



Figure S1 The chemical structures of FICZ (left) and SR1 (right) (quoted from MCE website).



Figure S2. AhR/ARNT motif (quoted from JASPAR website)

Table S1. Predicted binding sites of CYP1A1, Gpc3, Smpd3 and AhR/ARNT (quoted from JASPAR website)

Matrix ID	Name	Score	Relative score	Sequence ID (Cyp1a1)	Start	End	Strand	Predicted sequence
MA0006.1	Ahr::Arnt	6.15805	0.853842612	NC_000075.6:c57704424-57703824	58	63	-	TGTGTG
MA0006.1	Ahr::Arnt	6.15805	0.853842612	NC_000075.6:c57704424-57703824	60	65	-	TGTGTG
MA0006.1	Ahr::Arnt	6.15805	0.853842612	NC_000075.6:c57704424-57703824	62	67	-	TGTGTG
MA0006.1	Ahr::Arnt	6.15805	0.853842612	NC_000075.6:c57704424-57703824	591	596	-	TGTGTG
MA0006.1	Ahr::Arnt	5.29689	0.81730469	NC_000075.6:c57704424-57703824	126	131	+	TGAGTG
MA0006.1	Ahr::Arnt	5.23853	0.814828622	NC_000075.6:c57704424-57703824	361	366	+	TGCGTC

Matrix ID	Name	Score	Relative score	Sequence ID (Gpc3)	Start	End	Strand	Predicted sequence
MA0006.1	Ahr.:Arnt	8.06995	0.934962247	NC_000086.7:c52614574-52613974	271	276	+	AGCGTG
MA0006.1	Ahr.:Arnt	8.06995	0.934962247	NC_000086.7:c52614574-52613974	374	379	-	AGCGTG
MA0006.1	Ahr.:Arnt	7.68027	0.918428643	NC_000086.7:c52614574-52613974	460	465	-	GGCGTG
MA0006.1	Ahr.:Arnt	7.68027	0.918428643	NC_000086.7:c52614574-52613974	498	503	-	GGCGTG
MA0006.1	Ahr.:Arnt	7.68027	0.918428643	NC_000086.7:c52614574-52613974	557	562	-	GGCGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	63	68	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	65	70	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	67	72	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	69	74	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	71	76	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	73	78	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	75	80	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	77	82	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	79	84	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	81	86	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	83	88	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	85	90	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	87	92	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	89	94	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	91	96	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	93	98	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	95	100	+	TGTGTG
MA0006.1	Ahr.:Arnt	6.15805	0.853842612	NC_000086.7:c52614574-52613974	97	102	+	TGTGTG
MA0006.1	Ahr.:Arnt	5.75182	0.836607052	NC_000086.7:c52614574-52613974	372	377	-	CGTGTG
MA0006.1	Ahr.:Arnt	5.29689	0.81730469	NC_000086.7:c52614574-52613974	32	37	+	TGGGTG
MA0006.1	Ahr.:Arnt	5.29689	0.81730469	NC_000086.7:c52614574-52613974	275	280	+	TGCCTG
MA0006.1	Ahr.:Arnt	5.29689	0.81730469	NC_000086.7:c52614574-52613974	510	515	-	TGCCTG
MA0006.1	Ahr.:Arnt	5.23853	0.814828622	NC_000086.7:c52614574-52613974	465	470	-	TGCGGG
MA0006.1	Ahr.:Arnt	5.23853	0.814828622	NC_000086.7:c52614574-52613974	472	477	-	TGCGGG
MA0006.1	Ahr.:Arnt	5.23853	0.814828622	NC_000086.7:c52614574-52613974	586	591	-	TGCGGG
MA0006.1	Ahr.:Arnt	4.89067	0.800069129	NC_000086.7:c52614574-52613974	59	64	+	CGGGTG
MA0006.1	Ahr.:Arnt	4.89067	0.800069129	NC_000086.7:c52614574-52613974	339	344	+	CGAGTG

  

Matrix ID	Name	Score	Relative score	Sequence ID (Smpd3)	Start	End	Strand	Predicted sequence
MA0006.1	Ahr.:Arnt	5.75182	0.836607052	NC_000074.6:c106338565-106337965	394	399	-	CTCGTG
MA0006.1	Ahr.:Arnt	5.29689	0.81730469	NC_000074.6:c106338565-106337965	435	440	-	TGCCTG
MA0006.1	Ahr.:Arnt	5.23853	0.814828622	NC_000074.6:c106338565-106337965	525	530	+	TGCGTC
MA0006.1	Ahr.:Arnt	4.89067	0.800069129	NC_000074.6:c106338565-106337965	105	110	+	CGAGTG