

Table S3. Lists of genes, which statically two fold up- and down-changed in most significantly up- (A) and down (B)-regulated pathways (p < 0.0001) (Ref. Table 1).

A																			
Pathway										RPKM values					RPKM values (relative)				
AP1	ATF-2	RAC-1	p53	Glypican	URP	HIF-1	IGF	UDP-GlcNAc	Gene Symbol	25mM	0mM_3h	0mM_6h	0mM_9h	0mM_24h	25mM	0mM_3h	0mM_6h	0mM_9h	0mM_24h
		ARHGEF2							ARHGEF2	20.63	40.54	51.00	58.22	56.39	1.00	1.97	2.47	2.82	2.73
									ASNS	9.76	62.31	119.11	110.96	90.32	1.00	6.38	12.20	11.37	9.25
ATF4	ATF3	ATF3	ATF3						ATF3	0.43	17.05	9.28	9.93	15.38	1.00	39.65	21.58	23.09	35.76
		ATF4		ATF4					ATF4	98.82	274.43	283.24	336.25	613.16	1.00	2.78	2.87	3.40	6.20
			BCL2A1						BCL2A1	3.17	20.73	21.44	10.19	0.77	1.00	6.54	6.76	3.21	0.24
CASP3									CASP3	16.55	28.61	52.42	39.91	8.40	1.00	1.73	3.17	2.41	0.51
									CTGF	12.11	253.60	174.48	146.08	32.50	1.00	20.95	14.41	12.07	2.68
									CYR61	49.48	499.28	254.48	194.17	87.82	1.00	10.09	5.14	3.92	1.77
	DDIT3	DDIT3							DDIT3	19.19	408.29	393.41	512.04	490.88	1.00	21.28	20.50	26.68	25.58
		DNAJC3						DNAJC3	DNAJC3	13.76	27.24	81.02	94.22	34.61	1.00	1.98	5.89	6.85	2.52
	DUSP1	DUSP1	DUSP1	DUSP1					DUSP1	34.97	246.35	142.87	108.02	64.10	1.00	7.04	4.09	3.09	1.83
	DUSP5	DUSP5	DUSP5						DUSP5	14.67	74.60	72.74	69.99	111.20	1.00	5.09	4.96	4.77	7.58
EGR2									EDN1	0.19	4.75	2.82	1.02	0.42	1.00	24.61	14.59	5.26	2.18
									EGR2	0.05	0.39	0.20	0.26	0.15	1.00	7.32	3.66	4.88	2.81
									EIF2AK3	4.80	8.59	11.98	11.03	6.06	1.00	1.79	2.49	2.30	1.26
									FGF2	12.00	44.76	76.11	63.08	31.44	1.00	3.73	6.34	5.26	2.62
									FHL2	27.10	99.41	95.45	62.11	37.99	1.00	3.67	3.52	2.29	1.40
FOS	FOS								FOS	0.57	3.94	4.15	5.52	9.01	1.00	6.91	7.27	9.68	15.80
	GADD45A	GADD45A	GADD45A						GADD45A	25.00	269.26	240.30	188.47	142.88	1.00	10.77	9.61	7.54	5.72
				GADD45B					GADD45B	6.74	46.84	26.59	24.79	25.17	1.00	6.95	3.95	3.68	3.73
									GFPT1	15.18	26.74	92.26	93.17	53.88	1.00	1.76	6.08	6.14	3.55
									HERPUD1	23.87	289.16	304.54	289.10	191.89	1.00	12.11	12.76	12.11	8.04
HMOX1									HMOX1	34.71	295.68	340.13	548.89	691.14	1.00	8.52	9.80	15.81	19.91
			HSPA1A						HSPA1A	12.61	38.75	70.29	107.30	217.86	1.00	3.07	5.57	8.51	17.28
				ID2					ID2	1.34	4.40	2.92	3.24	2.67	1.00	3.28	2.18	2.41	1.99
									IGFBP1	0.62	3.07	3.81	2.09	8.44	1.00	4.92	6.12	3.35	13.55
									IGFBP3	1.38	6.00	6.44	5.58	6.53	1.00	4.34	4.67	4.04	4.73
									IGFBP5	0.04	0.29	0.17	0.21	0.01	1.00	6.58	3.81	4.85	0.23
	IL23A	IL23A							IL23A	0.24	1.13	1.28	1.11	0.76	1.00	4.64	5.24	4.56	3.12
IL6	IL6	IL6							IL6	5.76	104.77	99.39	59.55	33.87	1.00	18.19	17.26	10.34	5.88
IL8	IL8								IL8	127.06	1109.16	1007.69	684.11	173.11	1.00	8.73	7.93	5.38	1.36
	JDP2	JDP2							JDP2	1.80	5.49	5.68	7.27	10.52	1.00	3.05	3.15	4.04	5.84
									KLF4	2.43	6.61	7.71	9.02	17.33	1.00	2.72	3.17	3.71	7.13
									MDM4	3.70	6.49	8.96	7.13	3.72	1.00	1.75	2.42	1.93	1.01
MMP1									MMP1	9.25	25.52	53.35	49.78	14.98	1.00	2.76	5.77	5.38	1.62
									NLRC4	0.19	0.21	0.81	1.20	3.21	1.00	1.06	4.16	6.18	16.58
									NRG1	2.11	8.65	9.42	6.41	3.80	1.00	4.10	4.46	3.04	1.80
									PAWR	17.80	30.59	48.69	42.10	28.42	1.00	1.72	2.74	2.37	1.60
									PGM3	19.93	21.09	66.12	64.49	19.97	1.00	1.06	3.32	3.24	1.00
									PIP5K1B	0.00	0.05	0.05	0.06	0.08	nd	nd	nd	nd	nd
PLAUR									PLAUR	17.91	35.14	40.01	53.27	23.69	1.00	1.96	2.23	2.97	1.32
									PLK3	6.77	34.62	21.50	21.97	21.85	1.00	5.11	3.18	3.25	3.23
PRKCE									PRKCE	3.05	3.91	7.67	9.36	8.05	1.00	1.28	2.51	3.07	2.64
									RASGRF2	0.12	0.12	0.69	1.28	1.77	1.00	1.00	5.71	10.67	14.71
RCAN1									RCAN1	6.96	20.96	26.26	23.58	8.91	1.00	3.01	3.77	3.39	1.28
									RCHY1	4.00	4.89	10.05	9.56	4.71	1.00	1.22	2.51	2.39	1.18
	SERPIN5	SERPIN5	SERPIN5						SERPIN5	20.43	53.00	70.33	39.28	19.29	1.00	2.59	3.44	1.92	0.94
			SERPINE1						SERPINE1	73.79	394.05	202.27	155.38	29.30	1.00	5.34	2.74	2.11	0.40

				SGK1							SGK1	2.09	37.07	28.06	18.30	8.75	1.00	17.74	13.42	8.76	4.19
SLC3A2											SLC3A2	64.37	222.40	245.56	380.13	1580.55	1.00	3.46	3.81	5.91	24.55
											SMURF2	42.25	101.49	139.90	127.23	31.84	1.00	2.40	3.31	3.01	0.75
	TGFB2	TGFB2									TGFB2	0.17	1.98	1.22	0.51	0.97	1.00	11.85	7.29	3.06	5.82
											TGIF1	22.73	35.96	61.43	54.59	54.73	1.00	1.58	2.70	2.40	2.41
THBD											THBD	2.02	9.86	37.12	28.75	13.05	1.00	4.88	18.37	14.23	6.46
											TXNRD1	123.12	238.09	314.73	406.64	582.04	1.00	1.93	2.56	3.30	4.73
											UAP1	50.35	165.14	325.21	292.21	61.24	1.00	3.28	6.46	5.80	1.22
											VEGFA	27.05	50.26	73.04	91.09	80.11	1.00	1.86	2.70	3.37	2.96
											WIP1	17.03	13.26	45.87	78.72	62.05	1.00	0.78	2.69	4.62	3.64
											XBP1	54.63	200.41	168.41	134.42	173.54	1.00	3.67	3.08	2.46	3.18

B

		Pathway										RPKM values					RPKM values (relative)				
EPHB	Fatty acid	Androgen	Glypican	Syndecan	beta catenin	ncWnt	Wnt	N-cadherin	PLK1	G2/M transition	Gene Symbol	25mM	0mM_3h	0mM_6h	0mM_9h	0mM_24h	25mM	0mM_3h	0mM_6h	0mM_9h	0mM_24h
											ACACA	25.54	18.55	11.81	8.19	16.44	1.00	0.73	0.46	0.32	0.64
											ACACB	0.88	0.76	0.38	0.34	0.31	1.00	0.86	0.43	0.39	0.35
											AGPAT3	14.86	10.36	5.98	6.28	11.43	1.00	0.70	0.40	0.42	0.77
											AGPAT4	2.81	1.89	1.06	1.48	1.24	1.00	0.67	0.38	0.53	0.44
			BCL9	BCL9	BCL9	BCL9	BCL9	BCL9			BCL9	3.95	1.10	1.02	2.07	2.94	1.00	0.28	0.26	0.52	0.74
										BUB1B	26.19	16.76	9.89	8.89	1.80	1.00	0.64	0.38	0.34	0.07	
										CAMK2G	20.64	12.67	8.07	9.82	16.51	1.00	0.61	0.39	0.48	0.80	
										CDC14B	4.62	3.33	1.85	1.51	3.23	1.00	0.72	0.40	0.33	0.70	
										CDC25B	112.41	80.97	35.67	33.92	34.95	1.00	0.72	0.32	0.30	0.31	
										CEP250	16.69	10.09	4.83	6.98	11.84	1.00	0.60	0.29	0.42	0.71	
										CHD7	5.09	1.80	1.01	1.44	2.59	1.00	0.35	0.20	0.28	0.51	
										CTDSP1	34.71	17.73	10.27	14.15	30.63	1.00	0.51	0.30	0.41	0.88	
										CTDSP2	45.01	19.13	12.71	16.87	31.69	1.00	0.42	0.28	0.37	0.70	
	DGAT2									DGAT2	2.14	0.73	0.29	0.22	1.27	1.00	0.34	0.13	0.10	0.59	
										DLGAP5	41.36	29.86	19.29	13.88	1.51	1.00	0.72	0.47	0.34	0.04	
DNM1										DNM1	6.64	4.89	3.16	2.86	1.75	1.00	0.74	0.47	0.43	0.26	
										EEF2K	9.32	5.79	2.91	3.84	6.31	1.00	0.62	0.31	0.41	0.68	
EFNA5										EFNA5	6.07	2.91	1.81	2.37	8.30	1.00	0.48	0.30	0.39	1.37	
										EHMT2	20.74	14.31	7.16	8.70	23.06	1.00	0.69	0.35	0.42	1.11	
										ELOVL3	0.58	0.14	0.02	0.06	0.06	1.00	0.23	0.03	0.10	0.10	
										ELOVL6	17.46	7.23	4.10	4.98	5.92	1.00	0.41	0.23	0.28	0.34	
EPHB4										EPHB4	12.38	5.34	1.47	2.49	10.24	1.00	0.43	0.12	0.20	0.83	
										ERC1	19.62	10.51	5.18	8.45	11.47	1.00	0.54	0.26	0.43	0.58	
										ETV1	6.66	2.86	0.78	0.30	0.46	1.00	0.43	0.12	0.05	0.07	
										FAM123B	1.39	0.48	0.38	0.75	1.30	1.00	0.35	0.27	0.54	0.94	
										FOXO1	4.80	3.57	1.08	0.85	2.07	1.00	0.74	0.22	0.18	0.43	
										FZD1	0.65	0.38	0.22	0.22	0.48	1.00	0.58	0.33	0.34	0.74	
										FZD5	1.81	0.80	0.61	0.98	2.13	1.00	0.44	0.34	0.54	1.18	
										FZD7	1.80	0.79	0.54	0.78	1.58	1.00	0.44	0.30	0.43	0.88	
										FZD8	17.95	5.02	3.19	3.45	6.85	1.00	0.28	0.18	0.19	0.38	
										GAB1	2.81	0.84	0.47	0.50	1.46	1.00	0.30	0.17	0.18	0.52	
GRB7										GRB7	2.40	0.20	0.06	0.15	0.41	1.00	0.08	0.02	0.06	0.17	
										HIP1	10.17	5.90	2.38	2.23	2.30	1.00	0.58	0.23	0.22	0.23	
										HOXB13	5.57	1.24	0.62	0.49	2.56	1.00	0.22	0.11	0.09	0.46	
										IL17RD	1.68	0.64	0.17	0.21	0.45	1.00	0.38	0.10	0.12	0.27	
										INCENP	26.85	13.05	9.76	13.60	5.45	1.00	0.49	0.36	0.51	0.20	
KALRN										KALRN	0.42	0.40	0.19	0.12	0.07	1.00	0.95	0.45	0.29	0.17	
										KDM3A	21.78	6.01	7.50	10.04	17.27	1.00	0.28	0.34	0.46	0.79	

								KIF20A	KIF20A	0.42	0.40	0.19	0.12	0.07	1.00	0.95	0.45	0.29	0.17
								KREMEN1	KREMEN1	3.32	1.57	0.87	0.78	1.77	1.00	0.47	0.26	0.23	0.53
			LAMA3					LAMA3	LAMA3	2.31	1.19	0.82	0.82	0.52	1.00	0.51	0.35	0.35	0.22
LPIN1								LPIN1	LPIN1	30.03	20.26	10.12	8.85	19.28	1.00	0.67	0.34	0.29	0.64
	MAP2K6	MAP2K6						MAP2K6	MAP2K6	1.63	1.19	0.84	0.60	2.50	1.00	0.73	0.52	0.37	1.53
		MAP3K12						MAP3K12	MAP3K12	10.36	5.65	3.08	4.87	10.05	1.00	0.55	0.30	0.47	0.97
		MAP3K4						MAP3K4	MAP3K4	15.76	13.31	6.59	5.54	5.19	1.00	0.84	0.42	0.35	0.33
		MAP3K8						MAP3K8	MAP3K8	1.52	0.95	0.34	0.41	0.55	1.00	0.63	0.22	0.27	0.36
	MAPK14	MAPK14						MAPK14	MAPK14	23.44	11.99	9.13	9.29	10.80	1.00	0.51	0.39	0.40	0.46
		MAPKAPK3						MAPKAPK3	MAPKAPK3	14.94	8.93	5.36	6.75	39.82	1.00	0.60	0.36	0.45	2.66
								MXI1	MXI1	32.60	12.19	8.15	7.40	24.02	1.00	0.37	0.25	0.23	0.74
	NCOA1							NCOA1	NCOA1	7.26	5.33	3.09	3.46	7.27	1.00	0.73	0.43	0.48	1.00
	NCOA2	NCOA2	NCOA2	NCOA2	NCOA2	NCOA2	NCOA2	NCOA2	NCOA2	7.60	3.44	1.98	3.09	5.16	1.00	0.45	0.26	0.41	0.68
								NFKBIA	NFKBIA	127.34	177.51	59.73	35.89	32.56	1.00	1.39	0.47	0.28	0.26
	NRIP1	NRIP1	NRIP1	NRIP1	NRIP1	NRIP1	NRIP1	NRIP1	NRIP1	21.42	16.07	11.40	7.13	3.90	1.00	0.75	0.53	0.33	0.18
								NUMA1	NUMA1	57.90	31.13	18.94	25.99	35.30	1.00	0.54	0.33	0.45	0.61
				PAG1				PAG1	PAG1	1.24	0.38	0.18	0.18	0.29	1.00	0.30	0.15	0.14	0.23
PAK1		PAK1	PAK1		PAK1			PAK1	PAK1	36.44	23.38	16.18	11.67	20.02	1.00	0.64	0.44	0.32	0.55
	PATZ1	PATZ1	PATZ1	PATZ1	PATZ1	PATZ1	PATZ1	PATZ1	PATZ1	14.57	8.47	4.54	6.85	21.29	1.00	0.58	0.31	0.47	1.46
	POU2F1							POU2F1	POU2F1	3.31	1.55	1.07	1.62	2.83	1.00	0.47	0.32	0.49	0.85
PPARA								PPARA	PPARA	7.09	2.38	1.73	3.60	6.88	1.00	0.34	0.24	0.51	0.97
			PPARG		PPARG			PPARG	PPARG	66.87	20.14	19.18	14.61	34.35	1.00	0.30	0.29	0.22	0.51
			PRKCD					PRKCD	PRKCD	11.77	5.91	3.30	6.31	13.90	1.00	0.50	0.28	0.54	1.18
			PTCH1					PTCH1	PTCH1	1.76	0.38	0.26	0.45	1.78	1.00	0.21	0.15	0.25	1.01
								RASGRF1	RASGRF1	0.33	0.16	0.10	0.11	0.64	1.00	0.47	0.29	0.32	1.92
							RIN2	RIN2	47.36	16.61	16.32	16.05	7.19	1.00	0.35	0.34	0.34	0.15	
							RPS6KA1	RPS6KA1	29.76	17.04	4.51	5.93	23.78	1.00	0.57	0.15	0.20	0.80	
							RUNX2	RUNX2	6.16	1.67	1.45	0.98	0.97	1.00	0.27	0.23	0.16	0.16	
RXRA								RXRA	RXRA	13.98	7.25	2.54	3.86	11.05	1.00	0.52	0.18	0.28	0.79
		SALL4	SALL4	SALL4	SALL4	SALL4	SALL4	SALL4	SALL4	0.57	0.41	0.18	0.16	0.49	1.00	0.71	0.31	0.27	0.85
		SMAD3						SMAD3	SMAD3	69.01	71.86	30.38	20.14	10.15	1.00	1.04	0.44	0.29	0.15
		SMARCA4	SMARCA4	SMARCA4	SMARCA4	SMARCA4	SMARCA4	SMARCA4	SMARCA4	31.26	23.05	11.86	14.09	29.51	1.00	0.74	0.38	0.45	0.94
		SOS1						SOS1	SOS1	13.94	6.88	4.13	4.63	7.28	1.00	0.49	0.30	0.33	0.52
SRC	SRC							SRC	SRC	21.64	11.10	5.92	9.55	27.57	1.00	0.51	0.27	0.44	1.27
	SVIL	SVIL	SVIL	SVIL	SVIL	SVIL	SVIL	SVIL	SVIL	3.05	2.58	1.23	0.94	1.21	1.00	0.85	0.40	0.31	0.40
	TBL1XR1							TBL1XR1	TBL1XR1	37.46	24.16	13.33	8.00	5.50	1.00	0.64	0.36	0.21	0.15
	TCF4	TCF4	TCF4	TCF4	TCF4	TCF4	TCF4	TCF4	TCF4	4.81	3.57	1.86	0.95	1.04	1.00	0.74	0.39	0.20	0.22
		TCF7L1						TCF7L1	TCF7L1	2.23	1.53	0.37	0.49	1.21	1.00	0.69	0.17	0.22	0.54
		TCF7L2	TCF7L2	TCF7L2	TCF7L2	TCF7L2	TCF7L2	TCF7L2	TCF7L2	14.75	6.97	5.23	5.58	8.74	1.00	0.47	0.35	0.38	0.59
								TDRD7	TDRD7	12.74	7.55	4.46	5.35	8.79	1.00	0.59	0.35	0.42	0.69
		TLE1	TLE1	TLE1	TLE1	TLE1	TLE1	TLE1	TLE1	8.62	5.63	2.12	2.22	6.65	1.00	0.65	0.25	0.26	0.77
		TLE4	TLE4	TLE4	TLE4	TLE4	TLE4	TLE4	TLE4	9.70	5.10	2.67	2.33	3.03	1.00	0.53	0.27	0.24	0.31
								WEE1	WEE1	15.54	9.73	7.71	6.45	3.44	1.00	0.63	0.50	0.42	0.22
		WNT3				WNT3		WNT3	WNT3	0.97	0.63	0.25	0.15	1.57	1.00	0.64	0.26	0.15	1.61
							ZBTB33	ZBTB33	ZBTB33	13.69	7.71	6.06	5.48	8.87	1.00	0.56	0.44	0.40	0.65
	ZNF318	ZNF318	ZNF318	ZNF318	ZNF318	ZNF318	ZNF318	ZNF318	ZNF318	5.69	2.98	1.75	2.35	4.65	1.00	0.52	0.31	0.41	0.82

