

**Figure S1.** Effects of TCDD, OME, and ESO on induction of Ah-responsive genes. Effects of DMSO (set at 1.0), 10 nM TCDD, 50 μM OME, and 100 μM ESO on gene expression in U87-MG (A), 14-014s (B), and 15-037 (C) GBM cell lines were determined by real time PCR as outlined in the Methods. Effects of TCDD on 15-037 cells (D, left) and effects of OME and ESO on T98G cells (D, right) was determined in a Boyden chamber assay and results were quantitated as outlined in the Methods. Results are expressed as means ± SD for at least 3 separate determinations per treatment group and significant ( $p < 0.05$ ) inhibition by ESO and OME (\*) and reversal of these effects after AhR knockdown (\*\*) are indicated.

**Table S1.** Antibody and Reagents.

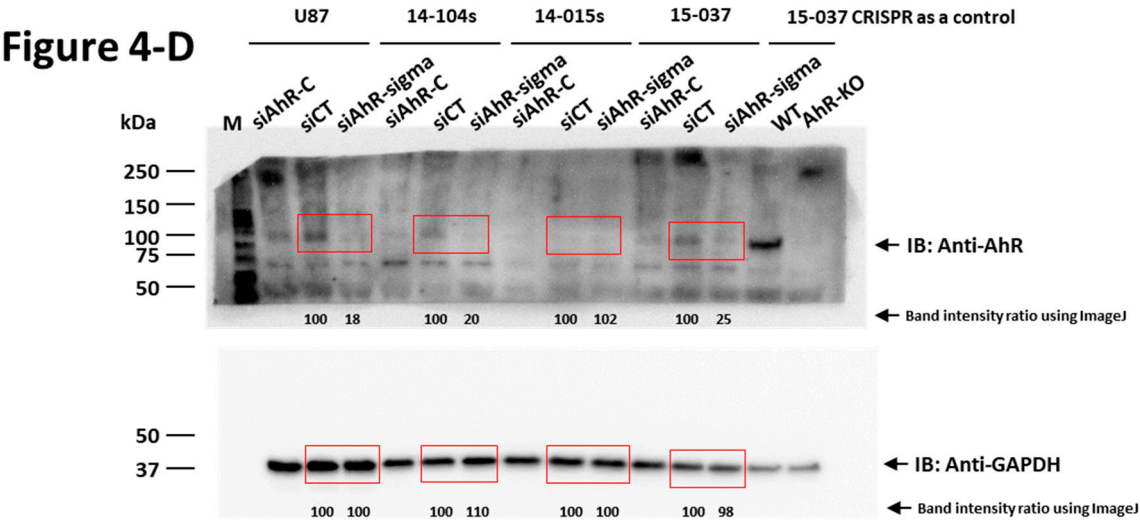
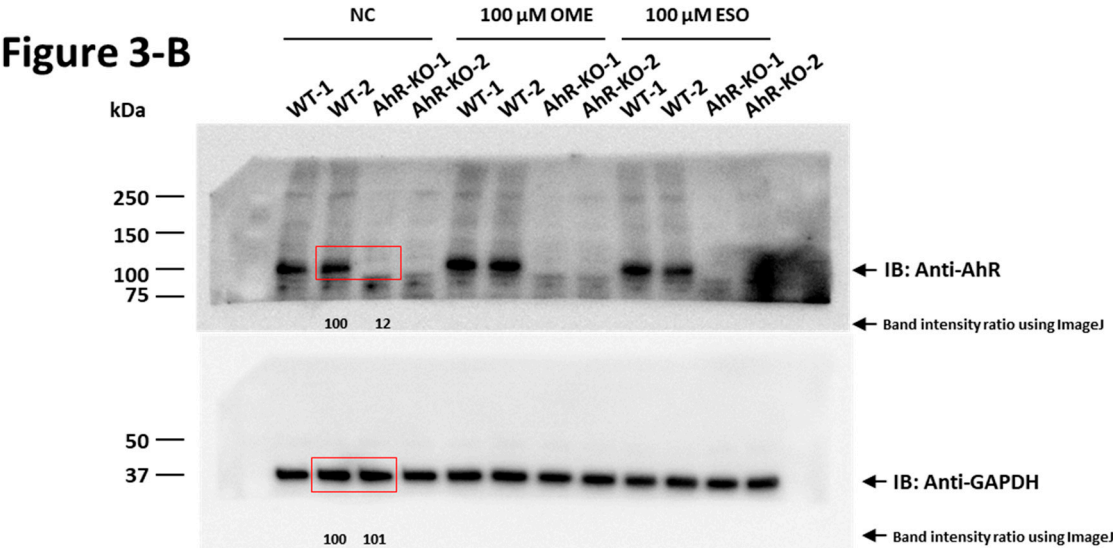
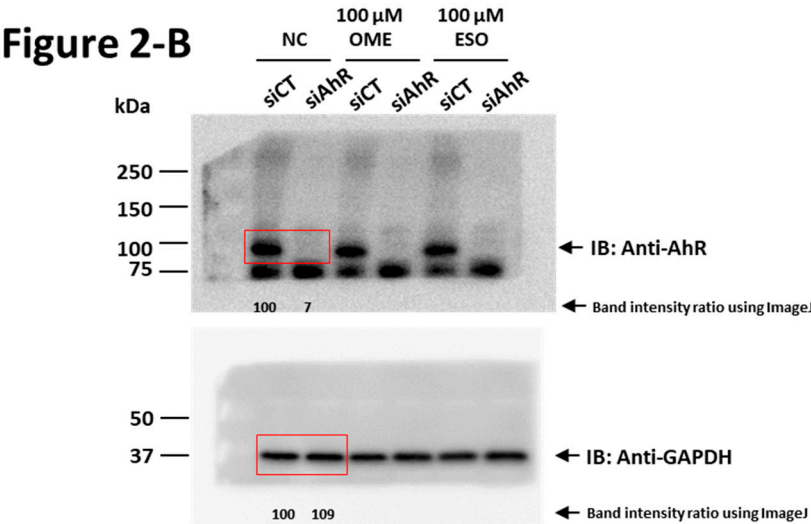
Type	Name	Company	Cat #
Antibody	AhR	Enzo Life Sciences	BML-SA210
	GAPDH	Cell Signaling	5174
siRNA	Negative control	Qiagen	1027281
	siAhR	Sigma	SASI_Hs02_00332181
Chemical	4-hydroxytamoxifen	Sigma	H7904
	Flutamide	Sigma	F9397
	Leflunomide	Sigma	L5025
	Mexiletine-HCl	Sigma	M2727
	Nimodipine	Sigma	N149
	Omeprazole	Sigma	O104
	Sulindac	Sigma	S8139
	1,4-Dihydroxy-2-naphthoic acid	Sigma	281255
	Tryptamine	Sigma	193747
	Quercetin	Sigma	Q4951
	$\beta$ -naphthoflavone	Sigma	N3633
	Tranilast	LKT Laboratories	T6902
	Esomeprazole potassium	LKT Laboratories	E7357

**Table S2.** RT-PCR Primers.

Species	Name	Forward (5'–3')	Reverse (5'–3')
Human	CYP1A1	GACCACAACCACCAAGAAG	AGCGAAGAATAGGGATGAAG
	CYP1B1	TATCACTGACATCTTCGGCG	ACCTGATCCAATTCTGCCTG
	CXCL12	TGGGCTCCTACTGTAAGGGTT	TTGACCCGAAGCTAAAGTGG
	CXCR4	TTTTCTTCACGGAAACAGGG	GTTACCATGGAGGGGATCAG
	MMP9	TTGGTCCACCTGGTTCAACT	ACGACGTCTTCCAGTACCGA
	TIPARP	ACACGTTCATGGCATTCAAA	TCTCAGGAGCACTTGGAAAGA
	TBP	GATCAGAACAACAGCCTGCC	TTCTGAATAGGCTGTGGGGT

**Table S3.** Treatment of Early Stage GBM PDX 15-037 with Omeprazole.

Treatment	Drug Route	Dose Schedule	Total Dose mg/kg	% Body Wt. Loss at Nadir	% T/C	Log Cell Kill	Tumor Free on day 35	Activity Rating
No treatment	—	—	—	0	—	—	0/5	—
Omeprazole	PO	QD3-20, 27; B.I.D: 21–26	3100	–1	41.9	0.7	0/6	Active (+)



Supplemental Materials: the uncropped Western blot