Molecular Pharmacology

Supplemental Information

Tumor Suppressor Protein p53 Negatively Regulates Human Pregnane X Receptor Activity

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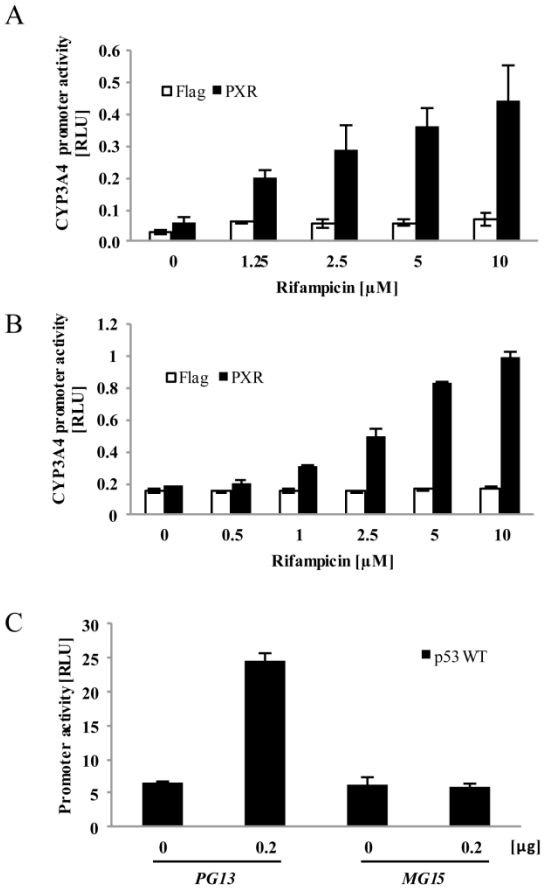
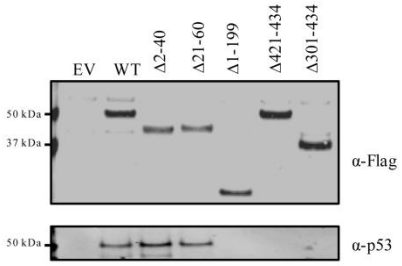


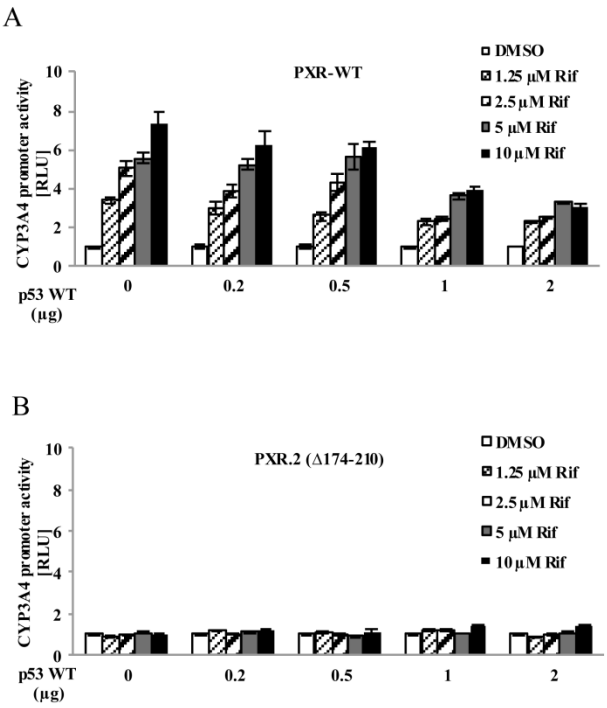
Supplemental Figure S1. **PXR and p53 are active in the cell lines tested.**

Flag-PXR (PXR) or empty vector control (Flag), *CYP3A4*-luc, and TK-Renilla luciferase plasmid were transfected into A) 293T and B) HCT116 $p53^{-/-}$ cells for 48 h. Cells were treated with DMSO or the indicated concentrations of rifampicin for 24 h after transfection. C) Wild-type p53 (p53 WT), luciferase reporter plasmid with a p53 responsive promoter (PG13) or luciferase reporter with a mutation at the promoter sequence (MG15) along with TK-Renilla were transfected into HCT116 $p53^{-/-}$ cells for 48 h. Firefly luciferase activity was measured and normalized to the Renilla luciferase reading and reported as relative luciferase units (RLU).



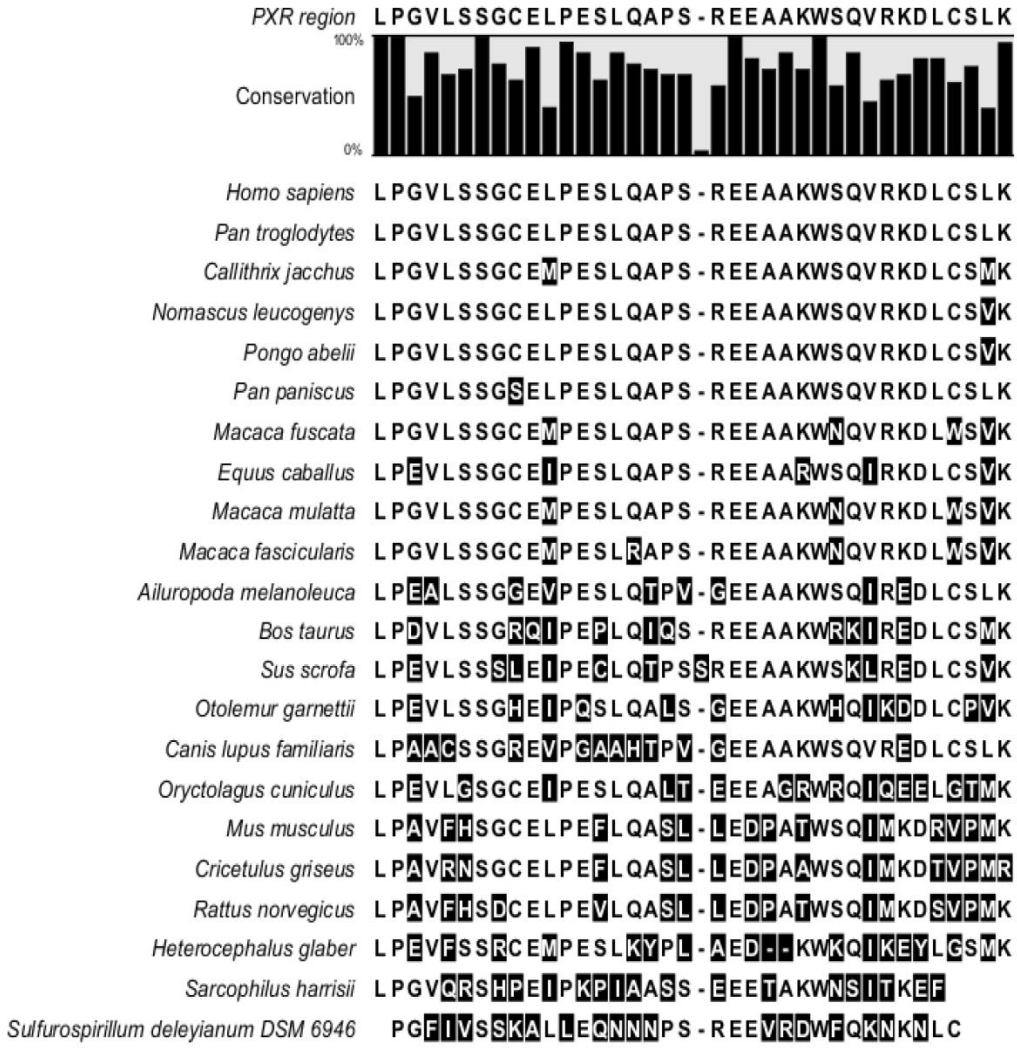
Supplemental Figure S2. **Interactions between p53 and various PXR mutants**.

Experiments were performed as described in Figure 4B.



Supplemental Figure S3. **PXR.1 but not PXR.2 is activated by rifampicin**.

HepG2 cells were transfected with either A) full-length PXR.1 (PXR-WT) or B) PXR.2 (PXRΔ174-210), *CYP3A4*-luc, TK-Renilla luciferase plasmid as a transfection control, and wild-type p53 (p53 WT) in the amounts indicated for 48 h. Cells were treated with either DMSO or the indicated concentrations of rifampicin for 24 h after transfection. Luciferase activity was measured and normalized to the Renilla luciferase reading and reported as relative luciferase units (RLU).



Supplemental Figure S4. Amino acids 174-210 are unique to PXR protein.

pBLAST search shows that amino acids 174-210 of PXR are unique to PXR and highly conserved among PXR proteins from different species. The top panel displays the percentage of conservation compared with human PXR. Amino acids that differ from human PXR are highlighted in black.