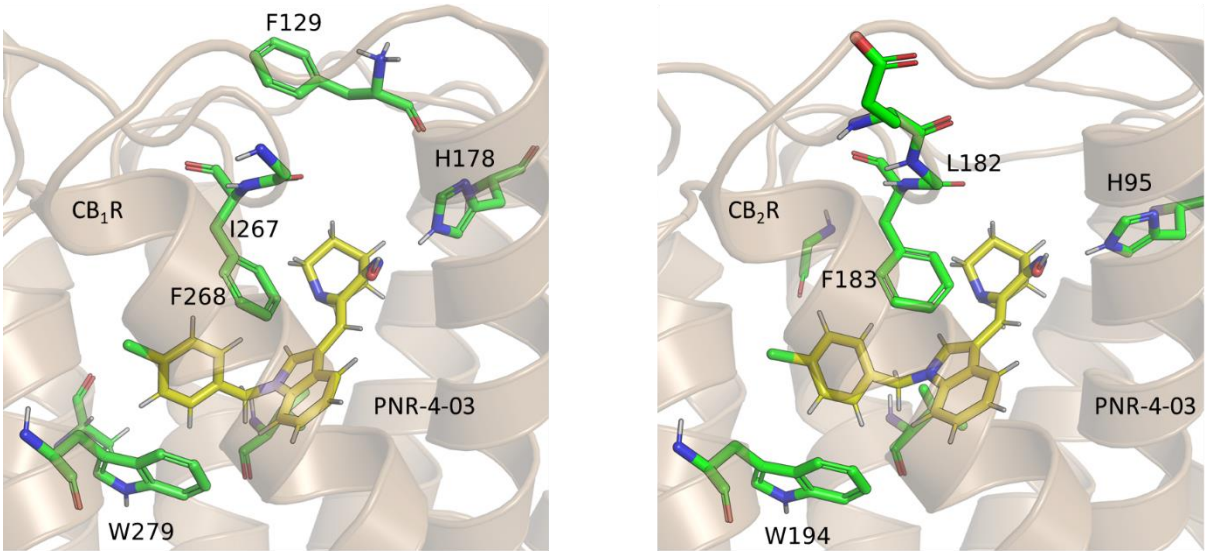

Figure S16. Binding modes of the ligand PNR-4-03 with both the CB_1 and CB_2 receptors.

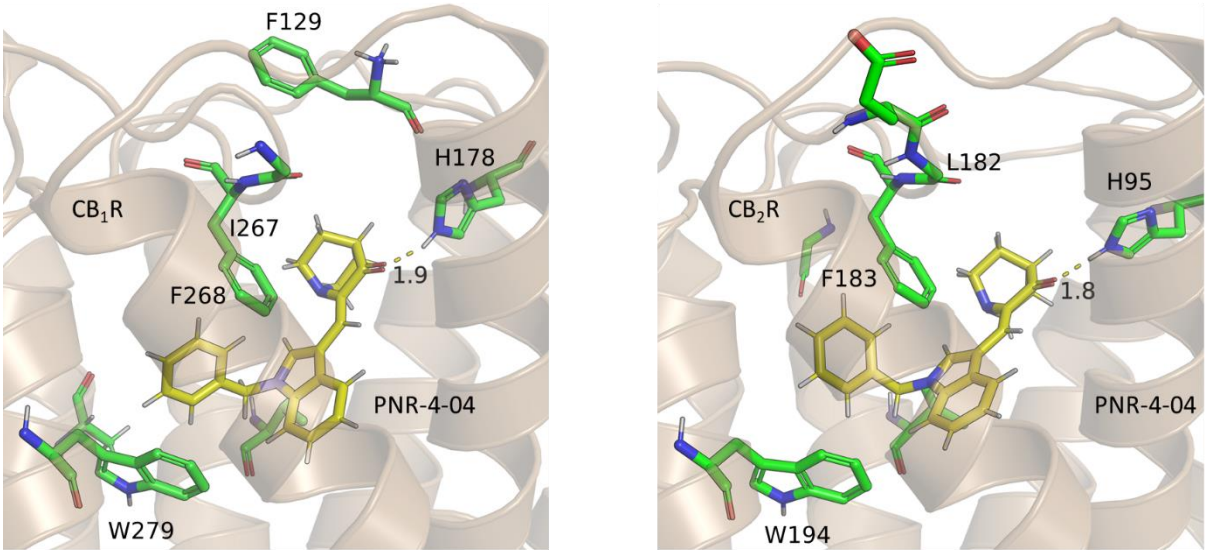

Figure S17. Binding modes of the ligand PNR-4-04 with both the CB_1 and CB_2 receptors.

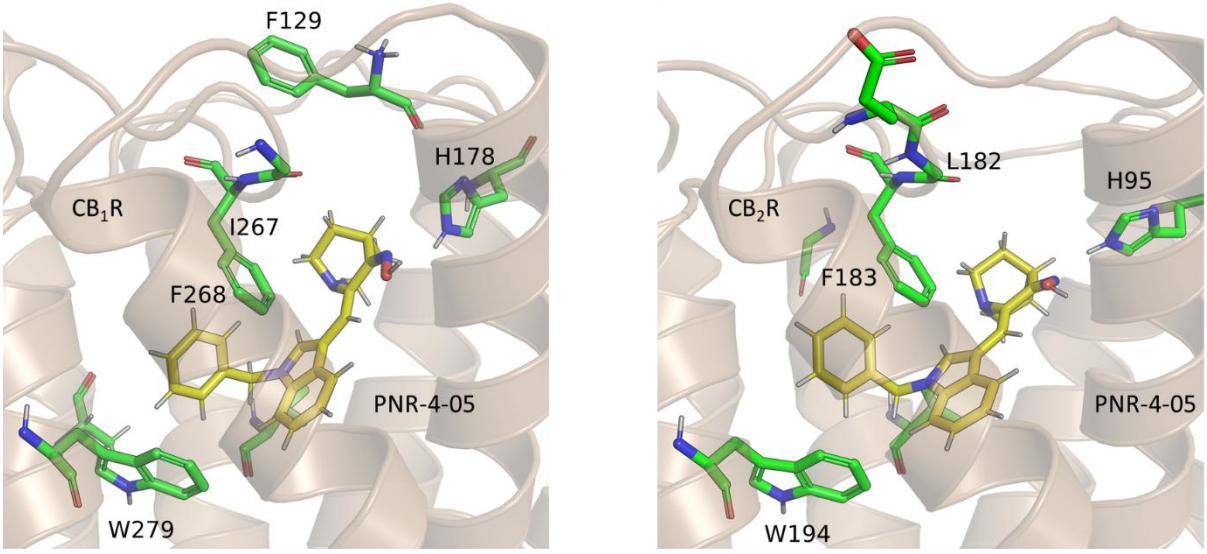

Figure S18. Binding modes of the ligand PNR-4-05 with both the CB_1 and CB_2 receptors.

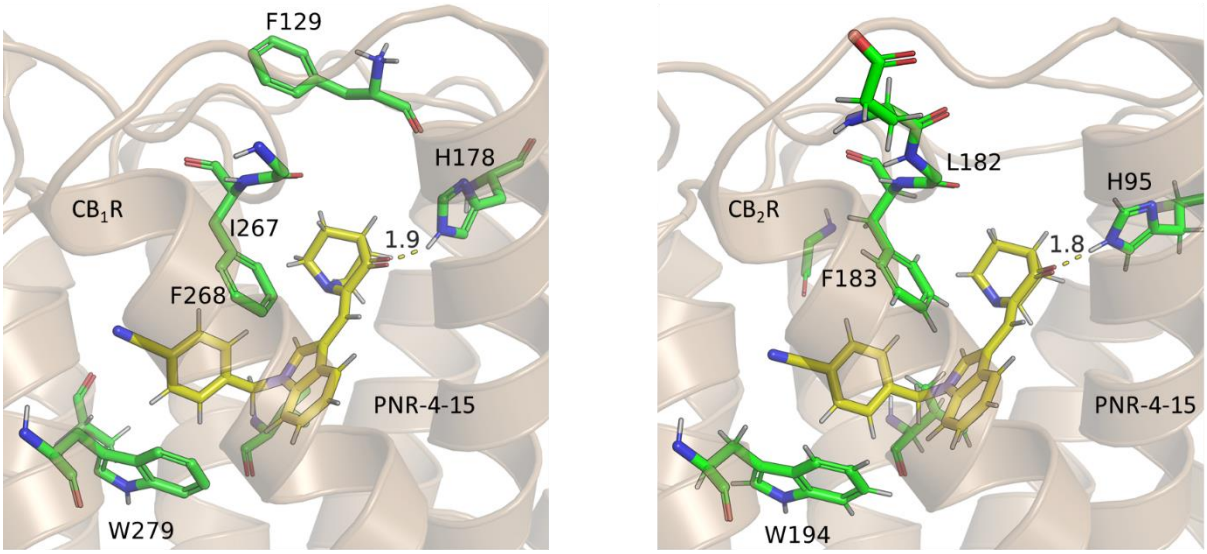

Figure S19. Binding modes of the ligand PNR-4-15 with both the CB_1 and CB_2 receptors.

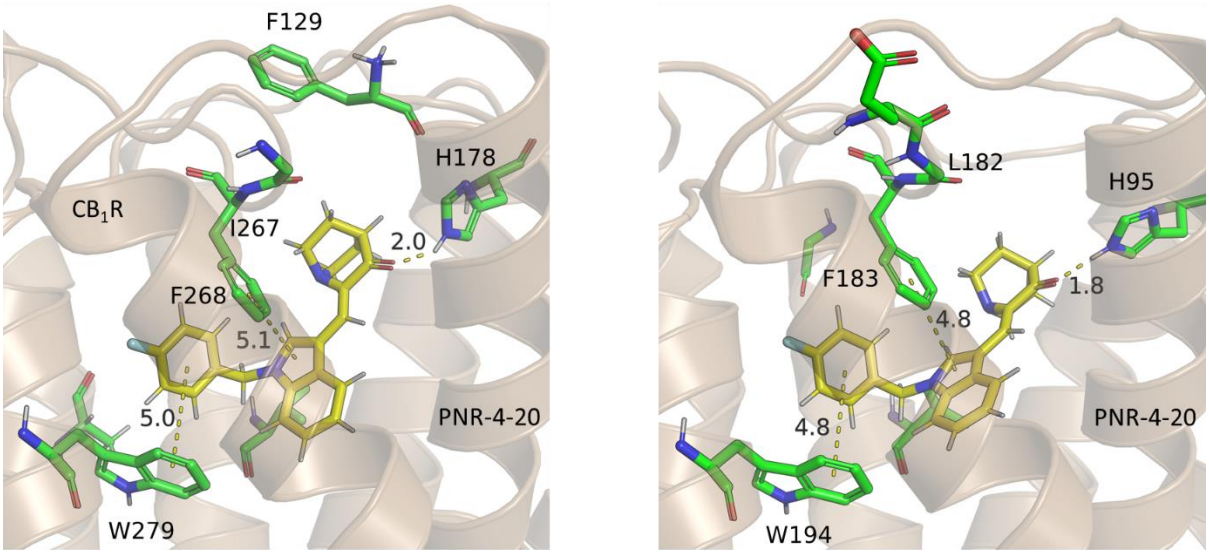

Figure S20. Binding modes of the ligand PNR-4-20 with both the CB_1 and CB_2 receptors.

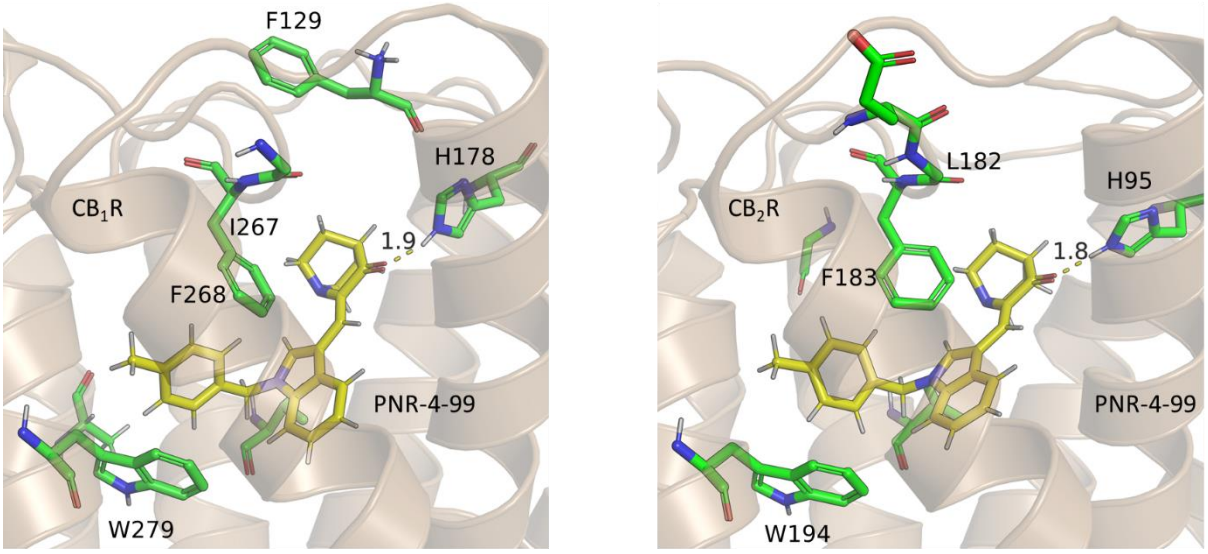

Figure S21. Binding modes of the ligand PNR-4-99 with both the CB_1 and CB_2 receptors.

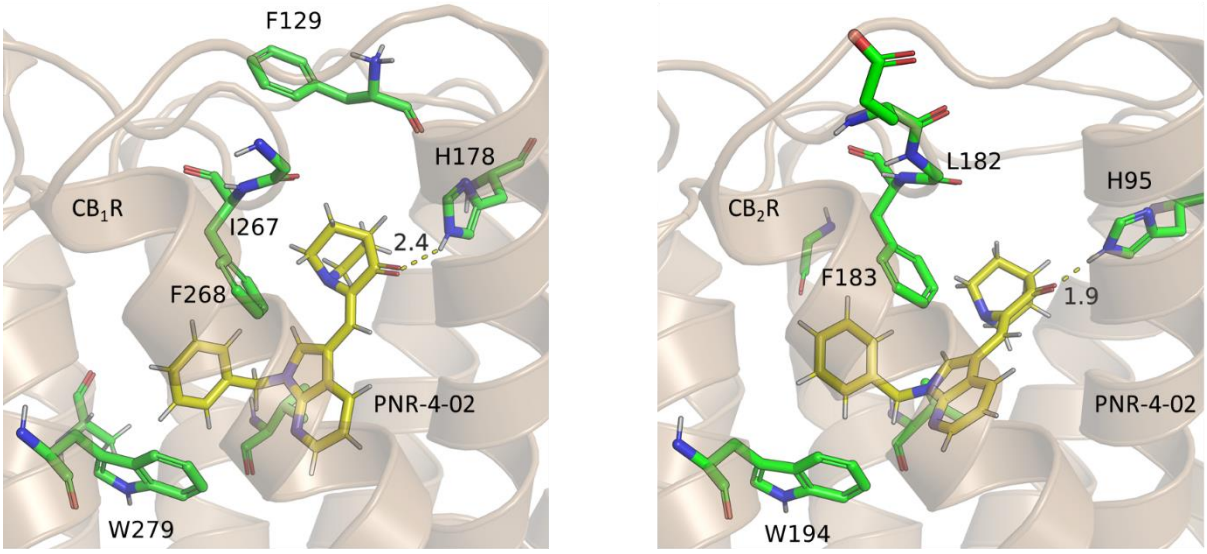

Figure S22. Binding modes of the ligand PNR-9-33 with both the CB_1 and CB_2 receptors.