



Dec 06, 2024

## Peroxisome proliferator activated receptor alpha reporter gene assay

DOI

<https://dx.doi.org/10.17504/protocols.io.q26g7mbo1gwz/v1>

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**Protocol Citation:** Clementine Garoche, Jorke H. Kamstra, Barbara Kubíčková, Bruce Blumberg, Sebastian Hoffmann, Miriam Jacobs, Patrick Balaguer 2024. Peroxisome proliferator activated receptor alpha reporter gene assay. **protocols.io** <https://dx.doi.org/10.17504/protocols.io.q26g7mbo1gwz/v1>

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**Protocol status:** Working

**We use this protocol and it's working**

**Created:** November 18, 2024

**Last Modified:** December 06, 2024

**Protocol Integer ID:** 112279

**Keywords:** relative hppar $\alpha$  activation, chimeric ppar $\alpha$  binds to gal4re, unliganded chimeric ppar $\alpha$  bind, affinity for ppar $\alpha$ , hppar $\alpha$  cell, peroxisome proliferator, receptor alpha reporter gene, luciferase activity, hppar $\alpha$ , blocking of the hppar $\alpha$ , substrate of luciferase, expression of luciferase, reporter gene technique, measuring cell luminescence, ppar $\alpha$ , inhibition by test chemical, luciferase, assay, concentration of the effector ligand, effector ligand, cell luminescence, test chemical

**Funders Acknowledgements:**

European Commission

Grant ID: 825489

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## Abstract

The HG5LN-hPPAR $\alpha$  assay using a reporter gene technique is an *in vitro* tool that provides mechanistic data. The assay is used to establish signal activation (agonism) or blocking of the hPPAR $\alpha$  (antagonism) caused by a ligand. Unliganded chimeric PPAR $\alpha$  binds to GAL4RE and transactivates luciferase at a basal level. Once a chemical ligand binds to chimeric PPAR $\alpha$ , together they form heterodimers with RXR and recruit cofactors to modulate luciferase transcription. The expression of luciferase is thus directly linked to the concentration of the effector ligand and to its affinity for PPAR $\alpha$ . Once the substrate of luciferase, luciferin, is added to the cells, it is possible to assess transactivation by measuring cell luminescence. Luciferase activity can be evaluated quickly and inexpensively with a number of commercially available test kits. The test system for the assessment of the relative hPPAR $\alpha$  activation or inhibition by test chemicals provided here utilises the HG5LN-hPPAR $\alpha$  cell line.



## Attachments



SOP\_HG5LN-

hPPARa.pdf

842KB

