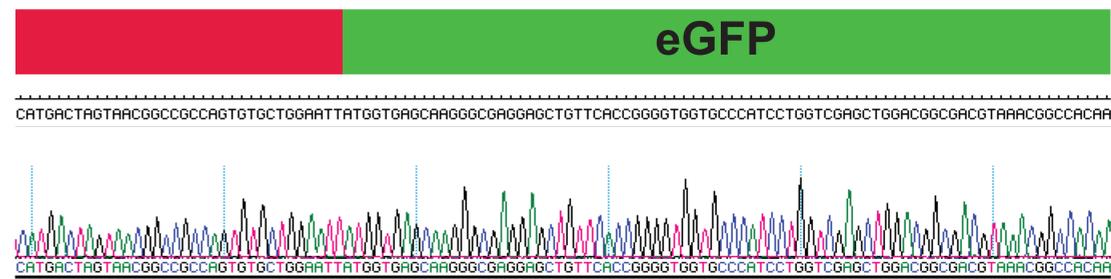
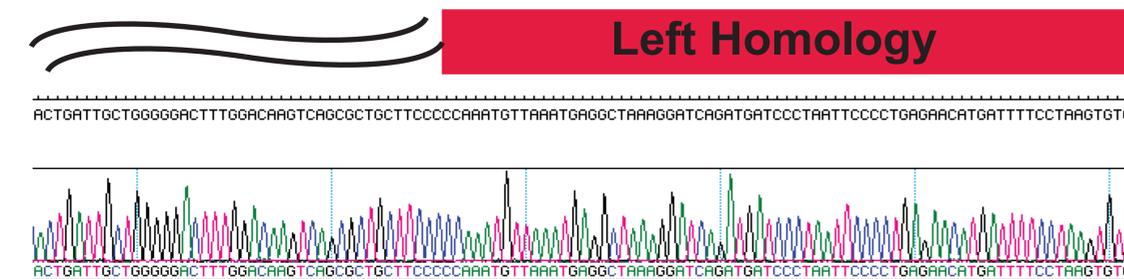


A

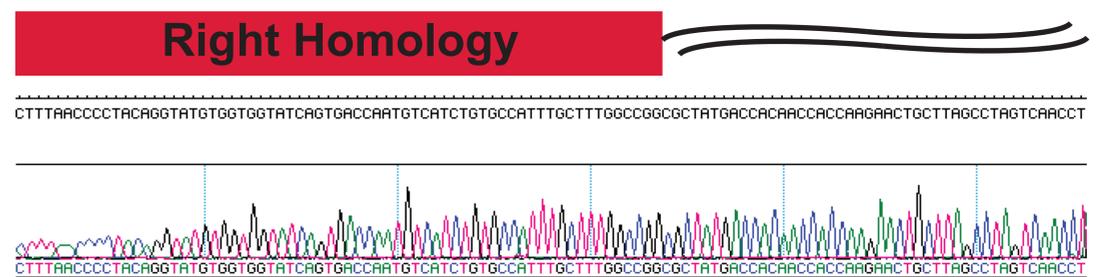
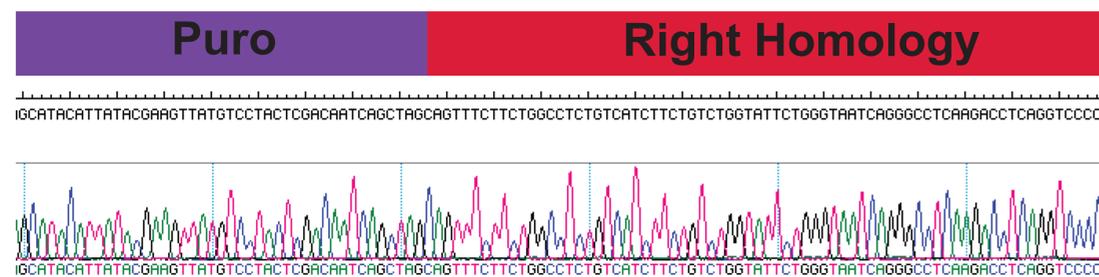
5' Amplicon

Cyp1a1 Endogenous Locus



3' Amplicon

Cyp1a1 Endogenous Locus

**B****Left Homology Domain:**

5'-ccaaatgttaaatgaggctaaaggatcagatgatccctaattcccctgagaacatgattttcctaagtgtggtgggtaggactcggggtgatacaccttgattatgtgtttatthtaatgtgtaggggaaaaatcaaacttgactttcac atagatattgtttatgatgatagtagatgatttaaagttgatttaggaaaatgtgaagtaaatacagactggtactatgtgaaatcacagattgacattggaagatgtcagtttagattggtacagcagttaagagaaagcggtctg gaattaggcaacttggcttggagctctgcatcaacactttctggtctgtgaccttgggcaagttacttacttctctgagcctcattgcaggctacttcatagatttggccagggtgaatgaagaaggactgtgaaattcttagccca cagtggtagttcaacaacttctcccacctcaccttcttcatgcccagtaagcagttctggtggaaggtttccccttccctgacactctagatattggctttctcatcccccaatctgacggctgactttttctctctgacacttctca gcagccacctccaagatccctacactgatca-3'

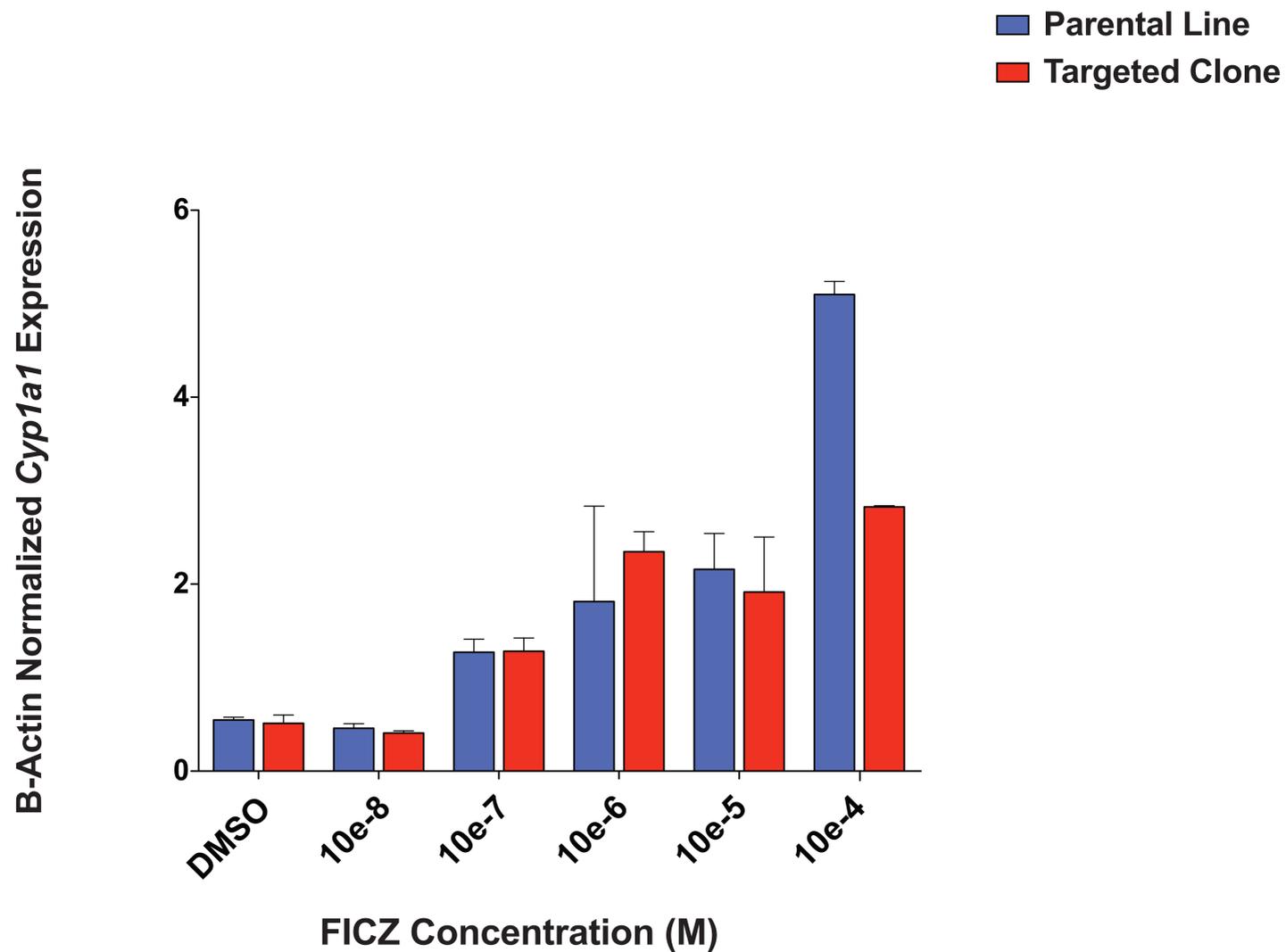
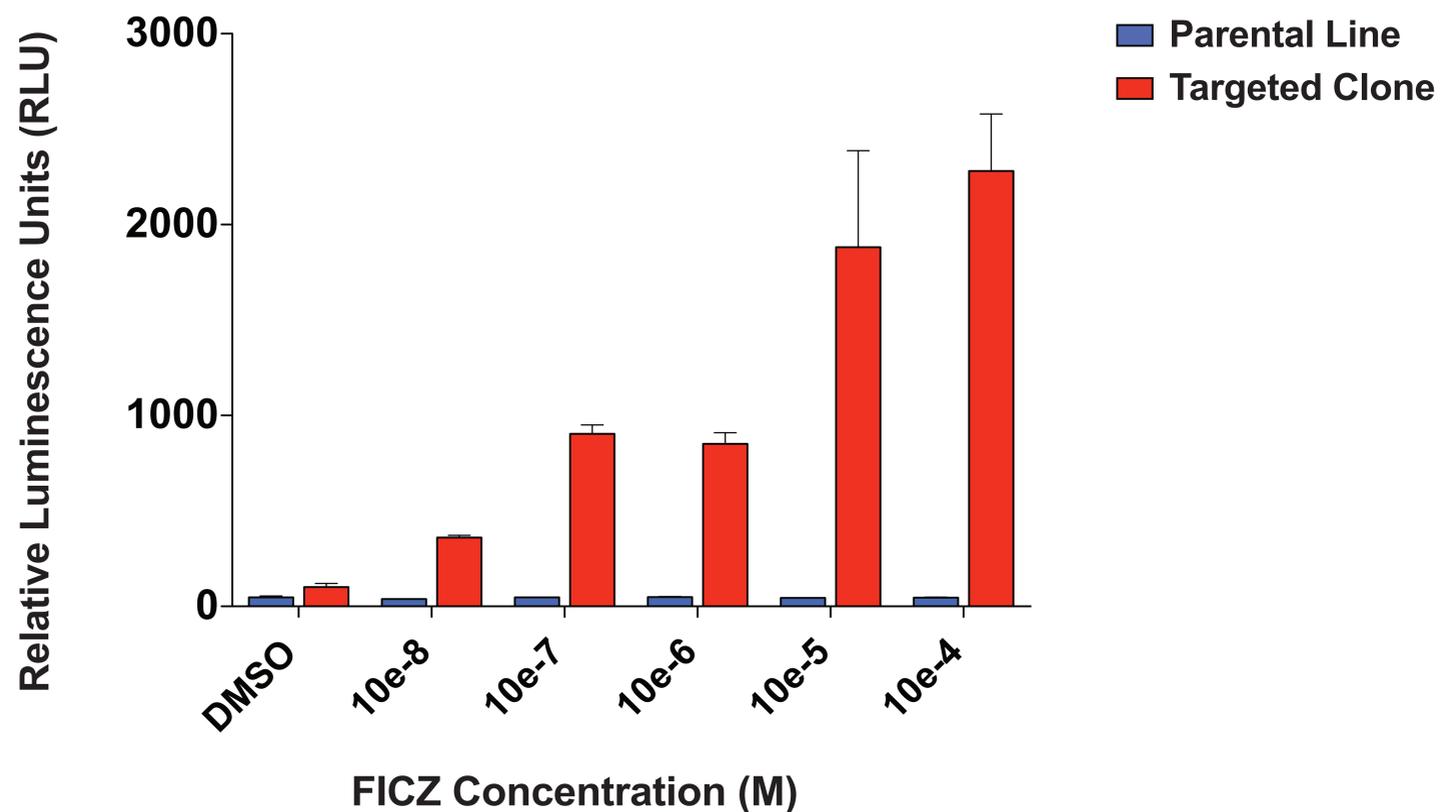
Right Homology Domain:

5'-agtttcttctggcctctgcatcttctgtctggtattctgggtaatcagggcctcaagacctcaggtcccaaaggcctgaagaatccaccagggccatgggctggcctctgattgggcacatgctgaccctgggaaagaaccgca cctggcactgtcaaggatgagccagcagatgaggacgtgctgcagatccgaattggctccacaccctggtggtgctgagcggcctggacaccatccggcaggccctggtgaggcaggcgatgattcaagggccggcccgac ctctacacctcaccctcatcagtaatggtcagagcatgtcctcagcccagactctggaccagtggtggctgccgcccgcctggcccagaatggcctgaaaagtttccattgctctgaccagcctcctcaacctctgctacctg gaagagcatgtgagcaaggaggctgaggctctgataagcacggtgaggagctgatggcaggcctgggcaacttaaccctacaggtatgtggtggtatcagtgaccaatgtcatctgtgccattgcttggccgg-3'

Single Guide RNA (sgRNA):

5'-cccaatctcatgtcggccacgg-3'

Supplemental Figure 1: Sanger sequencing confirms PCR validation strategy of *CYP1A1* reporter iPSCs A) PCR products discussed in Figure 1C were purified and sequenced using the Sanger method (Genewiz, Inc.). Both amplicons include endogenous regions of the *CYP1A1* locus as well as elements of the reporter construct (eGFP in the 5' amplicon; puro resistance gene in the 3' amplicon). B) Full sequences for the Left Homology Arm, Right Homology Arm, and single guide RNA (sgRNA).

A**B**

Supplemental Figure 2: *CYP1A1* reporter iPSCs elicit a response to the AHR agonist FICZ A) *CYP1A1* transcript level expression was increased in both the parental cell line (blue bar) and the targeted clone (red bar) in response to escalating doses of 6-formylindolo(3,2-b)carbazole (FICZ). B) Luciferase expression was observed as a result of FICZ treatment exclusively in the targeted clone (red bar) but not in the parental cell line (blue bar), showing that the integrated reporter construct was faithfully reporting on AHR-dependent *CYP1A1* upregulation.