Dec 07, 2024

Peroxisome proliferator activated receptor gamma reporter gene assay

DOI
https://dx.doi.org/10.17504/protocols.io.yxmvm9×19l3p/v1

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Protocol Citation: Clementine Garoche, Jorke H. Kamstra, Barbara Kubíčková, Bruce Blumburg, Sebastian Hoffmann, Miriam Jacobs, Patrick Balaguer 2024. Peroxisome proliferator activated receptor gamma reporter gene assay. **protocols.io** https://dx.doi.org/10.17504/protocols.io.yxmvm9x19l3p/v1

Protocol status: Working
We use this protocol and it's working

Created: November 15, 2024

Last Modified: December 07, 2024

Protocol Integer ID: 112160

Keywords: PPAR gamma transactivation, in vitro, metabolism disruption, relative hpparγ activation by test chemical, relative hpparγ activation, hpparγ cell line, receptor gamma reporter gene, hpparγ, peroxisome proliferator, chimeric pparγ, unliganded chimeric pparγ, luciferase activity, blocking of the hpparγ, pparγ, substrate of luciferase, expression of luciferase, reporter gene technique, measuring cell luminescence, assay, cell luminescence, luciferase, concentration of the effector ligand, test chemical, effector ligand, hg5ln

Funders Acknowledgements:
European Commission
Grant ID: 825489

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Abstract

The HG5LN-hPPARγ 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 hPPARγ (antagonism) caused by a ligand. Unliganded chimeric PPARγ binds to GAL4RE and transactivates luciferase at a basal level. Once a chemical ligand binds to chimeric PPARγ, 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. 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 hPPARγ activation by test chemicals provided here utilises the HG5LN-hPPARγ cell line.

Attachments

SOP_HG5LN-hPPARg.pdf

844KB

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