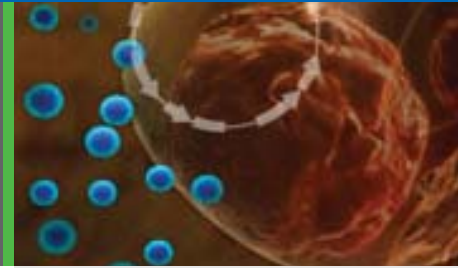
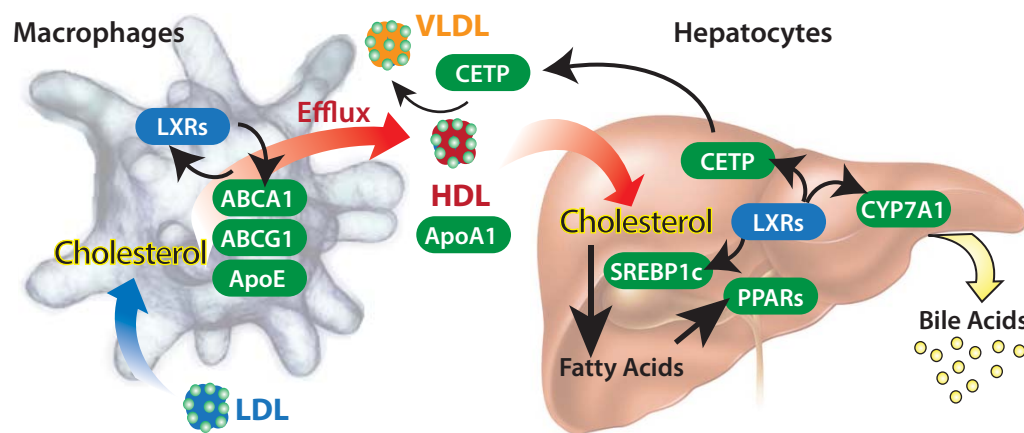


pGreenFire™ Sterol Response Reporters



Cholesterol Homeostasis Pathway Reporters

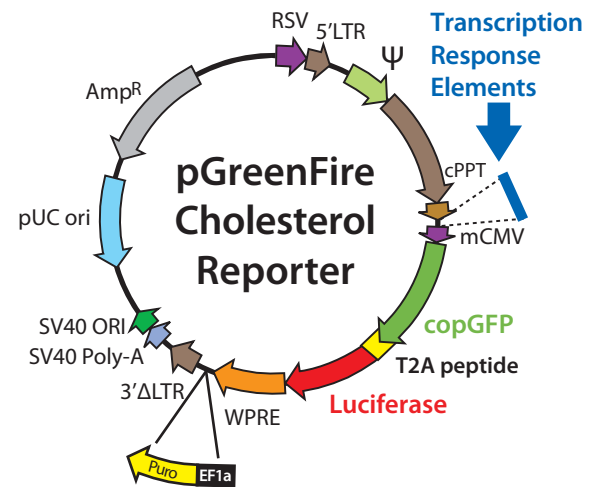


- Dissect Liver X Receptor (LXR) Pathways
- Lentivector transcription reporters available as Plasmids or prepackaged Virus
- HepG2 stable cell lines for each reporter also available
- Dual reporter vector system to quantitate Firefly Luciferase and GFP for live cell imaging

Liver X Receptors (LXRs) play a key role in lipid homeostasis. LXRs form heterodimers with RXR to bind to LXR response elements (LXREs) in the target promoter regions of cholesterol regulating genes. The LXRE is composed of two direct repeat hexanucleotide sequences, separated by four bases. LXREs are found in the promoters of key genes involved in cholesterol synthesis, transport, and metabolism, as well as transport and synthesis of fatty acids. LXRs are implicated as important sensors of sterol metabolism including the maintenance of normal cholesterol balance by promoting sterol efflux from peripheral cells. Increases in circulating HDL-cholesterol ultimately leads to hepatic sterol catabolism and excretion.

The LXR Response Cholesterol Homeostasis Pathway Reporters (shown in green boxes above) are designed to facilitate research into studying cholesterol efflux mechanisms and for developing target gene-specific LXR agonists that could regulate reverse cholesterol transport without increasing lipogenesis. Each construct is available as a lentivector plasmid, as prepackaged virus and as a stable reporter HepG2 cell line.

All of the pGreenFire Cholesterol Pathway Reporters contain a downstream constitutive EF1-Puro cassette for stable cell line selection. The HepG2 reporter cell lines are puromycin resistant stable reporter cell lines for the particular reporter construct indicated. Each of the Liver X Receptor Response Elements (LXREs) originate from the promoters of the gene indicated.



ABCA1
ABCG1
ApoE

CETP
CYP7A1
LXRα

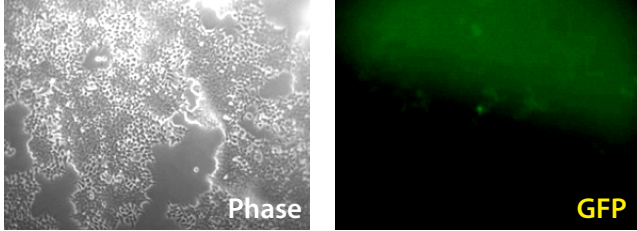
SREBP1c
ApoA1
PPRE

pGreenFire™ Sterol Response Reporters

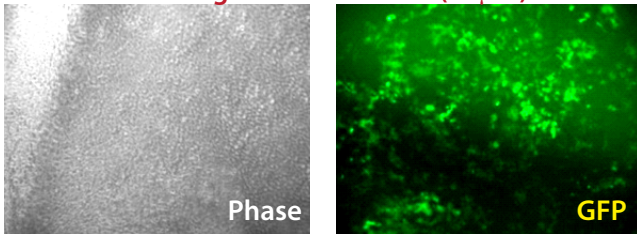
Monitor Transcription Network Activity using both GFP and Luciferase

ABCA1 LXRE GreenFire Reporter (HepG2 cell line)

Untreated Control

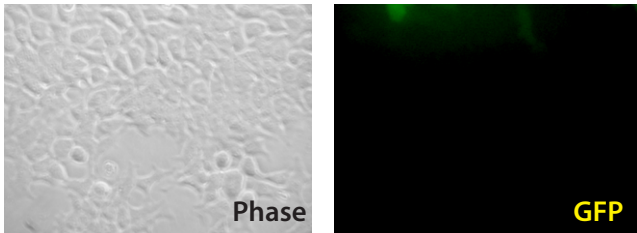


+ LXR Agonist TO-901317 (10 μM)

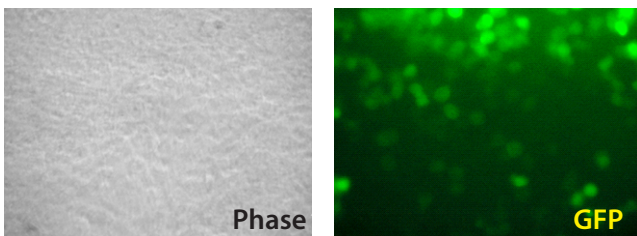


PPRE GreenFire Reporter (HepG2 cell line)

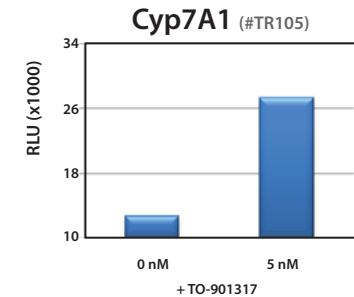
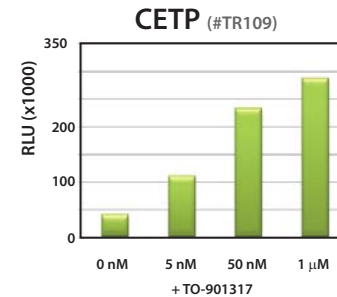
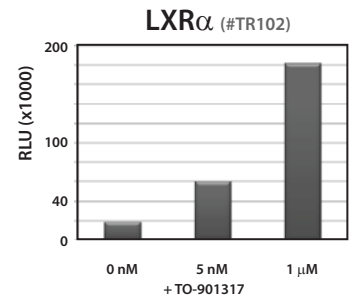
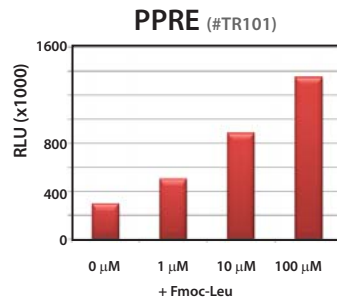
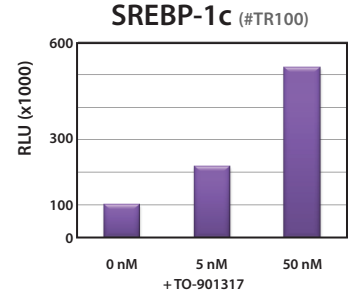
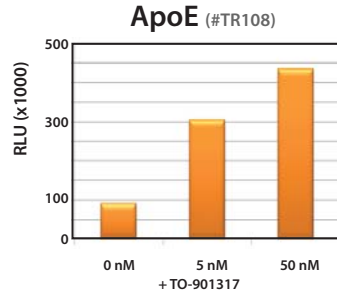
Untreated Control



+ PPAR Agonist + Fmoc-Leu (100 μM)



Sterol Response Elements from Selected Promoters



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