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E4_1

Allele-1

E4_4

E4_2

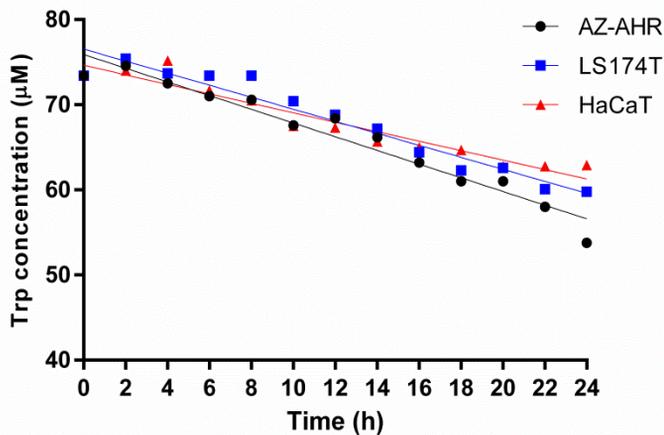
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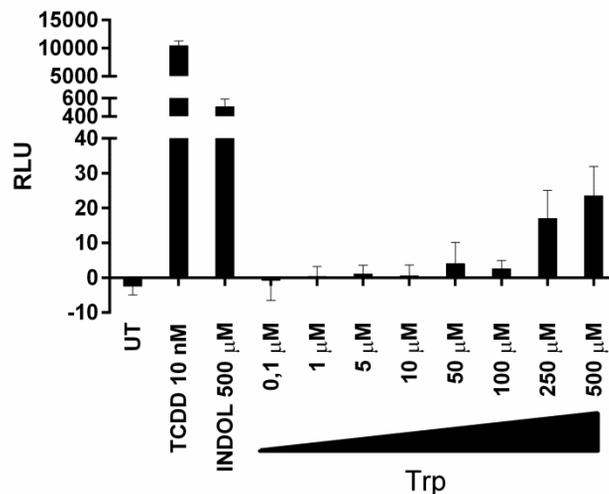
E4_5

Supplementary Figure 1. Sequencing data of HT-29 AhR KO clone E4 variant.

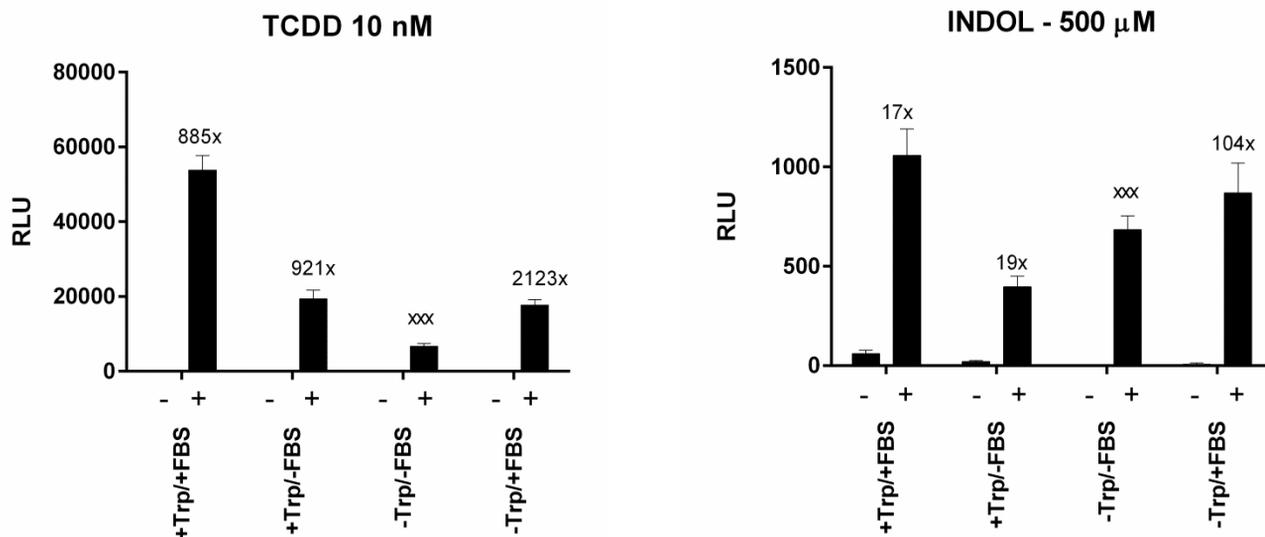
A Tryptophan in culture media of cell lines - time course



B -FBS/-Trp medium



C



Supplementary Figure 2. Tryptophan effects in culture medium on AhR activity. (A) Time-course of Trp levels in culture media from hepatic (AZ-AHR), intestinal (LS174T) and skin (HaCaT) cells. Determined by HPLC. (B) Induction of AhR-dependent Luciferase activity in AZ-AHR cells incubated for 24 h with TCDD, Indole and Trp in Trp/serum-free culture medium. (C) Induction of AhR-dependent Luciferase activity in AZ-AHR cells incubated for 24 h with TCDD and Indole in standard (+Trp/+FBS), serum-free (+Trp/-FBS), Trp-free (-Trp/+FBS) and Trp/serum-free (-Trp/-FBS) culture medium.

incubation		# fields	Σ cells	# positive AhR nudei	% positive AhR nuclei	% relative AhR nuclei	\emptyset AhR positive nudei
Vehicle (DMSO)	exp 1	4	316	17	5	9	
	exp 2	11	545	19	3	4	13 \pm 11.6
	exp 3	11	553	90	16	26	
10 nM TCDD	exp 1	7	318	171	54	100	
	exp 2	14	555	430	77	100	100 \pm 11.8
	exp 3	11	538	330	61	100	
1 mM Indole	exp 1	6	335	203	61	113	
	exp 2	9	338	248	73	95	105 \pm 9.2
	exp 3	12	500	323	65	107	
200 μ M IPY	exp 1	7	326	136	42	78	
	exp 2	9	295	176	60	78	73 \pm 9.0
	exp 3	11	514	194	38	62	
200 μ M 3-MI	exp 1	6	407	264	65	120	
	exp 2	9	329	236	72	94	105 \pm 13.8
	exp 3	13	603	375	62	102	
200 μ M TA	exp 1	6	421	187	44	81	
	exp 2	11	319	208	65	84	91 \pm 14.6
	exp 3	12	527	346	66	108	
100 μ M IAC	exp 1	6	393	199	51	94	
	exp 2	9	356	218	61	79	98 \pm 20.4
	exp 3	11	499	366	73	120	
200 μ M IAD	exp 1	7	377	175	46	85	
	exp 2	9	344	252	73	95	83 \pm 13.1
	exp 3	11	538	228	42	69	

Suppl. Table 1. Nuclear translocation of AhR – quantification of immunofluorescence.

LS180 cells were incubated for 90 min with MICT, vehicle or TCDD. Intracellular AhR was visualized with Alexa Fluor 488 labelled primary antibody. The whole staining protocol was performed in three independent experiments in technical duplicates. The AhR translocation was evaluated visually depending on the distinct signal intensity of AhR antibody in the nucleus and cytosol. For percentage calculation, approximately one hundred cells from at least four randomly selected fields of view in each replicate were used.