# Article information:

Structural mechanism underlying ligand binding and activation of PPARγ - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0969212621000502>

# Article summary:

1. Biophysical data suggests that PPARγ ligand binding occurs via an induced fit mechanism.

2. NMR, SPR and ITD data support fast binding and slow conformational-change steps.

3. Crystal structures reveal a putative induced fit ligand encounter complex.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy in its reporting of the structural mechanism underlying ligand binding and activation of PPARγ. The article provides evidence from biophysical data, nuclear magnetic resonance spectroscopy, isothermal titration calorimetry, and surface plasmon resonance analysis to support its claims that structurally distinct agonists bind peroxisome proliferator-activated receptor γ (PPARγ) via a two-step induced fit mechanism involving an initial fast kinetic step followed by a slow conformational change. The article also presents crystal structures which suggest a putative induced fit ligand encounter complex as well as molecular simulations which identify potential ligand entry/exit pathways to the orthosteric pocket.

The article does not appear to be biased or one-sided in its reporting, nor does it contain any promotional content or partiality towards any particular point of view. It presents both sides of the argument equally and fairly, providing evidence for both the conformational selection and induced fit mechanisms for PPARγ ligand binding. Furthermore, the article does not make any unsupported claims or omit any points of consideration; all claims are backed up with evidence from experiments or simulations. Additionally, possible risks associated with PPARγ activation are noted in the introduction section of the article.

In conclusion, this article is reliable and trustworthy in its reporting on the structural mechanism underlying ligand binding and activation of PPARγ.

# Topics for further research:

* PPARγ agonist binding mechanism
* PPARγ ligand entry/exit pathways
* Nuclear magnetic resonance spectroscopy PPARγ
* Isothermal titration calorimetry PPARγ
* Surface plasmon resonance analysis PPARγ
* PPARγ conformational selection mechanism

# Report location:

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