

Modulation of clock Gene Expression by the Transcriptional Coregulator Receptor-
Interacting Protein 140 (RIP140)

Ariel H.B. Poliandri, Joshua J. Gamsby, Mark Christian, Michael J. Spinella, Jennifer
J. Loros, Jay C. Dunlap, and Malcolm G. Parker

SUPPLEMENTARY ONLINE MATERIAL

Supplementary Table S1. QPCR primers

Gene	Accession num.	Primers seq. 5'->3' FW/RV
Mouse Beta-2-microglobulin (B2m)	NM_009735.3	TGGTGCTTGTCTCACTGACC
		TATGTTCCGGCTTCCCATTCT
Mouse Ribosomal Protein L13A (RPL13a)	NM_009438.4	GGAGAAACGGAAGGAAAAGG
		GAGTCCGTTGGTCTTGAGGA
Mouse TATA box binding protein (Tbp)	NM_013684.3	CAGCCTTCCACCTTATGCTC
		CCGTAAGGCATCATTGGACT
Mouse Nuclear receptor interacting protein 1 (Nrip1), (RIP140)	NM_173440.	CGACTGCTATGGGAGGTGAT
		AGCCAAGCTCTTCTCCATGA
Mouse aryl hydrocarbon receptor nuclear translocator-like (Arntl), (Bmal1)	NM_007489.3	AAGTGCAACAGGCCTTCAGT
		GGTGGCCAGCTTTTCAAATA
Mouse Fatty acid synthase (Fas)	NM_007988.3	TGCGGAAACTTCAGGAAATG
		AGAGACGTGTCACTCCTGGACTT
Mouse Serol regulatory element binding factor 1c (Srebf1c), (SREBP1c)	NM_011480.2	CCAGAGGGTGAGCCTGACA
		AGCCTCTGCAATTTCCAGATCT
Mouse Phosphoenolpyruvate carboxykinase 1 (Pck1), (PECK),	NM_011044.2	ATCATCTTTGGTGGCCGTAG
		CATGGCTGCTCCTACAAACA
Mouse Circadian locomoter output cycles kaput (Clock)	NM_007715.5	GAGGTCGTCCTTCAGCAGTC
		TGTGACATGCCTTGTGGAAT
Mouse Cryptochrome 1 (Cry1)	NM_007771.3	TTCCTGCTACTGCCCTGTG
		TTTTGCAGGGAAGCCTCTTA
Mouse Cryptochrome 2 (Cry2)	NM_009963.3	ATGTGTTCCCAAGGCTGTTC
		CCTCCTTGGCCATCTTCATA
Mouse Period homolog 1 (Per1)	NM_011065.3	CCAGGATGTGGGTGTCTTCT
		TTTCTGGGTGAAGTCCTTG
Mouse Period homolog 2 (Per2)	NM_011066.2	ATTGGGAGGCACAAAGTCAG
		CAGTAGCCGGTGGATTTGTT
Mouse RAR-related orphan receptor alpha (RORA),	NM_013646.1	CCCCTACTGTTCCCTCACCA
		CCAGGTGGGATTTGGATATG
Human Beta-2-microglobulin (B2m)	NM_004048	TCTCTCTTTCTGGCCTGGAG
		TCAATGTCCGGATGGATGAAA
Human RPL13a	NM_012423	CCGGAAGAAGAAACAGCTCA
		TATTGGGCTCAGACCAGGAG
Human Ribosomal Protein L19 (RPL19)	NM_000981	CATGGAACACATCCACAAGC
		GCGTGCTTCCTTGGTCTTAG
Human Aryl hydrocarbon receptor nuclear translocator-like (ARNTL), (Bmal1)	NM_001178.4	GAGCAGCTCTCCTCCTCTGA
		CGTCGTGCTCCAGAACATAA
Human Clock homolog (mouse) (CLOCK),	NM_004898.2	AATTTTGATGGGTTGGTGGGA
		AGCATTACCAGGAAGCATGG
Human Neuronal PAS domain protein 2 (NPAS2)	NM_002518.3	TGGGAACCTCAGGCTATGAC
		ACCGGTAGCAACACGACTTC
Human Cryptochrome 1 (Cry1)	NM_004075	CTGCTATTGCCCTGTTGGTT
		TTTTGCAGGGAAGCCTCTTA
Human Cryptochrome 2 (Cry2)	NM_021117.2	GTCCTGCAGTGCTTTCTTCC
		GCTTTCAATTTGGGCAGGTA
Human Period homolog 1 (Drosophila) (Per1)	NM_002616.1	TTCAGGCCTCAGGGACTTTA
		CCCGGATCTTGGTACATAC
Human Period homolog 2 (Drosophila) (Per2)	NM_022817.2	CTGATTGAAACCCAGTGCT
		CGAAACCGAATGGGAGAATA
Gene	Accession num.	Primers seq. FW/RV
Human nuclear receptor subfamily 1, group D, member 1 (NR1D1) (Rev-erba)	NM_021724.2	CTTCCGTGACCTTTCTCAGC
		TTCACGTTGAACAACGAAGC
Human RAR-related orphan receptor A (RORA)	NM_134262.2	AAATCGCATCTGGAAACCTG
		CACAATTGCCACATCACCTC

Supplementary Table S2. Small interfering RNA sequences

Gene	Duplex
hRIP140	sense: GAAGAGGAUCAGAACUUUATT antisense:UAAAGUUCUGAUCCUCUUCAT
hRORA (all variants)	sense: CCGAGAAGAUGGAAUACUATT antisense:UAGUAUCCAUCUUCUCGGTG
hRev-erba	sense: AGCAGAACAUCCAGUACAATT antisense:UUGUACUGGAUGUUCUGCUGG
NON CODING siRNA	sense: UUCUCCGAACGUGUCACGUTT antisense:ACGUGACACGUUCGGAGAATT

Supplementary Table S3. QPCR primers for Chip assay

Primer pair	Primers seq. 5'->3'FW/RV
hBmal1 ROREs	CGACATTTAGGGAAGGCAGA
	CAATGAAGGCCAGGATTC
hBmal1 Exon 20	GAGCCTCTTGGAAGCAGATG
	TCCACCAGTAATGCACTTTGA
hCry1 ROREs	ATGGCTTTATTCTGGCATGG
	GCAACCAGTGGACGGTTTAG
hCry1 3 prime	GGTAACTGCCCCCATGATTA
	GTGTCCCCACACAAATCTCA

*

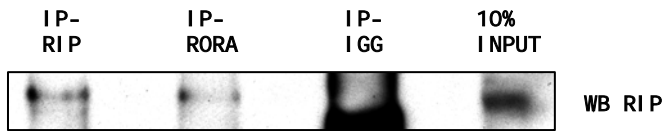


Figure S1. Total cell lysates from HepG2 cells were immunoprecipitated using anti RIP140, anti RORA or normal mouse IgG antibodies and western blot was performed using specific RIP140 antibody.