

1 *Supplementary materials for*

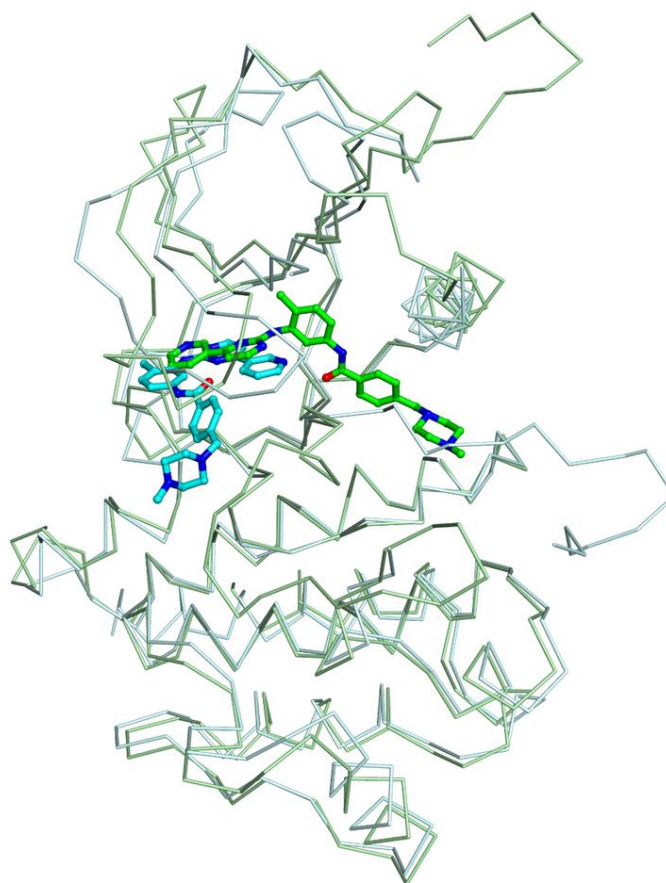
2 **Structural basis for the regulation of PPAR γ activity**
 3 **by imatinib**

4 **Jun Young Jang¹, Hyun-Jung Kim², and Byung Woo Han^{1*}**

5 ¹ Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, Seoul,
 6 Korea

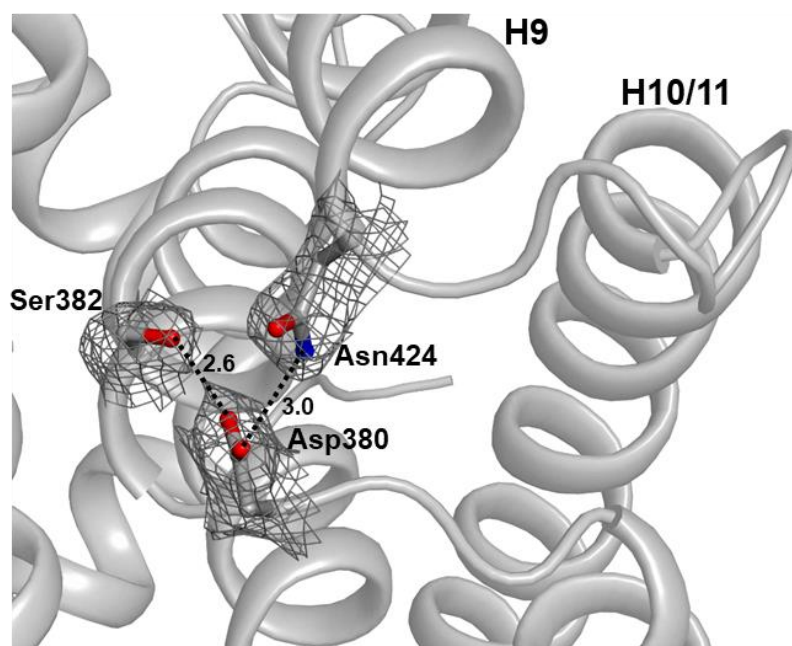
7 ² College of Pharmacy, Chung-Ang University, Seoul, Korea

8 * Correspondence: bwahan@snu.ac.kr; Tel.: +82-02-880-7898



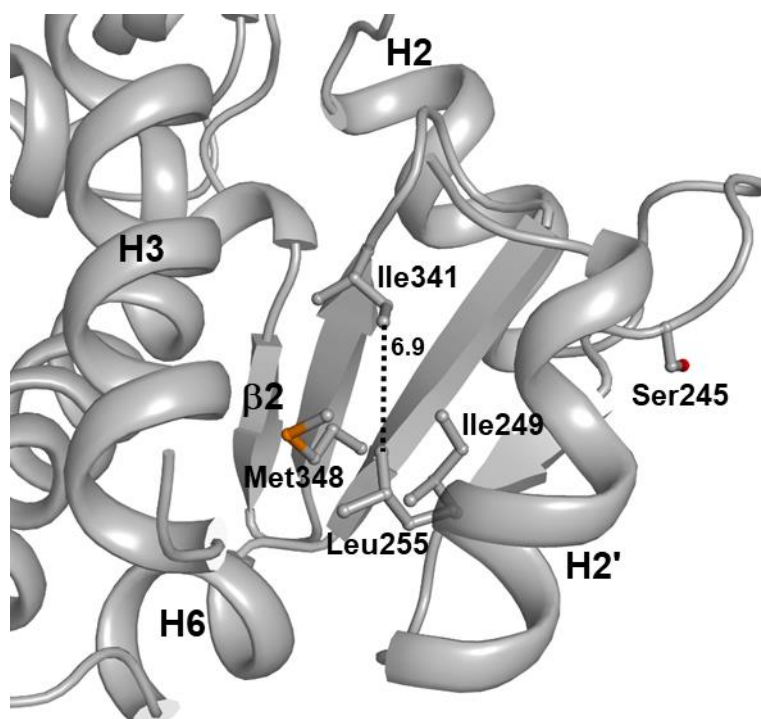
9

10 **Figure S1.** Superposition of imatinib-bound ABL kinase domain (PDB ID: 1IEP) and imatinib-bound
 11 Syk kinase domain (PDB ID: 1XBB). ABL kinase domain (pale green) and Syk kinase domain (pale
 12 cyan) are shown in $C\alpha$ trace ribbon models. Imatinib molecules in the ABL and Syk complex
 13 structures are shown as green and cyan stick models, respectively.



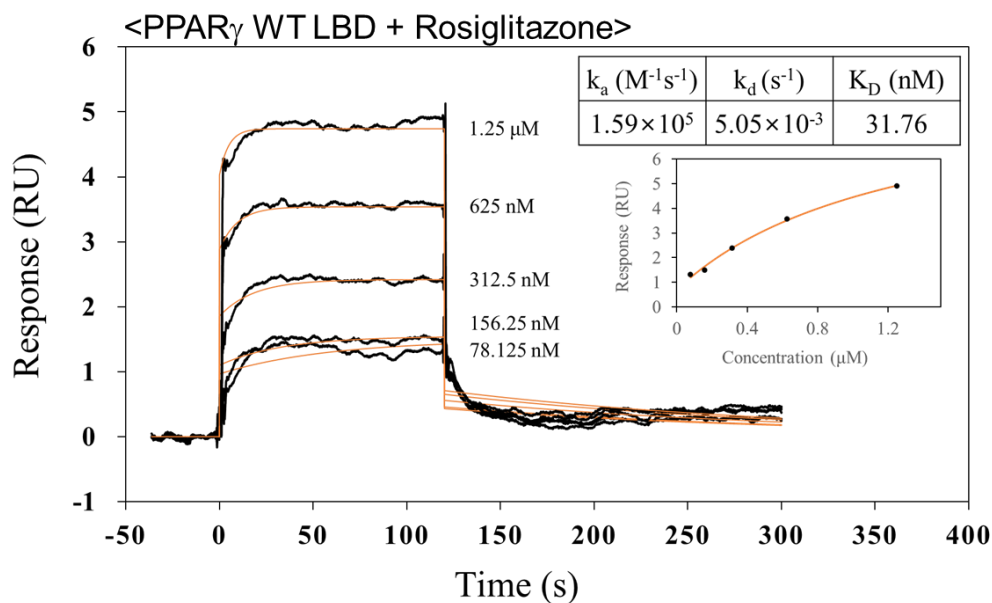
14

15 **Figure S2.** Ribbon diagram of the H9-H10 loop region in the ligand-free PPAR γ WT LBD structure
 16 (PDB ID: 6JQ7). The residues Asp380, Ser382, and Asn424 are shown in stick models with $2mF_o-DF_c$
 17 electron density maps (in grey; contoured at 1.0σ). Dashed lines represent the distance between
 18 residues and the corresponding distances (\AA) are labeled.



19

20 **Figure S3.** The hydrophobic interaction network in Arm3 region of PPAR γ WT LBD. The ligand-free
 21 PPAR γ WT LBD structure is shown in a ribbon diagram (grey), and the residues forming the
 22 hydrophobic interaction network are represented by stick models. Dashed line represents the distance
 23 between Leu255 and Ile341, and the corresponding distances (\AA) are labeled.

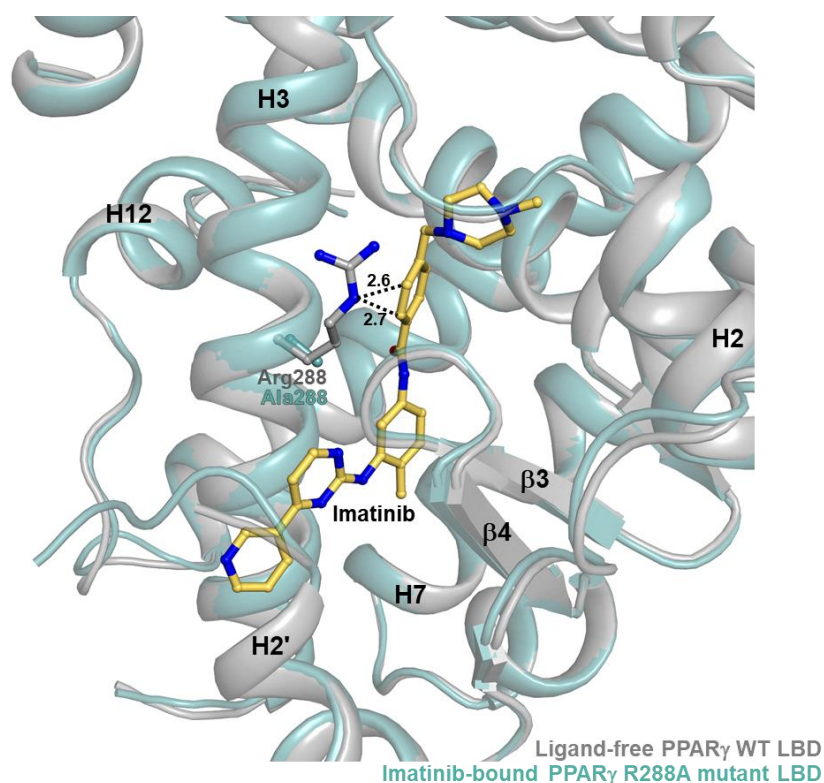


24

25

26

Figure S4. SPR analysis of the binding affinity for rosiglitazone of PPAR γ WT LBD. SPR sensorgrams for rosiglitazone binding of PPAR γ WT LBD are shown. The calculated K_d value is also shown.



27

28

29

30

31

32

33

34

Figure S5. Modeling of the ligand-free PPAR γ WT LBD structure into the imatinib-bound PPAR γ R288A mutant LBD structure. The ligand-free PPAR γ WT LBD structure (PDB ID: 6JQ7) was superimposed onto the imatinib-bound PPAR γ R288A mutant LBD structure. The ligand-free PPAR γ WT and the imatinib-bound PPAR γ R288A mutant LBD structures are shown in grey and light teal colored ribbon diagrams, respectively. Side chains and imatinib are shown as stick models. Dashed line represents the distance between Arg288 and imatinib, and the corresponding distances (\AA) are labeled.

35



© 2019 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license

38

(<http://creativecommons.org/licenses/by/4.0/>).

39