

Supplemental Materials

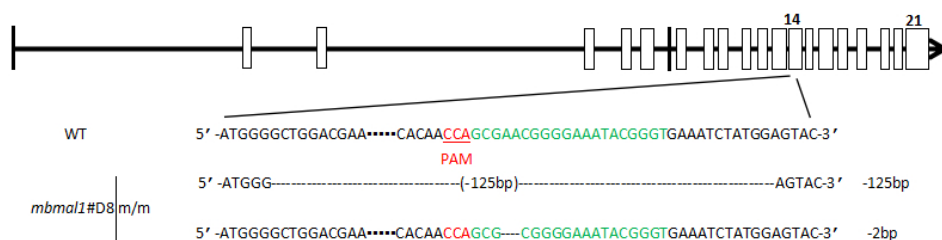


Figure S1. The sgRNA targeting the *Bmal1* gene and the sequences of both alleles in the *Bmal1* deletion cell strain.

<i>mbmal1</i>	MADQRMDISS	TISDFMSPGP	TDLLSGSLGT	SGVDCNRKRK	GSATDYQESM	DTDKDDPHGR
D8-2	MADQRMDISS	TISDFMSPGP	TDLLSGSLGT	SGVDCNRKRK	GSATDYQESM	DTDKDDPHGR
D8-1	MADQRMDISS	TISDFMSPGP	TDLLSGSLGT	SGVDCNRKRK	GSATDYQESM	DTDKDDPHGR
	*****	*****	*****	*****	*****	*****
<i>mbmal1</i>	LEYAEHQGRI	KNAREAHSQI	EKRRRDKMNS	FIDELASLVP	TCNAMSRKLD	KLTVLRMAVQ
D8-2	LEYAEHQGRI	KNAREAHSQI	EKRRRDKMNS	FIDELASLVP	TCNAMSRKLD	KLTVLRMAVQ
D8-1	LEYAEHQGRI	KNAREAHSQI	EKRRRDKMNS	FIDELASLVP	TCNAMSRKLD	KLTVLRMAVQ
	*****	*****	*****	*****	*****	*****
<i>mbmal1</i>	HMKTLRGATN	PYTEANYKPT	FLSDDELKHL	ILRAADGFLF	VVGCDRGKIL	FVSESVFkil
D8-2	HMKTLRGATN	PYTEANYKPT	FLSDDELKHL	ILRAADGFLF	VVGCDRGKIL	FVSESVFkil
D8-1	HMKTLRGATN	PYTEANYKPT	FLSDDELKHL	ILRAADGFLF	VVGCDRGKIL	FVSESVFkil
	*****	*****	*****	*****	*****	*****
<i>mbmal1</i>	NYSQNDLIQ	SLFDYLHPKD	IAKVKEQLSS	SDTAPRERLI	DAKTGLPVKT	DITPGPSRLC
D8-2	NYSQNDLIQ	SLFDYLHPKD	IAKVKEQLSS	SDTAPRERLI	DAKTGLPVKT	DITPGPSRLC
D8-1	NYSQNDLIQ	SLFDYLHPKD	IAKVKEQLSS	SDTAPRERLI	DAKTGLPVKT	DITPGPSRLC
	*****	*****	*****	*****	*****	*****
<i>mbmal1</i>	SGARRSFPCR	MKCNRPsvkv	EDKDFASTCS	KKKADRKSFC	TIHSTGYLKS	WPPTKMGLDE
D8-2	SGARRSFPCR	MKCNRPsvkv	EDKDFASTCS	KKKADRKSFC	TIHSTGYLKS	WPPTKM G VRF
D8-1	SGARRSFPCR	MKCNRPsvkv	EDKDFASTCS	KKKADRKSFC	TIHSTGYLKS	WPPTKMGLDE
	*****	*****	*****	*****	*****	*****
<i>mbmal1</i>	DNEPDNEGCN	LSCLVAIGRL	HSHMVPQFAN	GEIRVKSMEY	VSRHAIDGKF	VFVDQRATAI
D8-2	STRNRWEICF	CRSEGDsyfG	VSTTGTSRYI	ML*		
D8-1	DNEPDNEGCN	LSCLVAIGRL	HSHMVPQPAR	GNTGEIYGVR	FSTRNRWEIC	FCRSEGDsyf
<i>mbmal1</i>	LAYLPQELLG	TSCYEYFHQD	DIGHLAECHR	QVLQTREKIT	TNCYKFKIKD	GSFITLRSRW
D8-2						
D8-1	GVSTTGTSRY	IML*				
<i>mbmal1</i>	FSFMNPWTKE	VEYIVSTNTV	VLANVLEGGD	PTFPQLTAPP	HSMDSMLPSG	EGGPKRTHPT
D8-2						
D8-1						
<i>mbmal1</i>	VPGIPGGTRA	GAGKIGRMIA	EEIMEIHRIR	GSSPSSCGSS	PLNITSTPPP	DASSPGGKKI
D8-2						
D8-1						
<i>mbmal1</i>	LNGGTPDIPS	TGLLPQAQAE	TPGYPSYDSS	SILGENPHIG	IDMIDNDQGS	SSPSNDEAAM
D8-2						
D8-1						
<i>mbmal1</i>	AVIMSLLEAD	AGLGGPVDFS	DLPWPL*			
D8-2						
D8-1						

Figure S2. Predicted translation products of both alleles in the *Bmal1* deletion cell strain.

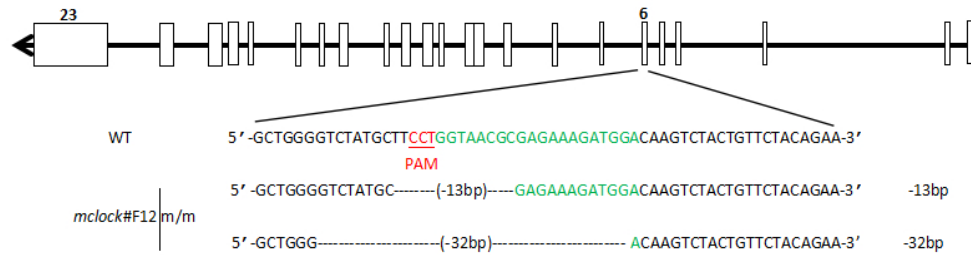


Figure S3. The sgRNA targeting the *Clock* gene and the sequences of both alleles in the *Clock* deletion cell strain.

<i>mClock</i>	MVFTVSCSKM	SSIVDRDDSS	IFDGLVEEDD	KDKAKRVSRN	KSEKKRRDQF	NVLIKELGSM
F12-1	MVFTVSCSKM	SSIVDRDDSS	IFDGLVEEDD	KDKAKRVSRN	KSEKKRRDQF	NVLIKELGSM
F12-2	MVFTVSCSKM	SSIVDRDDSS	IFDGLVEEDD	KDKAKRVSRN	KSEKKRRDQF	NVLIKELGQV
<i>mClock</i>	LPGNARKMDK	STVLQKSIDF	LRKHKETTAQ	SDASEIRQDW	KPTFLSNEEF	TQLMLEALDG
F12-1	REKWTSLLFY	RRALIFCANI	KRPLHSQMLV	RFDRTCNPHS	LVMKSLHS*-	-----
F12-2	YCSTEEH*-	-----	-----	-----	-----	-----
<i>mClock</i>	FFLAIMTDGS	IIYVESVTS	LLEHLPSDLV	DQSIFNFIPE	GEHSEVYKIL	STHLESDSL
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	TPEYLKSKNQ	LEFOCHMLRG	TIDPKEPSTY	EYVRFIGNFK	SLTSVSTSTH	NGFEGTIQRT
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	HRPSYEDRVC	FVATVRLATP	QFIKEMCTVE	EPNEEFTSRH	SLEWKFLFLD	HRAPPIIGYL
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	PFEVLGTSQY	DYYHVDLEN	LAKCHEHLMQ	YKRGKSCYYR	FLTRGQQWIW	LQTHYIITYH
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	QWNSRPEFIV	CTHTVVSYAE	VRAERRRELG	IEESLPETAA	DKSQDSGSDN	RINTVSLKEA
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	LERFDHSPTP	SASSRSSRKS	SHTAVSDPSS	TPTKIPTDTS	TPPRQHLPAAH	EKMTQRRSSF
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	SSQSINSQSV	GPSLTQPAMS	QAANLPPIQG	MSQFQFSAQL	GAMQHLKDQL	EQRTRMIEAN
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	IHRQQEELRK	IQEQLQMVHG	QGLQMFLQQS	NPGLNFGSVQ	LSSGNSNIQQ	LTPVNMQGGV
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	VPANQVQSGH	ISTGQHMIQQ	QTLQSTSTQQ	SQSQVMSGHS	QQTSLPSQTP	STLTAPLYNT
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	MVISQPAAGS	MVQIPSSMPQ	NSTQSATVTT	FTQDRQIRFS	QQQQLVTKLV	TAPVACGAYM
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	VPSTMLMGQV	VTAYPTFATQ	QQQAQTLSTV	QQQQQQQQQP	PQQQQQQQQS	SQEQQLPSVQ
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	QPAQAQLGQP	PQFLQTSRL	LHGMPSTQLI	LSAAFLQQS	TFPPSHHQH	QPQQQQQLPR
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----
<i>mClock</i>	HRTDSLTDPS	KVQFP*	-----	-----	-----	-----
F12-1	-----	-----	-----	-----	-----	-----
F12-2	-----	-----	-----	-----	-----	-----

Figure S4. Predicted translation products of both alleles in the *Clock* deletion cell strain.

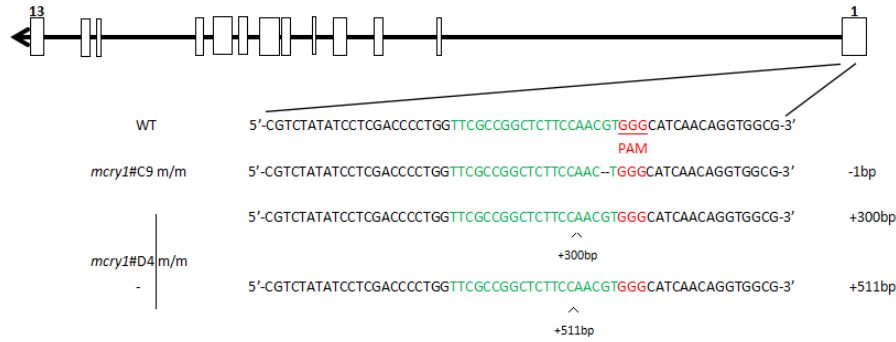


Figure S5. The sgRNA targeting the *CryI* gene and the sequences of both alleles in the *CryI* deletion cell strains.

<i>mcr1</i>	MGVNAVHWFR	KGLRLHDNPA	LKECIQGADT	IRCVYILDPW	FAGSSNVGIN	RWRFLQCLE
C9-1/2	MGVNAVHWFR	KGLRLHDNPA	LKECIQGADT	IRCVYILDPW	FAGSSN WAST	GGDFCFSVLR
	*****	*****	*****	*****	*****	*****
<i>mcr1</i>	DLDANLRKLN	SRLFVIRGQP	ADVFPRLFKE	WNITKLSIEY	DSEPFQKERD	AAIKKLATEA
C9-1/2	ILMPIYEN*-					
<i>mcr1</i>	GVEVIVRISH	TLYDLDKIIE	LNGGQPPLTY	KRFQTLVSKM	EPLEMPADTI	TSDVIGKCMT
C9-1/2						
<i>mcr1</i>	PLSDDHDEKY	GVPSLEELGF	DTDGLSSAVW	PGGETEALTR	LERHLERKAW	VANFERPRMN
C9-1/2						
<i>mcr1</i>	ANSLASPTG	LSPYLRFGCL	SCRIFYFKLT	DLYKKVKKNS	SPPLSLYGQL	LWREFFYTAA
C9-1/2						
<i>mcr1</i>	TNNPRFDKME	GNPICVQIPW	DKNPEALAKW	AEGRTGFPWI	DAIMTQLRQE	GWIIHLARHA
C9-1/2						
<i>mcr1</i>	VACFLTRGDL	WISWEEGMKV	FEELLLDADW	SINAGSWMWL	SCSSFFQQFF	HCYCPVGFR
C9-1/2						
<i>mcr1</i>	RTDPNGDYIR	RYLPVLRGFP	AKYIYDPWNA	PEGIQKVAKC	LIGVNYPKPM	VNHAEASRLN
C9-1/2						
<i>mcr1</i>	IERMKQIYQQ	LSRYRGLGLL	ASVPSNSNGN	GGLMGYAPGE	NVPSCSSSGN	GGLMGYAPGE
C9-1/2						
<i>mcr1</i>	NVPSCSGGNC	SQSGGILHYA	HGDSQQTHSL	KQCRSSACTG	LSSGKRPSQE	EDAQSVGPKV
C9-1/2						
<i>mcr1</i>	QRQSSN*					
C9-1/2						

Figure S6. Predicted translation products of both alleles in the *CryI* deletion cell strain (*CryI*-C9).

<i>mcry1</i>	MGVNAVHWFR	KGLRLHDNPA	LKECIQGADT	IRCVYILDPW	FAGSSNVGIN	RWRFLQCLE
D4-1	MGVNAVHWFR	KGLRLHDNPA	LKECIQGADT	IRCVYILDPW	FAGSSKIRFV	FIEHRQTRSG
D4-2	MGVNAVHWFR	KGLRLHDNPA	LKECIQGADT	IRCVYILDPW	FAGSSN SRVT	TGNSGCLLCW
	*****	*****	*****	*****	*****	*****
<i>mcry1</i>	DLDANLRKLN	SRLFVIRGQP	ADVFPRLFKE	WNITKLSIEY	DSEFPGKERD	AAIKKLATEA
D4-1	S* _____	_____	_____	_____	_____	_____
D4-2	PRQVQSSIRV	AKESWGLLSS	DCRANRPHLG	LCPEASVPLQ	GRHPRGRLWQ	CAHPQPLSPL
<i>mcry1</i>	GVEVIVRISH	TYDLDKIIE	LNGQPPLTY	KRFQTLVSKM	EPLEMPADTI	TSDVIGKCMT
D4-1	_____	_____	_____	_____	_____	_____
D4-2	QGRLAPRSEG	KARAE LRHQS	GTTHGSHTPA	ACSFPGANAR	SWAGLGEARP	AQSSLSAGAL
<i>mcry1</i>	PLSDDHDEKY	GVPSLEELGF	DTDGLSSAVW	PGGETEALTR	LERHLERKAW	VANFERPRMN
D4-1	_____	_____	_____	_____	_____	_____
D4-2	CYRAWAQWS	SAGVEAHSV L	PSTGLQAPAG	SQPLLSRGHQ	QVAIFASVS*	_____
<i>mcry1</i>	ANSLLASPTG	LSPYLRFGCL	SCRLFYFKLT	DLYKKVKKNS	SPPLSLYGQL	LWREFFYTAA
D4-1	_____	_____	_____	_____	_____	_____
D4-2	_____	_____	_____	_____	_____	_____
<i>mcry1</i>	TNNPRFDKME	GNPICVQIPW	DKNPEALAKW	AEGRTGFPWI	DAIMTQLRQE	GWIIHLARHA
D4-1	_____	_____	_____	_____	_____	_____
D4-2	_____	_____	_____	_____	_____	_____
<i>mcry1</i>	VACFLTRGDL	WISWEEGMKV	FEELLLDADW	SINAGSWMWL	SCSSFFQQFF	HCYCPVGFR
D4-1	_____	_____	_____	_____	_____	_____
D4-2	_____	_____	_____	_____	_____	_____
<i>mcry1</i>	RTDPNGDYIR	RYLPVLRGFP	AKYIYDPWNA	PEGIQKVAKC	LIGVNYPKPM	VNHAEASRLN
D4-1	_____	_____	_____	_____	_____	_____
D4-2	_____	_____	_____	_____	_____	_____
<i>mcry1</i>	IERMKQIYQQ	LSRYRGLGLL	ASVPSNSNGN	GGLMGYAPGE	NVPSCSSSGN	GGLMGYAPGE
D4-1	_____	_____	_____	_____	_____	_____
D4-2	_____	_____	_____	_____	_____	_____
<i>mcry1</i>	NVPSCSGGNC	SQGSGILHYA	HGDSQQTHSL	KQGRSSAGTG	LSSGKRPSQE	EDAQSVGPKV
D4-1	_____	_____	_____	_____	_____	_____
D4-2	_____	_____	_____	_____	_____	_____
<i>mcry1</i>	QRQSSN*					
D4-1	_____					
D4-2	_____					

Figure S7. Predicted translation products of both alleles in the *CryI* deletion cell strain (*CryI*-D4).

<i>mcry2</i>	MAAAAVVAAT	VPAQSMGADG	ASSVHWFRKG	LRLHNPALL	AAVRGARCVR	CVYILDPWFA
H3-1	MAAAAVVAAT	VRLHRV*	—————	—————	—————	—————
H3-2	MAAAAVVAAT	VPAPARPRCT	GSAKDYGSTT	TPRC*	—————	—————
	*****	*				
<i>mcry2</i>	ASSVGINRW	RFLQSLEDL	DTSLRKLNSR	LFVVRGQPAD	VFPRLFKEWG	VTRLTFEYDS
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————
<i>mcry2</i>	EPFGKERDAA	IMKMAKEAGV	EVVTENSHTL	YDLDRRIELN	GQKPPLTYKR	FQALISRMEL
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————
<i>mcry2</i>	PKKPAVAVSS	QQMESCRAEI	QENHDDTYGV	PSLEELGFPT	EGLCPAVWQG	GETEALARLD
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————
<i>mcry2</i>	KHLERKAWVA	NYERPRMNAN	SLLASPTGLS	PYLRFGLCLSC	RLFYRLWDL	YKKVKRNSTP
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————
<i>mcry2</i>	PLSLFGQLLW	REFFYTAATN	NPRFDRMEGN	PICIQIPWDR	NPEALAKWAE	GKTGFPWIDA
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————
<i>mcry2</i>	IMTQLRQEGW	IHHLARHAVA	CFLTRGDLWV	SWESGVRVFD	ELLLDADFSV	NAGSWMWLSC
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————
<i>mcry2</i>	SAFQQFFHC	YCPVGFGRR	DPSGDYIRRY	LPKLGFPSPR	YIYEPWNAPE	SVQKAAKCII
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————
<i>mcry2</i>	GVDYPRPIVN	HAETSRLNIE	RMKQIYQQLS	RYRGLCLLAS	VPSCVEDLSH	PVAEPGSSQA
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————
<i>mcry2</i>	GSISNTGPRA	LSSGPASPKR	KLEAAEEPPG	EELTKRARVT	EMPTQEPASK	DS*
H3-1	—————	—————	—————	—————	—————	—————
H3-2	—————	—————	—————	—————	—————	—————

Figure S10. Predicted translation products of both alleles in the *Cry2* deletion cell strain (*Cry2*-H3).

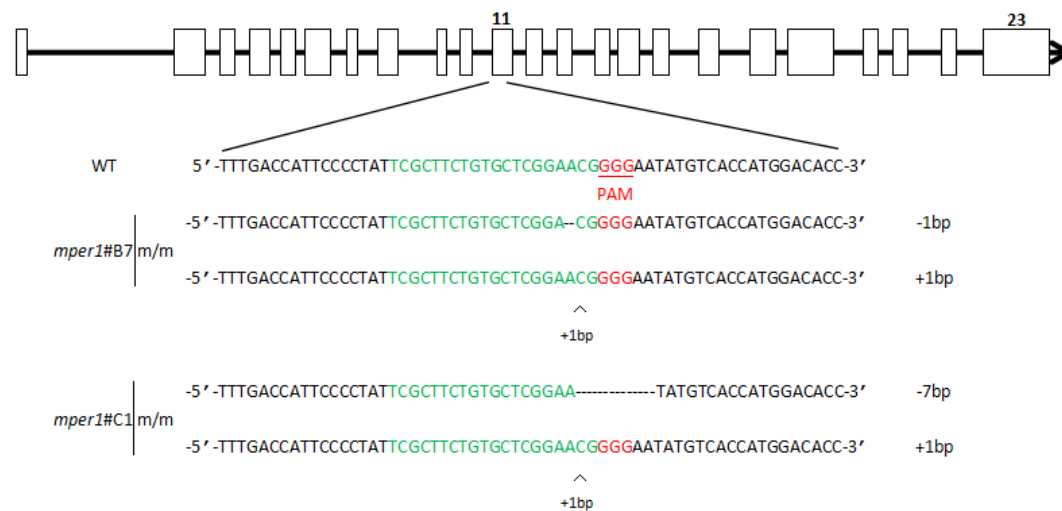


Figure S11. The sgRNA targeting the *Per1* gene and the sequences of both alleles in the *Per1* deletion cell strain.

<i>mparl</i>	MSGFLEGADG	GGDFRPCEPF	CPGGVPSFGA	PQHRPCPGPS	LADDTDANSN	GSSGNESNCP
C1-1	MSGFLEGADG	GGDFRPCEPF	CPGGVPSFGA	PQHRPCPGPS	LADDTDANSN	GSSGNESNCP
C1-2	MSGFLEGADG	GGDFRPCEPF	CPGGVPSFGA	PQHRPCPGPS	LADDTDANSN	GSSGNESNCP
<i>mparl</i>	ESRGASQRSS	HSSSSGNCKD	SALLETTES	KSTNSQSPSP	PSSSIAYSL	SASSEQDNPS
C1-1	ESRGASQRSS	HSSSSGNCKD	SALLETTES	KSTNSQSPSP	PSSSIAYSL	SASSEQDNPS
C1-2	ESRGASQRSS	HSSSSGNCKD	SALLETTES	KSTNSQSPSP	PSSSIAYSL	SASSEQDNPS
<i>mparl</i>	TSGCSSEQSA	RARTQKELMT	ALRELKLRLP	PERRGKGRSG	TLATLQYALA	CVKQVQANQE
C1-1	TSGCSSEQSA	RARTQKELMT	ALRELKLRLP	PERRGKGRSG	TLATLQYALA	CVKQVQANQE
C1-2	TSGCSSEQSA	RARTQKELMT	ALRELKLRLP	PERRGKGRSG	TLATLQYALA	CVKQVQANQE
<i>mparl</i>	YYQQWSLEEG	EPCAMDMSY	TLEELEHITS	EYTLRNQDTF	SVAVSFLTGR	IVYISEQAGV
C1-1	YYQQWSLEEG	EPCAMDMSY	TLEELEHITS	EYTLRNQDTF	SVAVSFLTGR	IVYISEQAGV
C1-2	YYQQWSLEEG	EPCAMDMSY	TLEELEHITS	EYTLRNQDTF	SVAVSFLTGR	IVYISEQAGV
<i>mparl</i>	LLRCKRDVFR	GARFSELLAP	QDVGVFYGST	TPSRLPTWGT	GTSAGSGLKD	FTQEKSVFCR
C1-1	LLRCKRDVFR	GARFSELLAP	QDVGVFYGST	TPSRLPTWGT	GTSAGSGLKD	FTQEKSVFCR
C1-2	LLRCKRDVFR	GARFSELLAP	QDVGVFYGST	TPSRLPTWGT	GTSAGSGLKD	FTQEKSVFCR
<i>mparl</i>	IRGGPDRDPG	PRYQPFRLTP	YVTKIRVSDG	APAQPCLLI	AERIHSGYEA	PRIPDPKRIF
C1-1	IRGGPDRDPG	PRYQPFRLTP	YVTKIRVSDG	APAQPCLLI	AERIHSGYEA	PRIPDPKRIF
C1-2	IRGGPDRDPG	PRYQPFRLTP	YVTKIRVSDG	APAQPCLLI	AERIHSGYEA	PRIPDPKRIF
<i>mparl</i>	TTRHTPSCLF	QDVDERAAPL	LGYPQLDLG	APVLLFLHPE	DRPLMLAIHK	KILQLAGQFF
C1-1	TTRHTPSCLF	QDVDERAAPL	LGYPQLDLG	APVLLFLHPE	DRPLMLAIHK	KILQLAGQFF
C1-2	TTRHTPSCLF	QDVDERAAPL	LGYPQLDLG	APVLLFLHPE	DRPLMLAIHK	KILQLAGQFF
<i>mparl</i>	DHSPIRFCAR	NCEYVTMDTS	WAGFVHPWSR	KVAFVLGRHK	VRTAPLNEDV	FTFPAPSPAP
C1-1	DHSPIRFCAR	KRGICHGHQ	LGRFCAPLEP	QGGFRVGS*	-----	-----
C1-2	DHSPIRFCAR	NMSPWTFAPG	VLCTPGAARW	LSCWVAIKCA	RHP*	-----
<i>mparl</i>	SLDSIDIQLS	EQIHRLLQ	VHSSSPTGLC	GVGPLMSFGP	LHSPGSSSDS	NGDAEGPGP
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	PAPVTFQQIC	KDVHLVKHQG	QQLFIESRAK	PPRPRLLAT	GTFAKAVLPC	QSPNFELEVA
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	PVPDQASLAL	APPEPERKET	SGCSYQQINC	LDSILRYLES	CNIPSTTKRK	CASSSYTAS
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	SASDDDKQRA	GPVPVGAKKD	PSSAMLSGEG	ATPRKEPVVG	GTLSPALAN	KAESVSVVTS
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	QCSFSSTIVH	VGDKKPFESD	IIMMEDLPGL	APGPAPSPAP	SPTVAPDPTP	DAYRPFVGLTK
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	AVLSLHTQKE	EQAFNLNFRD	LGRLRGLDTS	SVAFSAFGCH	HGPIPPGRRH	HCRSKAKRSR
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	HHHHQTFRPE	TPCYVSHSPS	VPSSGFWPPP	PATTPFFAMV	QPYPLPVFSP	RGGPQLPFFA
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	PTSVSPATFP	SPLVTPMVAL	VLPNYLFPTP	PSYPYGVSA	PVEGPPTPAS	HSPSPSLPFP
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	PLSPPHRPDS	PLFNRCSSP	LQLNLLQLEE	SPRTEGAAA	GGPGSSACPL	PFSEETAEP
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	ARLVEVTESS	NQDALSGSSD	LLELLIQEDS	RSGTGSAASC	SLGSGLGSGS	SGSGHEGGST
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	SASITRSSQS	SHTSKYFGSI	DSSEAEAGAA	RARTEPGDQV	IKCVLQDPIW	LLMANADQRV
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	MMTYQVPSRD	AASVLKQDRE	RLRAMQKQPP	RFSEDQRREL	GAVHSWVRKG	QLPRALDVTA
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	CVDOGSSVQD	PGHSDDPLFS	ELDGLGLEPM	EEGGEGGGC	GVGGCGGDCG	EEAQTQIGAK
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----
<i>mparl</i>	GSSSQDSAME	EEEQGGGSSS	PALPAEENST	S*	-----	-----
C1-1	-----	-----	-----	-----	-----	-----
C1-2	-----	-----	-----	-----	-----	-----

Figure S12. Predicted translation products of both alleles in the *Per1* deletion cell strain (*Per1*-C1).

<i>aper1</i>	MSGFLEGADG	GGDFRPCEPF	CPGGVPSPGA	PQHRPCPGPS	LADDTDANSN	GSSGNESNGP
E7-1	MSGFLEGADG	GGDFRPCEPF	CPGGVPSPGA	PQHRPCPGPS	LADDTDANSN	GSSGNESNGP
E7-2	MSGFLEGADG	GGDFRPCEPF	CPGGVPSPGA	PQHRPCPGPS	LADDTDANSN	GSSGNESNGP
<i>aper1</i>	*****	*****	*****	*****	*****	*****
E7-1	ESRGASQRSS	HSSSSGNGKD	SALLETTESS	KSTNSQSPSP	PSSSIAYSL	SASSEQDNPS
E7-2	ESRGASQRSS	HSSSSGNGKD	SALLETTESS	KSTNSQSPSP	PSSSIAYSL	SASSEQDNPS
<i>aper1</i>	*****	*****	*****	*****	*****	*****
E7-1	TSGCSSEBQA	RARTQKELMT	ALRELKLRLP	PERRCKGRSG	TLATLQYALA	CVKQVQANQE
E7-2	TSGCSSEBQA	RARTQKELMT	ALRELKLRLP	PERRCKGRSG	TLATLQYALA	CVKQVQANQE
<i>aper1</i>	*****	*****	*****	*****	*****	*****
E7-1	YYQQWSLEEG	EPCAMDMSY	TLEELEHITS	EYTLRNQDTF	SVAVSFLTGR	IVYISBQAGV
E7-2	YYQQWSLEEG	EPCAMDMSY	TLEELEHITS	EYTLRNQDTF	SVAVSFLTGR	IVYISBQAGV
<i>aper1</i>	*****	*****	*****	*****	*****	*****
E7-1	LLRCKRDVFR	GARFSELLAP	QDVGVPYGST	TPSRLPTWGT	GTSAGSGLKD	FTQEKSVFCR
E7-2	LLRCKRDVFR	GARFSELLAP	QDVGVPYGST	TPSRLPTWGT	GTSAGSGLKD	FTQEKSVFCR
<i>aper1</i>	*****	*****	*****	*****	*****	*****
E7-1	IRGGPDRDPG	PRYQPFRLTP	YVTKIRVSDG	APAQPCCLLI	AERIHSGYEA	PRIPDPKRIF
E7-2	IRGGPDRDPG	PRYQPFRLTP	YVTKIRVSDG	APAQPCCLLI	AERIHSGYEA	PRIPDPKRIF
<i>aper1</i>	*****	*****	*****	*****	*****	*****
E7-1	TTRHTPSCLF	QDVDERAAPL	LGYPQLDLLG	APVLLFLHPE	DRPLMLAIHK	KILQLACQPF
E7-2	TTRHTPSCLF	QDVDERAAPL	LGYPQLDLLG	APVLLFLHPE	DRPLMLAIHK	KILQLACQPF
<i>aper1</i>	*****	*****	*****	*****	*****	*****
E7-1	DHSPIRFCAR	NCEYVTMDTS	WAGFVHPWSR	KVAFVLGRHK	VRTAPLNEDV	FTFPAPSPAP
E7-2	DHSPIRFCAR	KRGICHGHQ	LGRFCAPLEP	QGGFRVGS*	CARHP*	-----
<i>aper1</i>	*****	*****	*****	*****	*****	*****
E7-1	SLSDSIQELS	EQIHRLLQF	VHSSSFTGLC	GVGPLMSPGF	LHSFGSSSDS	NGGDAEGFCP
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	PAPVTFQQIC	KDVHLVKHQG	QQLFIESRAK	PPPRPRLAT	GTFKAKVLP	QSFNPELEVA
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	PVPDQASLAL	AFEEPERKET	SGCSYQQINC	LDSILRYLES	CNIPSTTKRK	CASSSSYTAS
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	SASDDDKQRA	GPVPVGAKKD	PSSAMLSGEG	ATPRKEPVVG	GTLSPALAN	KAESVSVSTS
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	QCSFSSTIVH	VGDKKPFESD	IIMMEDLPGL	APGPAPSPAP	SPTVAPDPTP	DAYRPVGLTK
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	AVLSLHTQKE	EQAFNLNFRD	LGRLRLDTS	SVAPSPAGCH	HGPIPPGRRH	HCRSKAKRSR
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	HHHHQTPRPE	TPCYVSHFSP	VPSSGFWPPP	PATTPFFAMV	QPYPLPVFSP	RGGPQPLPPA
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	PTSVSPATFP	SPLVTPMVAL	VLPNYLFPTP	PSYPYGVSA	PVEGPPTPAS	HSPSPSLPPP
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	PLSFPHRPDS	PLFNSRCSSP	LQLNLLQLEE	SPRTEGAAA	GGPGSSAGPL	PPSEETAEP
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	ARLVEVTESS	NQDALSGSSD	LLELLQEDS	RSCTGSAASG	SLGSGLGSGS	GSGSHEGGST
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	SASITRSSQS	SHTSKYFGSI	DSSEAEAGAA	RARTEPGDQV	IKCVLQDPIW	LLMANADQRV
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	MMTYQVPSRD	AASVLKQDRE	RLRAMQKQQP	RFSEDQRREL	GAVHSWVRKG	QLFRALDVTA
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	CVDCGSSVQD	PGHSDDPLFS	ELDGLGLEFM	EEGGCEGGGC	GVGGGGDGC	EFAQTQIGAK
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----
<i>aper1</i>	GSSSQDSAME	EEEQGGGSSS	PALPAEENST	S*	-----	-----
E7-1	-----	-----	-----	-----	-----	-----
E7-2	-----	-----	-----	-----	-----	-----

Figure S13. Predicted translation products of both alleles in the *Per1* deletion cell strain (*Per1*-B7).

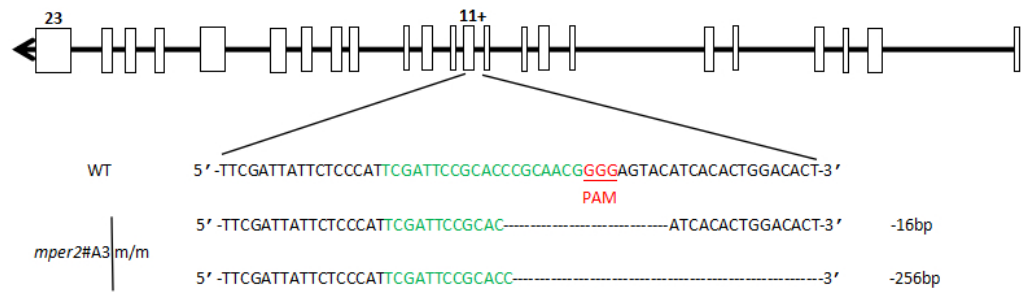


Figure S14. The sgRNA targeting the *Per2* gene and the sequences of both alleles in the *Per2* deletion cell strain.

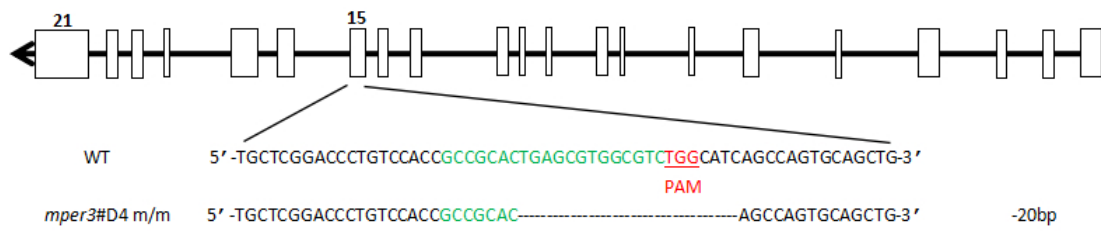


Figure S15. The sgRNA targeting the *Per3* gene and the sequences of both alleles in the *Per3* deletion cell strain.

<i>mp^{er3}</i>	MDPCGDPAVP	GGDCPQTRGP	GLQGASQEG	PLQGTCDVSS	HSEHEDRNRM	SEELIMVVQE
D4-1/2	MDPCGDPAVP	GGDCPQTRGP	GLQGASQEG	PLQGTCDVSS	HSEHEDRNRM	SEELIMVVQE
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	MKKYFPAERH	TKPSTLDALN	YALRCVHSVQ	ANSDFQSLG	PRGAHQADVT	VYSLEDLTAL
D4-1/2	MKKYFPAERH	TKPSTLDALN	YALRCVHSVQ	ANSDFQSLG	PRGAHQADVT	VYSLEDLTAL
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	ASEHTSKNTD	TFAAVFSFLS	GRLVHISEQA	ALILNSKRGF	LKSVHFVDLL	APQDVRAFYA
D4-1/2	ASEHTSKNTD	TFAAVFSFLS	GRLVHISEQA	ALILNSKRGF	LKSVHFVDLL	APQDVRAFYA
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	HTAPTQLPFW	NNWTQRASQY	ECAPAKPFFC	RICGGGDREK	RHYSFPRILP	YLVHVHSSAQ
D4-1/2	HTAPTQLPFW	NNWTQRASQY	ECAPAKPFFC	RICGGGDREK	RHYSFPRILP	YLVHVHSSAQ
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	PEPEPCCLTL	VEKIHSGYEA	PRIPVDKRIF	TTTHTPGCVF	LEVDERAVPL	LGYPQDLIG
D4-1/2	PEPEPCCLTL	VEKIHSGYEA	PRIPVDKRIF	TTTHTPGCVF	LEVDERAVPL	LGYPQDLIG
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	TSILTYLHPE	DRPLMVAIHQ	KVLKYAGHPP	FEHSPVRFCT	QNGEYVILDS	SWSSFVNPNWS
D4-1/2	TSILTYLHPE	DRPLMVAIHQ	KVLKYAGHPP	FEHSPVRFCT	QNGEYVILDS	SWSSFVNPNWS
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	RKVSFIIGRH	KVRTSPLNED	VFATRIKKA	SNDKDIAELQ	EQIHKLLQP	VHASASSGYG
D4-1/2	RKVSFIIGRH	KVRTSPLNED	VFATRIKKA	SNDKDIAELQ	EQIHKLLQP	VHASASSGYG
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	SLGSSGSQEQ	HVSITSSSES	SGHCPEEGQH	EQMTLQQVYA	SVNLIKNVGQ	QLYIESMARS
D4-1/2	SLGSSGSQEQ	HVSITSSSES	SGHCPEEGQH	EQMTLQQVYA	SVNLIKNVGQ	QLYIESMARS
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	SVKPVAETCV	EPQGGDEQKD	FSSSQTLKNK	STTDGSGGN	LQQEQPSSSY	QQMNCIDSVI
D4-1/2	SVKPVAETCV	EPQGGDEQKD	FSSSQTLKNK	STTDGSGGN	LQQEQPSSSY	QQMNCIDSVI
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	RYLTSYSLPA	LKRKCISCTN	TSSSSEAKP	IPEVDSSQRD	TEQLLDIRKQ	ETGTPSTDIE
D4-1/2	RYLTSYSLPA	LKRKCISCTN	TSSSSEAKP	IPEVDSSQRD	TEQLLDIRKQ	ETGTPSTDIE
	*****	*****	*****	*****	*****	*****
<i>mp^{er3}</i>	GGAARTLSTA	ALSVASGISQ	CSCSSTSGHA	PPLQSESVAV	ACKPWALRTK	ASHLAAGGFK
D4-1/2	GGAARTLSTA	AQPWQLQQHL	WPRSAPTVRK	CCRGV*—	—	—
	*****	*				
<i>mp^{er3}</i>	HVGLTAAVLS	AHTQKEEQNY	VDRFREKILT	SPYGCYLQQE	SRNRAQYSCV	QAGSTAKHSR
D4-1/2	—	—	—	—	—	—
<i>mp^{er3}</i>	CAGSERQKHK	RKKLPAPVDT	SSPGAHLCPH	VTGLLPDEQH	WGPSASPSPL	GAGLAFPSAL
D4-1/2	—	—	—	—	—	—
<i>mp^{er3}</i>	VVPSQTPYLL	PSFPLQDMAS	QGVGVSAAWG	AAAGCPPLSA	GPQAVAAFPS	AYVDTLMTIF
D4-1/2	—	—	—	—	—	—
<i>mp^{er3}</i>	LHNAPLFPLW	PPSFSPYPSL	GAAGSSELAP	LVPAMAPNPE	PTTSGHSQRR	VEENWEAHSE
D4-1/2	—	—	—	—	—	—
<i>mp^{er3}</i>	ELPFISSRSS	SPLQLNLLQE	EMPAPSESAD	AVRRGAGPDA	KHHCVTGPSG	SRSRHCTSGE
D4-1/2	—	—	—	—	—	—
<i>mp^{er3}</i>	LATATAQQUES	AAASGSSASS	IYFSSTDYAS	EVSENQRQPQ	DRQRDEALPG	AAEESIWRMI
D4-1/2	—	—	—	—	—	—
<i>mp^{er3}</i>	ERTPECVLMT	YQVPERGREE	VLKQDLEKLQ	SMEQQQPLFS	PAQREELAKV	RSWIHSHTAP
D4-1/2	—	—	—	—	—	—
<i>mp^{er3}</i>	QEGHLQSCVA	CEDRGSVGDT	AEVLEQHPAE	DTS*		
D4-1/2	—	—	—	—		

Figure S16. Predicted translation products of both alleles in the *Per3* deletion cell strain.

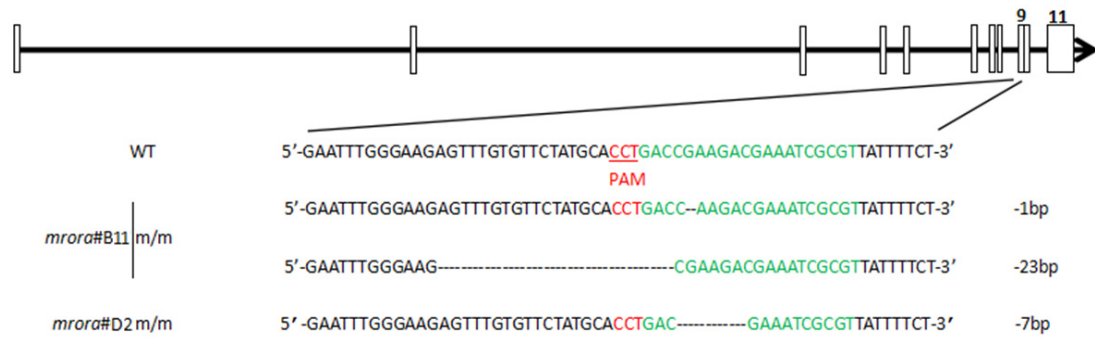


Figure S17. The sgRNA targeting the *Rora* gene and the sequences of both alleles in the *Rora* deletion cell strain.

<i>mrora</i>	MESAPAAPDP	AASEPGSSGS	EAAGSRETP	LTQDTGRKSE	APGAGRRQSY	ASSSRGISVT
B11-1	MESAPAAPDP	AASEPGSSGS	EAAGSRETP	LTQDTGRKSE	APGAGRRQSY	ASSSRGISVT
B11-2	MESAPAAPDP	AASEPGSSGS	EAAGSRETP	LTQDTGRKSE	APGAGRRQSY	ASSSRGISVT
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	KKTHTSQIEI	IPCKICGDKS	SGIHVGITC	EGCKGFFRRS	QQSNATYSCP	RQKNCLIDRT
B11-1	KKTHTSQIEI	IPCKICGDKS	SGIHVGITC	EGCKGFFRRS	QQSNATYSCP	RQKNCLIDRT
B11-2	KKTHTSQIEI	IPCKICGDKS	SGIHVGITC	EGCKGFFRRS	QQSNATYSCP	RQKNCLIDRT
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	SRNRCQHCL	QKCLAVGMSR	DAVKFGRMSK	KQRDSLAEV	QKHRMQQQR	DHQQQPGEAE
B11-1	SRNRCQHCL	QKCLAVGMSR	DAVKFGRMSK	KQRDSLAEV	QKHRMQQQR	DHQQQPGEAE
B11-2	SRNRCQHCL	QKCLAVGMSR	DAVKFGRMSK	KQRDSLAEV	QKHRMQQQR	DHQQQPGEAE
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	PLTPTYNISA	NGLTELHDDL	STYMDGHTPE	GSKADSAVSS	FYLDIQSPD	QSGLDINGIK
B11-1	PLTPTYNISA	NGLTELHDDL	STYMDGHTPE	GSKADSAVSS	FYLDIQSPD	QSGLDINGIK
B11-2	PLTPTYNISA	NGLTELHDDL	STYMDGHTPE	GSKADSAVSS	FYLDIQSPD	QSGLDINGIK
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	PEPICDYTPA	SGFFPYCSFT	NGETSPTVSM	AELEHLAQNI	SKSHLETCQY	LREELQQITW
B11-1	PEPICDYTPA	SGFFPYCSFT	NGETSPTVSM	AELEHLAQNI	SKSHLETCQY	LREELQQITW
B11-2	PEPICDYTPA	SGFFPYCSFT	NGETSPTVSM	AELEHLAQNI	SKSHLETCQY	LREELQQITW
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	QTFLQEEIEN	YQNKQREVMW	QLCAIKITEA	IQYVVEFAKR	IDGFMELCQN	DQIVLLKAGS
B11-1	QTFLQEEIEN	YQNKQREVMW	QLCAIKITEA	IQYVVEFAKR	IDGFMELCQN	DQIVLLKAGS
B11-2	QTFLQEEIEN	YQNKQREVMW	QLCAIKITEA	IQYVVEFAKR	IDGFMELCQN	DQIVLLKAGS
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	LEVVFIRMCR	AFDSQNNTVY	FDGKYASPDV	FKSLGCEDFI	SFVFEFGKSL	CSMHLTEDEI
B11-1	LEVVFIRMCR	AFDSQNNTVY	FDGKYASPDV	FKSLGCEDFI	SFVFEFGKRR	RNRVIFCIRT
B11-2	LEVVFIRMCR	AFDSQNNTVY	FDGKYASPDV	FKSLGCEDFI	SFVFEFGKSL	CSMHLTKTKS
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	ALFSAFVLMS	ADRSWLQEKV	KIEKLQQKIQ	LALQHVLLQN	HREDGILTKL	ICKVSTLRAL
B11-1	DVSGSLVASG	KGKNRKAATE	NSAGPSARPT	EEPPRRWNSN	QANMQGVYVK	SPMWTTYGKA
B11-2	RYFLHSY*—	—	—	—	—	—
<i>mrora</i>	CGRHTEKLMA	FKAIYPDIWR	LHFPPLYKEL	FTSEFEPAMQ	IDG*	
B11-1	NGI*—	—	—	—	—	
B11-2	—	—	—	—	—	

Figure S18. Predicted translation products of both alleles in the *Rora* deletion cell strain (*Rora*-B11).

<i>mrora</i>	MESAPAAPDP	AASEPGSSGS	AAAAGSRETP	LTQDTGRKSE	APGAGRQSY	ASSSRGISVT
D2-1/2	MESAPAAPDP	AASEPGSSGS	AAAAGSRETP	LTQDTGRKSE	APGAGRQSY	ASSSRGISVT
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	KKTHTSQIEI	IPCKICGDKS	SGIHYGVITC	EGCKGFFRRS	QQSNATYSCP	RQKNCLIDRT
D2-1/2	KKTHTSQIEI	IPCKICGDKS	SGIHYGVITC	EGCKGFFRRS	QQSNATYSCP	RQKNCLIDRT
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	SRNRCQHCR	L	QKCLAVGMSR	DAVKFGRMSK	KQRDSLYAEV	QKHRMQQQQR
D2-1/2	SRNRCQHCR	L	QKCLAVGMSR	DAVKFGRMSK	KQRDSLYAEV	QKHRMQQQQR
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	PLTPTYNISA	NGLTELHDDL	STYMDGHTPE	GSKADSAVSS	FYLDIQSPD	QSGLDINGIK
D2-1/2	PLTPTYNISA	NGLTELHDDL	STYMDGHTPE	GSKADSAVSS	FYLDIQSPD	QSGLDINGIK
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	PEPICDYTPA	SGFFPYCSFT	NGETSPTVSM	AELEHLAQNI	SKSHLETCQY	LREELQQITW
D2-1/2	PEPICDYTPA	SGFFPYCSFT	NGETSPTVSM	AELEHLAQNI	SKSHLETCQY	LREELQQITW
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	QTFLQEEIEN	YQNKQREVMW	QLCAIKITEA	IQYVVEFAKR	IDGFMELCQN	DQIVLLKAGS
D2-1/2	QTFLQEEIEN	YQNKQREVMW	QLCAIKITEA	IQYVVEFAKR	IDGFMELCQN	DQIVLLKAGS
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	LEVVFIRMCR	AFDSQNNIVY	FDGKYASPDV	FKSLGCEDFI	SFVFEPGKSL	CSMHLTEDEI
D2-1/2	LEVVFIRMCR	AFDSQNNIVY	FDGKYASPDV	FKSLGCEDFI	SFVFEPGKSL	CSMHLTKSRY
	*****	*****	*****	*****	*****	*****
<i>mrora</i>	ALFSAFVLMS	ADRSWLQEKV	KIEKLQKKIQ	LALQHVLRQN	HREDGILTKL	ICKVSTLRAL
D2-1/2	FLHSY*	-----	-----	-----	-----	-----
<i>mrora</i>	CGRHTEKLMA	FKAIYPDIVR	LHFPPLYKEL	FTSEFEPAMQ	IDG*	
D2-1/2	-----	-----	-----	-----	-----	

Figure S19. Predicted translation products of both alleles in the *Rora* deletion cell strain (*Rora*-D2).

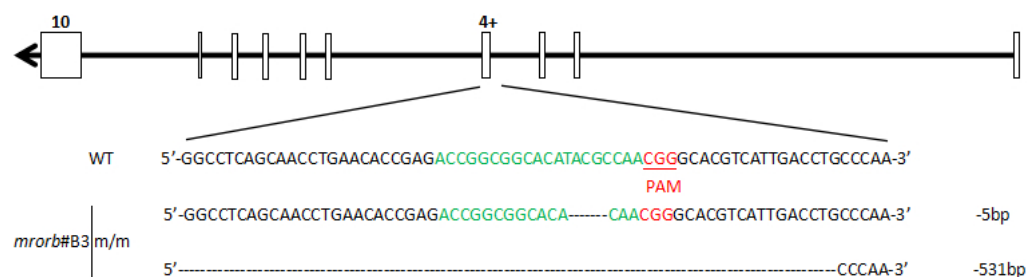


Figure S20. The sgRNA targeting the *Rorb* gene and the sequences of both alleles in the *Rorb* deletion cell strain.

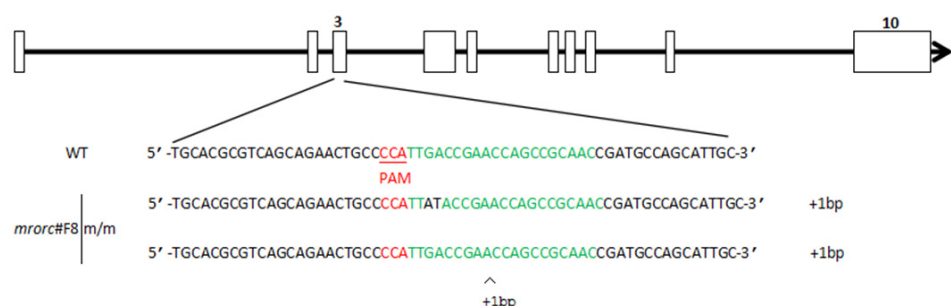


Figure S21. The sgRNA targeting the *Rorc* gene and the sequences of both alleles in the *Rorc* deletion cell strain.

<i>rrorc</i>	MRTQIEVIPC	KICGDKSSGI	HYGVITCEGC	KGFFRRSQQC	NVAYSCTRQQ	NCPIDRTSRN
F8-1	MRTQIEVIPC	KICGDKSSGI	HYGVITCEGC	KGFFRRSQQC	NVAYSCTRQQ	NCPIIPNQPQ
F8-2	MRTQIEVIPC	KICGDKSSGI	HYGVITCEGC	KGFFRRSQQC	NVAYSCTRQQ	NCPIEPNQPQ
	*****y	*****	*****	*****	*****	****_
<i>rrorc</i>	RCQHCLRLQKC	LALGMSRDAV	KFGRMSKKQR	DSLHAEVQKQ	LQQQQQQEQV	AKTPPAGSRG
F8-1	PMPALPPAEV	PGSGHVPRCC	QVWPNVQEAE	GQSTCRSAET	TATAAATGTS	GQDSSSWEPR
F8-2	PMPALPPAEV	PGSGHVPRCC	QVWPNVQEAE	GQSTCRSAET	TATAAATGTS	GQDSSSWEPR
<i>rrorc</i>	ADTLTYTLGL	SDGQLPLGAS	PDLPEASACP	PGLLRASGSG	PPYSNTLAKT	EVQGASCHLE
F8-1	SRHTYIHFR	LRWAATTGRL	T*_____	_____	_____	_____
F8-2	SRHTYIHFR	LRWAATTGRL	T*_____	_____	_____	_____
<i>rrorc</i>	YSPERGKAEG	RDSIYSTDGG	LTLCRCGLRF	EETRHPPELGE	PEQGPDSHCI	PSFCSAPEVP
F8-1	_____	_____	_____	_____	_____	_____
F8-2	_____	_____	_____	_____	_____	_____
<i>rrorc</i>	YASLTDIEYL	VQNVCKSFRE	TCQLRLEDLL	RQRTNLFSSRE	EVTSYQRKSM	WEMWERCAHH
F8-1	_____	_____	_____	_____	_____	_____
F8-8	_____	_____	_____	_____	_____	_____
<i>rrorc</i>	LTEAIQYVVE	FAKRLSGFME	LCQNDQIILL	KAGAMEVVLV	RMCRAYNANN	HTVFFEGKYG
F8-1	_____	_____	_____	_____	_____	_____
F8-8	_____	_____	_____	_____	_____	_____
<i>rrorc</i>	LTEAIQYVVE	FAKRLSGFME	LCQNDQIILL	KAGAMEVVLV	RMCRAYNANN	HTVFFEGKYG
F8-1	_____	_____	_____	_____	_____	_____
F8-2	_____	_____	_____	_____	_____	_____
<i>rrorc</i>	GVELFRALGC	SELISSIFDF	SHFLSALCFS	EDEIALYTAL	VLINANRPGL	QEKRRVEHLQ
F8-1	_____	_____	_____	_____	_____	_____
F8-2	_____	_____	_____	_____	_____	_____
<i>rrorc</i>	GVELFRALGC	SELISSIFDF	SHFLSALCFS	EDEIALYTAL	VLINANRPGL	QEKRRVEHLQ
F8-1	_____	_____	_____	_____	_____	_____
F8-2	_____	_____	_____	_____	_____	_____
<i>rrorc</i>	YNLELAFHHH	LCKTHRQGLL	AKLPPKGKLR	SLCSQHWEKL	QIFQHLHPIV	VQAAFPPLYK
F8-1	_____	_____	_____	_____	_____	_____
F8-2	_____	_____	_____	_____	_____	_____
<i>rrorc</i>	ELFSTDVESP	EGLSK*				
F8-1	_____	_____				
F8-2	_____	_____				

Figure S22. Predicted translation products of both alleles in the *Rorc* deletion cell strain.

<i>mbeta-trcp</i>	MDPAEAVLQE	KALKFMC SMP	RSLWLGCS SL	ADSMPSLRCL	YNPGTGALTA	FQNSSEREDC
D11-1	MDPAEAVLQE	KALKFMC SMP	RSLWLGCS SL	ADSMPSLRCL	YNPGTGALTA	FQNSSEREDC
D11-2	MDPAEAVLQE	KALKFMC SMP	RSLWLGCS SL	ADSMPSLRCL	YNPGTGALTA	FQNSSEREDC
	*****	*****	*****	*****	*****	*****
<i>mbeta-trcp</i>	NNGEPPRKII	PEKNSLRQTY	NSCARLCINQ	ETVCLTSTAM	KTENCVAKAK	LANGTSSMIV
D11-1	NNGEPPRKII	PEKNSLRQTY	NSCARLCINQ	ETVCLTSTAM	KTENCVAKAK	LANGTSSMIV
D11-2	NNGEPPRKII	PEKNSLRQTY	NSCARLCINQ	ETVCLTSTAM	KTENCVAKAK	LANGTSSMIV
	*****	*****	*****	*****	*****	*****
<i>mbeta-trcp</i>	PKQRKLSASY	EKEKELCVKY	FEQWSESDQV	EFVEHLISQM	CHYQHG HINS	YLPKMLQRDF
D11-1	PKQRKLSASY	EKEKELCVKY	FEQWSESDQV	EFVEHLISQM	CHYQHG HINS	YLPKMLQRDF
D11-2	PKQRKLSASY	EKEKELCVKY	FEQWSESDQV	EFVEHLISQM	CHYQHG HINS	YLPKMLQRDF
	*****	*****	*****	*****	*****	*****
<i>mbeta-trcp</i>	ITALPARGLD	HIAENILSYL	DAKSLCAAEL	VCKEWYRVTS	DGMLWKKLIE	RMVRTDSLWR
D11-1	ITALPARGLD	HIAENILSYL	DAKSLCAAEL	VCKEW	KKLIE	RMVRTDSLWR
D11-2	ITALPARGLD	HIAENILSYL	DAKSLCAAEL	VCKEWYRVTS	GRHAVEKAHR	EDGQDGLSVA
	*****	*****	*****	*****	*****	*****
<i>mbeta-trcp</i>	GLAERRGWGQ	YLFKNKPPDE	NAPPNSFYRA	LYPKIIQDIE	TIESNWRCCR	HSLQRIHCRS
D11-1	GLAERRGWGQ	YLFKNKPPDE	NAPPNSFYRA	LYPKIIQDIE	TIESNWRCCR	HSLQRIHCRS
D11-2	RPCRAQRLGT	VLIQKQTS*-				
<i>mbeta-trcp</i>	ETSKGVYCLQ	YDDQKIVSGL	RDNTIKIWDK	STLECKRILT	GHTGSVLC LQ	YDERVIITGS
D11-1	ETSKGVYCLQ	YDDQKIVSGL	RDNTIKIWDK	STLECKRILT	GHTGSVLC LQ	YDERVIITGS
D11-2						
<i>mbeta-trcp</i>	SDSTVRVWDV	NAGEMLNTLI	HHCEAVLHLR	FNNGMMVTCS	KDRSIAVWDM	ASPTDITLRR
D11-1	SDSTVRVWDV	NAGEMLNTLI	HHCEAVLHLR	FNNGMMVTCS	KDRSIAVWDM	ASPTDITLRR
D11-2						
<i>mbeta-trcp</i>	VLVGHRAAVN	VVDFDDKYIV	SASGDRTIKV	WNTSTCEFVR	TLNGHKRGIA	CLQYRDRLVV
D11-1	VLVGHRAAVN	VVDFDDKYIV	SASGDRTIKV	WNTSTCEFVR	TLNGHKRGIA	CLQYRDRLVV
D11-2						
<i>mbeta-trcp</i>	SGSSDNTIRL	WDIECGACLR	VLEGHEELVR	CIRFDNKRIV	SGAYDGKIKV	WDLMAALDPR
D11-1	SGSSDNTIRL	WDIECGACLR	VLEGHEELVR	CIRFDNKRIV	SGAYDGKIKV	WDLMAALDPR
D11-2						
<i>mbeta-trcp</i>	APAGTLCLRT	LVEHSGRVFR	LQFDEFQIVS	SSHDDTILIW	DFLNDPAAHA	EPPRSPSR TY
D11-1	APAGTLCLRT	LVEHSGRVFR	LQFDEFQIVS	SSHDDTILIW	DFLNDPAAHA	EPPRSPSR TY
D11-2						
<i>mbeta-trcp</i>	TYISR*					
D11-1	TYISR*					
D11-2						

Figure S25. Predicted translation products of both alleles in the *Beta-trcp* deletion cell (D11).

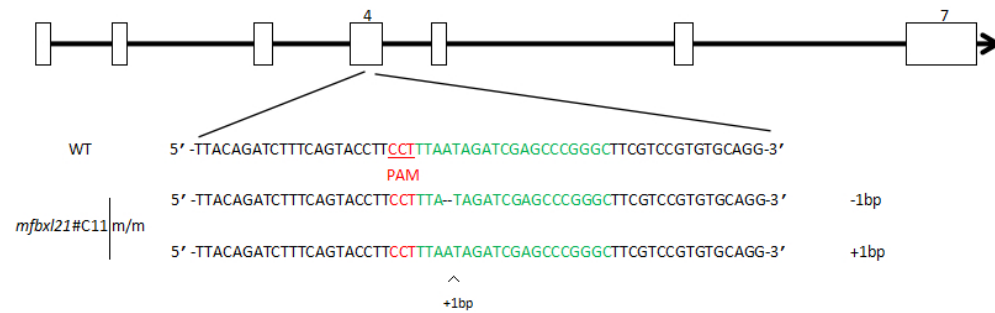


Figure S26. The sgRNA targeting the *Fbxl21* gene and the sequences of both alleles in the *Fbxl21* deletion cell strain.

<i>mfbxl21</i>	MKRNNFSAVN	KVVQSSPVVK	QPKRGLCSSL	RQTHALSVLL	DWGTLP HHVI	LQIFQYLPLI
C11-1	MKRNNFSAVN	KVVQSSPVVK	QPKRGLCSSL	RQTHALSVLL	DWGTLP HHVI	LQIFQYLPLN
C11-2	MKRNNFSAVN	KVVQSSPVVK	QPKRGLCSSL	RQTHALSVLL	DWGTLP HHVI	LQIFQYLPL*
	*****	*****	*****	*****	*****	*****
<i>mfbxl21</i>	DRARASSVCR	RWNEVFHIPD	LWRKFEBELN	QSATSYFKST	HPDLIQIIK	KHAAHLQYVS
C11-1	RSSPGFVRVQ	EME*				
C11-2						
<i>mfbxl21</i>	FKVDSSTESA	EAACDILSQL	VNCSIQTLGL	ISTAKPSFMN	VPKSHFVSAL	TVVFN SKSL
C11-1						
C11-2						
<i>mfbxl21</i>	SSIKIEDTPV	DDPSLKILVA	NNSDTLRLK	MSSCPHVSSD	GILCVADHCQ	GLRELALNYY
C11-1						
C11-2						
<i>mfbxl21</i>	ILSDEILLAL	SSETHVNLEH	LRIDVVS ENP	GQIKFHSIKK	RSWDALIKHS	PRVNVVMYFF
C11-1						
C11-2						
<i>mfbxl21</i>	LYEEEF EAFV	KEETPVTHLY	FGRSVSRAIL	GRIGLNC PRL	IELVVCANGL	LPLDSELIRI
C11-1						
C11-2						
C11-1						
C11-2						
<i>mfbxl21</i>	LYEEEF EAFV	KEETPVTHLY	FGRSVSRAIL	GRIGLNC PRL	IELVVCANGL	LPLDSELIRI
C11-1						
C11-2						
<i>mfbxl21</i>	AKHCKNLTSL	GLSECEVSCS	AFVEFVR LCG	RRLTQLSIME	EVLVPDDRYT	PDEVHTEVSK
C11-1						
C11-2						
<i>mfbxl21</i>	HLGRVWF PDV	MPIW*				
C11-1						
C11-2						

Figure S27. Predicted translation products of both alleles in the *Fbxl21* deletion cell.

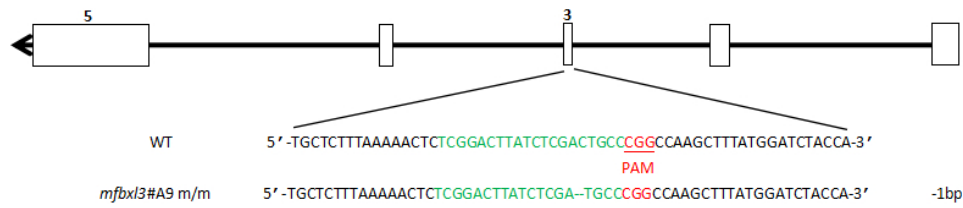


Figure S28. The sgRNA targeting the *Fbxl3* gene and the sequences of both alleles in the *Fbxl3* deletion cell strain.

<i>mfbxl3</i>	MKRGGGRSDQ	DSAEEGTAEK	PKRPRTTQER	SQPCDWGNLL	QDIVLHVFKY	LPLLDRAHAS
F7-1/2	MKRGGGRSDQ	DSAEEGTAEK	PKRPRTTQER	SQPCDWGNLL	QDIVLHVFKY	LPLLDRAHAS
	*****	*****	*****	*****	*****	*****
<i>mfbxl3</i>	QVCRNWNQVF	HMPDLWRCFE	FELNQPATSY	LKATHPELIK	QIIKRHSNHL	QYVSFKVDSS
F7-1/2	QVCRNWNQVF	HMPDLWRCFE	FELNQPATSY	LKATHPELIK	QIIKRHSNHL	QYVSFKVDSS
	*****	*****	*****	*****	*****	*****
<i>mfbxl3</i>	KESAEAAACDI	LSQLVNCSLK	TLGLISTARP	SFMDLPKSHF	ISALTVVFVN	SKSLSSLKID
F7-1/2	KESAEAAACDI	LSQLVNCSLK	TLGLISMPGQ	ALWIYQSLTL	SLH*	-----
	*****	*****	*****			
<i>mfbxl3</i>	DTPVDDPSLK	VLVANNSDTL	KLLKMSSCPH	VSPAGILCVA	DQCHGLRELA	LNYHLLSDEL
F7-1/2	-----	-----	-----	-----	-----	-----
<i>mfbxl3</i>	LLALSSEKHV	RLEHLRIDVV	SENPQGTHFH	TIQKSSWDAF	IKHSPKVMNV	MYFFLYBEEF
F7-1/2	-----	-----	-----	-----	-----	-----
<i>mfbxl3</i>	DPFFRYEIPA	THLYFGRSVS	KDVLGRVGMT	CPRLVELVVC	ANGLRPLDEE	LIRIAERCKN
F7-1/2	-----	-----	-----	-----	-----	-----
<i>mfbxl3</i>	LSAIGLGECE	VSCSAFVEFV	KMCGGRLSQL	SIMEEVLIPD	QKYSLEQIHW	EVSKHLGRVW
F7-1/2	-----	-----	-----	-----	-----	-----
<i>mfbxl3</i>	FPDMMPW*					
F7-1/2	-----					

Figure S29. Predicted translation products of both alleles in the *Fbxl3* deletion cell.

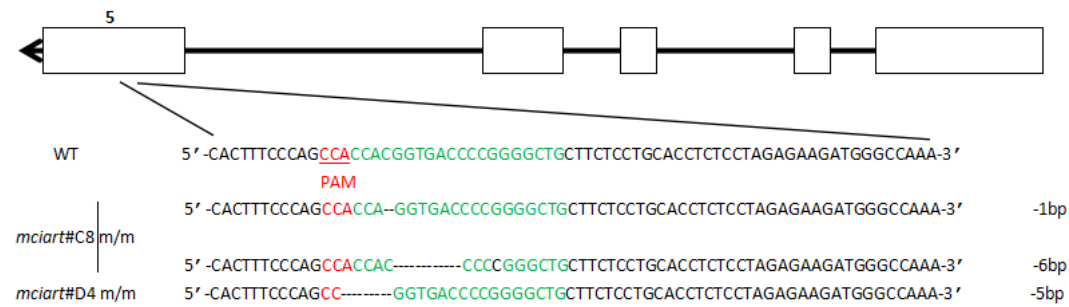


Figure S30. The sgRNA targeting the *Ciart* gene and the sequences of both alleles in the *Ciart* deletion cell strain.

<i>mciart</i>	MDSPSSVSSY	SSSSLSPSFS	TSSVNSDFS	PSDNEREGKG	THELRPDTVG	QRGGSRPSPG
C8-1	MDSPSSVSSY	SSSSLSPSFS	TSSVNSDFS	PSDNEREGKG	THELRPDTVG	QRGGSRPSPG
C8-2	MDSPSSVSSY	SSSSLSPSFS	TSSVNSDFS	PSDNEREGKG	THELRPDTVG	QRGGSRPSPG
	*****	*****	*****	*****	*****	*****
<i>mciart</i>	PIRCRHRPRV	SSNQHTAPHL	EQQGSEVKRS	RDGEQETSLN	TQGCTTEGDL	LFAQKCKELQ
C8-1	PIRCRHRPRV	SSNQHTAPHL	EQQGSEVKRS	RDGEQETSLN	TQGCTTEGDL	LFAQKCKELQ
C8-2	PIRCRHRPRV	SSNQHTAPHL	EQQGSEVKRS	RDGEQETSLN	TQGCTTEGDL	LFAQKCKELQ
	*****	*****	*****	*****	*****	*****
<i>mciart</i>	GFIRPLDLL	NGLKMGRFDR	GLSSFQSSVA	MDRIQRIVGV	LQKPQMGERY	LGTLLQVEGM
C8-1	GFIRPLDLL	NGLKMGRFDR	GLSSFQSSVA	MDRIQRIVGV	LQKPQMGERY	LGTLLQVEGM
C8-2	GFIRPLDLL	NGLKMGRFDR	GLSSFQSSVA	MDRIQRIVGV	LQKPQMGERY	LGTLLQVEGM
	*****	*****	*****	*****	*****	*****
<i>mciart</i>	LKTWFPPIAA	QKSSSGGSRH	QISKHFPSHH	GDPGAASPAP	LLEKMGQTQL	GHLVLKPKQP
C8-1	LKTWFPPIAA	QKSSSGGSRH	QISKHFPSHH	—PRAASPAP	LLEKMGQTQL	GHLVLKPKQP
C8-2	LKTWFPPIAA	QKSSSGGSRH	QISKHFPSHQ	VTPGLLLLHL	S*	—————
	*****	*****	*****			
<i>mciart</i>	WHLTGWPAMN	LTWIHSTPIC	NPPLSSQGSA	SGHSPIGTGA	SIGVILVLQK	GGQPFTHSAP
C8-1	WHLTGWPAMN	LTWIHSTPIC	NPPLSSQGSA	SGHSPIGTGA	SIGVILVLQK	GGQPFTHSAP
C8-2	—————	—————	—————	—————	—————	—————
<i>mciart</i>	GTPVPPTPLS	PVVPGDLKKL	PGEEPRCHSL	PVTLPDWS	ILCPPVLPTT	DREMTKGHPE
C8-1	GTPVPPTPLS	PVVPGDLKKL	PGEEPRCHSL	PVTLPDWS	ILCPPVLPTT	DREMTKGHPE
C8-2	—————	—————	—————	—————	—————	—————
<i>mciart</i>	PQMTSHPPVA	PDPQP*				
C8-1	PQMTSHPPVA	PDPQP*				
C8-2	—————	—————				

Figure S31. Predicted translation products of both alleles in the *Ciart* deletion cell (C8).

<i>mdec1</i>	MERIPSAQPP	PTCLPKAPGL	EHGDLSGMDF	AHMYQVYKSR	RGIKRSEDSK	ETYKLPHRLI
D8-1	MERIPSAQPP	PTCLPKAPGL	EHGDLSGMDF	AHMYQVYKSR	RGIKRSEDSK	ETYKLPHRLI
D8-2	MERIPSAQPP	PTCLPKAPGL	EHGDLSGMDF	AHMYQVYKSR	RGIKRSEDSK	ETYKLPHRLI
	*****	*****	*****	*****	*****	*****
<i>mdec1</i>	EKKRRDRINE	CIAQLKDLLP	EHLKLTTLGH	LEKAVVLELT	LKHVKALTNL	IDQQQQKIIA
D8-1	EKKRRDRINE	CIAQLKDLLP	EHLKLTTLGH	LEKAVVLELT	LKHVKALTNL	IDQQQQKIIA
D8-2	EKKRRDRINE	CIAQLKDLLP	EHLKLTTLGH	LEKAVVLELT	LKHVKALTNL	IDQQQQKIIA
	*****	*****	*****	*****	*****	*****
<i>mdec1</i>	LQSGLQAGDL	SGRNLEAGQE	MFCSGFQTCA	REVLQYLAKH	ENTRDLKSSQ	LVTHLHRVVS
D8-1	LQSGLQAGDL	SGRNLEAGQE	MFCSGFQTCA	REVLQYLAKH	ENTRDLKSSQ	LVTHLHRVVS
D8-2	LQSGLQAGDL	SGRNLEAGQE	MFCSGFQTCA	REVLQYLAKH	ENTRDLKSSQ	LVTHLHRVVS
	*****	*****	*****	*****	*****	*****
<i>mdec1</i>	ELLQGGASRK	PLDSAPKAVD	LKEKPSFLAK	GSEGP GKNCV	PVIQRTFAPS	GGEQSGSDTD
D8-1	ELLQGGASRK	PLDSAPKAVD	LKEKPSFLAK	GSEGP GKNCV	PVIQRTFAPS	GGEQSGSDTD
D8-2	ELLQGGASRK	PLDSAPKAVD	LKEKPSFLAK	GSEGP GKNCV	PVIQRTFAPS	GGEQSGSDTD
	*****	*****	*****	*****	*****	*****
<i>mdec1</i>	TDSGYGGELE	KGDLRSEQPY	FKSDHGRRFA	VGERVSTIKQ	ESEEPPTKKS	RMQLSEEEGH
D8-1	TDSGYGGELE	KGDLRSEQPY	FKSDHGRRF	GRTCQHN*—	————	————
D8-2	TDSGYGGELE	KGDLRSEQPY	FKSDHGPIRS	LPAKWENVSA	QLSKNPKSPP	PKRAECSSQK
	*****	*****	*****			
<i>mdec1</i>	FAGSDLMGSP	FLGPHPHQPP	FCLPFYLIPP	SATAYLPMLE	KCWYPTSWPV	LYPGLNTSAA
D8-1	————	————	————	————	————	————
D8-2	RKATSRVI*	————	————	————	————	————
<i>mdec1</i>	ALSSFMNPDK	IPTPLLLPQR	LPSPLAHSSL	DSSALLQALK	QIPPLNLETK	D*
D8-1	————	————	————	————	————	————
D8-2	————	————	————	————	————	————

Figure S34. Predicted translation products of both alleles in the *Dec1* deletion cell.

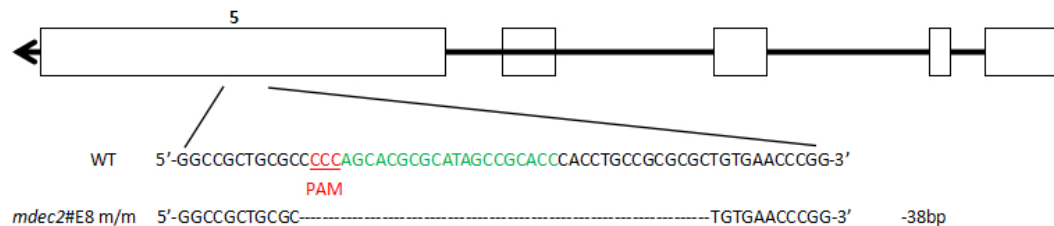


Figure S35. The sgRNA targeting the *Dec2* gene and the sequences of both alleles in the *Dec2* deletion cell strain.

<i>mdec2</i>	MDEGIPHLQE RQLEHRDFI GLDYSSLYMC KPKRSLKRDD TKDTYKLPHR LIEKKRRDRI
E8-1/2	MDEGIPHLQE RQLEHRDFI GLDYSSLYMC KPKRSLKRDD TKDTYKLPHR LIEKKRRDRI

<i>mdec2</i>	NECIAQLKDL LPEHLKL TTL GHLEKAVVLE LTLKHLKALT ALTEQQHQKI IALQNGERSL
E8-1/2	NECIAQLKDL LPEHLKL TTL GHLEKAVVLE LTLKHLKALT ALTEQQHQKI IALQNGERSL

<i>mdec2</i>	KSPVQADLDA FHSGFQTCAK EVLQYLARFE SWTPREPRCA QLVSHLHAVA TQLLTPQVPS
E8-1/2	KSPVQADLDA FHSGFQTCAK EVLQYLARFE SWTPREPRCA QLVSHLHAVA TQLLTPQVPS

<i>mdec2</i>	GRGSGRAPCS AGAAAAAGPE RVARCVPIQ RTQPGTEPEH DTD TDSGYGG EAEQGAAVK
E8-1/2	GRGSGRAPCS AGAAAAAGPE RVARCVPIQ RTQPGTEPEH DTD TDSGYGG EAEQGAAVK

<i>mdec2</i>	QEPPGDSSPA PKRPKLEARG ALLGPEPALL GSLVALGGA PFAQPAAPF CLPFYLLSPS
E8-1/2	QEPPGDSSPA PKRPKLEARG ALLGPEPALL GSLVALGGA PFAQPAAPF CLPFYLLSPS

<i>mdec2</i>	AAAYVQPWLD KSGLDKYL YP AAAAFPLL Y PGIPAAAAA AAAAFCLSS VLSPPPEKAG
E8-1/2	AAAYVQPWLD KSGLDKYL YP AAAAFPLL Y PGIPAAAAA AAAAFCLSS VLSPPPEKAG

<i>mdec2</i>	ATAGAPFLAH EVAPPGLRP QHAHSRTHLP RAVNPESSE DATQPAKDAP *
E8-1/2	ATAGAPFLAH EVAPPGLRC EPGELSGRCH AAGQGRPL — — — — —

Figure S36. Predicted translation products of both alleles in the *Dec2* deletion cell.

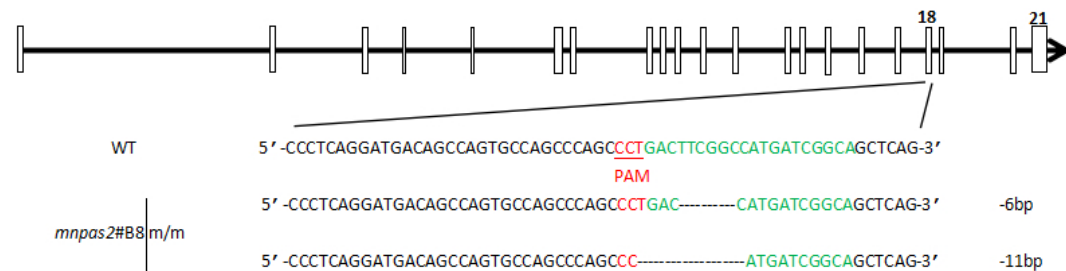


Figure S37. The sgRNA targeting the *Npas2* gene and the sequences of both alleles in the *Npas2* deletion cell strain.

<i>npas2</i>	MDDEKDR	RASRNKSEKK	RRDQFNVL	ELSSMLPGNT	RKMDKTTVLE	KVIGFLQKHN
B8-1	MDDEKDR	RASRNKSEKK	RRDQFNVL	ELSSMLPGNT	RKMDKTTVLE	KVIGFLQKHN
B8-2	MDDEKDR	RASRNKSEKK	RRDQFNVL	ELSSMLPGNT	RKMDKTTVLE	KVIGFLQKHN
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	EVSAQTEICD	IQQDWKPSFL	SNEEFTQLML	EALDGFVIVV	TTDGSIIYVS	DSITPLLGH
B8-1	EVSAQTEICD	IQQDWKPSFL	SNEEFTQLML	EALDGFVIVV	TTDGSIIYVS	DSITPLLGH
B8-2	EVSAQTEICD	IQQDWKPSFL	SNEEFTQLML	EALDGFVIVV	TTDGSIIYVS	DSITPLLGH
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	PADVMDQNL	NFLPEQEHSE	VYKILSSHML	VTDSPSPEFL	KSDNDLEFYC	HLLRGS LNPK
B8-1	PADVMDQNL	NFLPEQEHSE	VYKILSSHML	VTDSPSPEFL	KSDNDLEFYC	HLLRGS LNPK
B8-2	PADVMDQNL	NFLPEQEHSE	VYKILSSHML	VTDSPSPEFL	KSDNDLEFYC	HLLRGS LNPK
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	EFPTYEYIKF	VGNFRSYNNV	PSPSCNGFDN	TLSRPCHVPL	GKDVCFIATV	RLATPQFLKE
B8-1	EFPTYEYIKF	VGNFRSYNNV	PSPSCNGFDN	TLSRPCHVPL	GKDVCFIATV	RLATPQFLKE
B8-2	EFPTYEYIKF	VGNFRSYNNV	PSPSCNGFDN	TLSRPCHVPL	GKDVCFIATV	RLATPQFLKE
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	MCVADEPLEE	FTSRHSLEWK	FLFLDHRAPP	IIGYLPFEVL	GTSGYDYYHI	DDLELLARCH
B8-1	MCVADEPLEE	FTSRHSLEWK	FLFLDHRAPP	IIGYLPFEVL	GTSGYDYYHI	DDLELLARCH
B8-2	MCVADEPLEE	FTSRHSLEWK	FLFLDHRAPP	IIGYLPFEVL	GTSGYDYYHI	DDLELLARCH
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	QHLMQFGK GK	SCCYRFLTKG	QQWIWLQTHY	YITYHQWNSK	PEFIVCTHSV	VSYADV RVER
B8-1	QHLMQFGK GK	SCCYRFLTKG	QQWIWLQTHY	YITYHQWNSK	PEFIVCTHSV	VSYADV RVER
B8-2	QHLMQFGK GK	SCCYRFLTKG	QQWIWLQTHY	YITYHQWNSK	PEFIVCTHSV	VSYADV RVER
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	RQELALEDP	TEAMHPSAVK	EKDSSLEPPQ	PFNALDMGAS	GLPSSPSPA	SSRSSHKSSH
B8-1	RQELALEDP	TEAMHPSAVK	EKDSSLEPPQ	PFNALDMGAS	GLPSSPSPA	SSRSSHKSSH
B8-2	RQELALEDP	TEAMHPSAVK	EKDSSLEPPQ	PFNALDMGAS	GLPSSPSPA	SSRSSHKSSH
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	TAMSEPTSTP	TKLMAENSTT	ALPRPATLPQ	ELPVQGLSQA	ATMPTALHSS	ASCDLTQQL
B8-1	TAMSEPTSTP	TKLMAENSTT	ALPRPATLPQ	ELPVQGLSQA	ATMPTALHSS	ASCDLTQQL
B8-2	TAMSEPTSTP	TKLMAENSTT	ALPRPATLPQ	ELPVQGLSQA	ATMPTALHSS	ASCDLTQQL
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	LQSLPQTGLQ	SPPAPVTQFS	AQFSMFQTIK	DQLEQRTRIL	QANIRWQQEE	LHKIQEQ LCL
B8-1	LQSLPQTGLQ	SPPAPVTQFS	AQFSMFQTIK	DQLEQRTRIL	QANIRWQQEE	LHKIQEQ LCL
B8-2	LQSLPQTGLQ	SPPAPVTQFS	AQFSMFQTIK	DQLEQRTRIL	QANIRWQQEE	LHKIQEQ LCL
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	VQDSNVQMFL	QQPAVSLSFS	STQRPAQQQ	LQQRPAAPSQ	PQLVVNTPLQ	GQITSTQVTN
B8-1	VQDSNVQMFL	QQPAVSLSFS	STQRPAQQQ	LQQRPAAPSQ	PQLVVNTPLQ	GQITSTQVTN
B8-2	VQDSNVQMFL	QQPAVSLSFS	STQRPAQQQ	LQQRPAAPSQ	PQLVVNTPLQ	GQITSTQVTN
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	QHLLRESNVI	SAQGPKPMRS	SQLLPASGRS	LSSLPSQFSS	TASVLPPLGLS	LTTIAPTQPD
B8-1	QHLLRESNVI	SAQGPKPMRS	SQLLPASGRS	LSSLPSQFSS	TASVLPPLGLS	LTTIAPTQPD
B8-2	QHLLRESNVI	SAQGPKPMRS	SQLLPASGRS	LSSLPSQFSS	TASVLPPLGLS	LTTIAPTQPD
	*****	*****	*****	*****	*****	*****
<i>npas2</i>	DSQCQPSPDF	GHDRQLRLLL	SQPIQPMMPG	SCDARQPSEV	SRTGRQVKYA	QSQVMFSPD
B8-1	DSQCQPSPD	GHDRQLRLLL	SQPIQPMMPG	SCDARQPSEV	SRTGRQVKYA	QSQVMFSPD
B8-2	DSQCQPS*	GHDRQLRLLL	SQPIQPMMPG	SCDARQPSEV	SRTGRQVKYA	QSQVMFSPD

<i>npas2</i>	SHPTNSSAST	PVLLMGQAVL	HPSFASRPS	PLQPAQAQQQ	PPPYLQAPTS	LHSEQPD SLL
B8-1	SHPTNSSAST	PVLLMGQAVL	HPSFASRPS	PLQPAQAQQQ	PPPYLQAPTS	LHSEQPD SLL
B8-2						
<i>npas2</i>	LSTFSQQPGT	LCYAATQSTP	PQPPRPSRRV	SRLSES*		
B8-1	LSTFSQQPGT	LCYAATQSTP	PQPPRPSRRV	SRLSES*		
B8-2						

Figure S38. Predicted translation products of both alleles in the *Npas2* deletion cell.

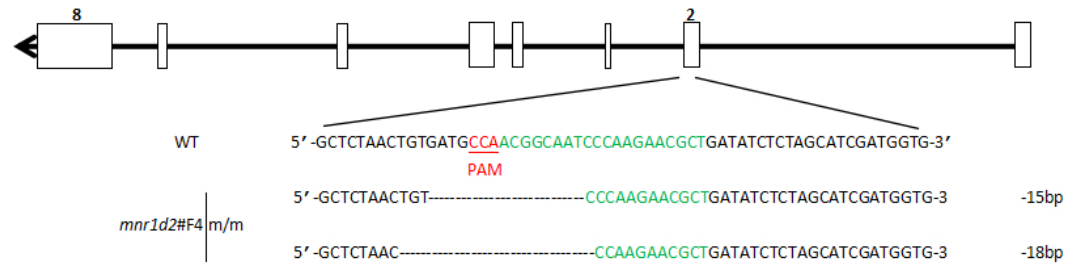


Figure S39. The sgRNA targeting the *Nr1d2* gene and the sequences of both alleles in the *Nr1d2* deletion cell strain.

<i>mnr1d2</i>	MELNAGGVIA	YISSSSSASS	PASCHSEGSE	NSFQSSSSSV	PSSPNSSNCD	ANGNPKNADI
F4-1	MELNAGGVIA	YISSSSSASS	PASCHSEGSE	NSFQSSSSSV	PSSPNSSNC-	----PKNADI
F4-2	MELNAGGVIA	YISSSSSASS	PASCHSEGSE	NSFQSSSSSV	PSSPNSSNPR	TLISLASMVF
	*****	*****	*****	*****	*****	*****
<i>mnr1d2</i>	SSIDGVLKSD	RTDCPVKTGK	TSAPGMTKSH	SGMTKFSGMV	LLCKVCGDVA	SGPHYGVHAC
F4-1	SSIDGVLKSD	RTDCPVKTGK	TSAPGMTKSH	SGMTKFSGMV	LLCKVCGDVA	SGPHYGVHAC
F4-2	*	-----	-----	-----	-----	-----
<i>mnr1d2</i>	EGCKGFFRRS	IQQNIQYKKC	LKNENC SIMR	MNRNRCQQCR	FKKCLSVGMS	RDAVRFG RIP
F4-1	EGCKGFFRRS	IQQNIQYKKC	LKNENC SIMR	MNRNRCQQCR	FKKCLSVGMS	RDAVRFG RIP
F4-2	-----	-----	-----	-----	-----	-----
<i>mnr1d2</i>	KREKQRLIE	MQSAMKTMMN	TQFSCHLQND	TLAEQHDQSA	LPAQEQLRPK	SQLEQENIKN
F4-1	KREKQRLIE	MQSAMKTMMN	TQFSCHLQND	TLAEQHDQSA	LPAQEQLRPK	SQLEQENIKN
F4-2	-----	-----	-----	-----	-----	-----
<i>mnr1d2</i>	TPSDFAKEEV	IGMVTRAHKD	TFLYNQEHRE	NSSESMPFQR	GERIPRNMEQ	YNLNQDHRGS
F4-1	TPSDFAKEEV	IGMVTRAHKD	TFLYNQEHRE	NSSESMPFQR	GERIPRNMEQ	YNLNQDHRGS
F4-2	-----	-----	-----	-----	-----	-----
<i>mnr1d2</i>	GIHNHFPCSE	RQQHLSGQYK	GRNIMHYPNG	HAVCIANGHC	MNFSSAYTQR	VCDRIPVGGC
F4-1	GIHNHFPCSE	RQQHLSGQYK	GRNIMHYPNG	HAVCIANGHC	MNFSSAYTQR	VCDRIPVGGC
F4-2	-----	-----	-----	-----	-----	-----
<i>mnr1d2</i>	SQTENRNSYL	CNTGGRMHLV	CPMSKSPYVD	PQKSGHEIWE	EFMSMFTPAV	KEVVEFAKRI
F4-1	SQTENRNSYL	CNTGGRMHLV	CPMSKSPYVD	PQKSGHEIWE	EFMSMFTPAV	KEVVEFAKRI
F4-2	-----	-----	-----	-----	-----	-----
<i>mnr1d2</i>	PGFRDLSQHD	QVNLLKAGTF	EVL MVRFASL	FDAKERTVTF	LSGKKYSVDD	LHSMGAGDLL
F4-1	PGFRDLSQHD	QVNLLKAGTF	EVL MVRFASL	FDAKERTVTF	LSGKKYSVDD	LHSMGAGDLL
F4-2	-----	-----	-----	-----	-----	-----
<i>mnr1d2</i>	SSMFEFSEKL	NALQLSDEEM	SLFTAVVLVS	ADRS GIENVN	SVEALQETLI	RALRTLIMKN
F4-1	SSMFEFSEKL	NALQLSDEEM	SLFTAVVLVS	ADRS GIENVN	SVEALQETLI	RALRTLIMKN
F4-2	-----	-----	-----	-----	-----	-----
<i>mnr1d2</i>	HPNEASIFTK	LLLKL PDLRS	LNNMHSEELL	AFKVHP*		
F4-1	HPNEASIFTK	LLLKL PDLRS	LNNMHSEELL	AFKVHP*		
F4-2	-----	-----	-----	-----		

Figure S40. Predicted translation products of both alleles in the *Nr1d2* deletion cell.

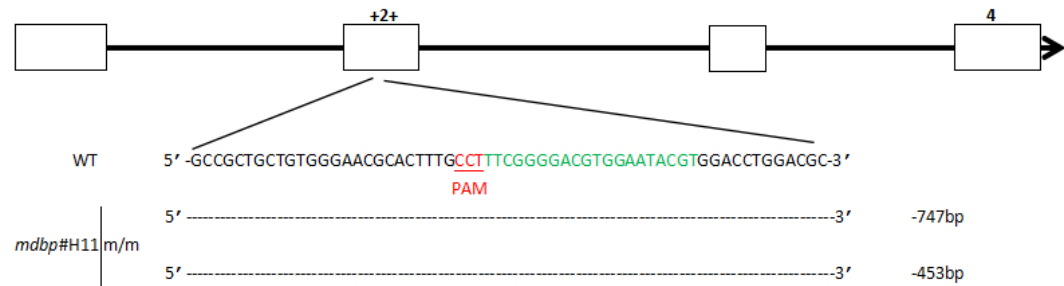


Figure S41. The sgRNA targeting the *Dbp* gene and the sequences of both alleles in the *Dbp* deletion cell strain.

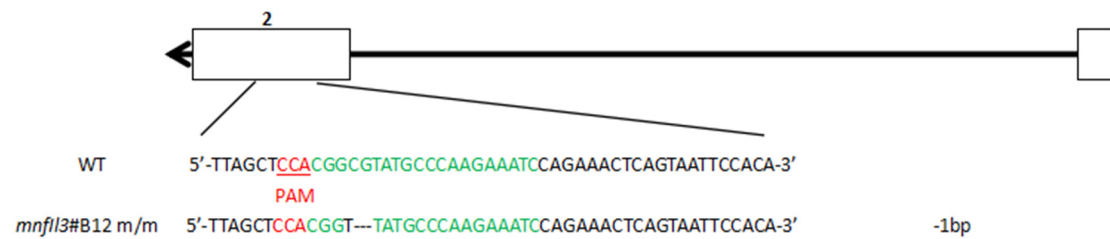


Figure S42. The sgRNA targeting the *Nfil3* gene and the sequences of both alleles in the *Nfil3* deletion cell strain.

<i>mnfil3</i>	MQLRKMQTIK	KEPAPLDPTS	SSDKMLLLNS	ALAEVAEDLA	SGEDLLLNEG	SMGKNKSSAC
B12-1/2	MQLRKMQTIK	KEPAPLDPTS	SSDKMLLLNS	ALAEVAEDLA	SGEDLLLNEG	SMGKNKSSAC
	*****	*****	*****	*****	*****	*****
<i>mnfil3</i>	RRKREFIPDE	KKDAMYWEKR	RKNNEAAKRS	REKRRLNDLV	LENKLIALGE	ENATLKAELL
B12-1/2	RRKREFIPDE	KKDAMYWEKR	RKNNEAAKRS	REKRRLNDLV	LENKLIALGE	ENATLKAELL
	*****	*****	*****	*****	*****	*****
<i>mnfil3</i>	SLKLKFGNIS	STAYAQEIQK	LSNSTAVYFQ	DYQTSKAAVS	SFVDEHEPAM	VAGSCISVIK
B12-1/2	SLKLKFGNIS	STVMPKKSRL	SVIPQLSTFR	TTRHPLRP*-	-----	-----
	*****	**				
<i>mnfil3</i>	HSPQSSLSDV	SEVSSVEHTQ	ESPAQGGCRS	PENKFPVIKQ	EPVELESFAR	EAREERGTYG
B12-1/2	-----	-----	-----	-----	-----	-----
<i>mnfil3</i>	TSIQSYMGSS	SFSTYSHSPP	LLQVHGSTSN	SPRTSEADEG	VVGKSSDGED	BQQVPGKPIH
B12-1/2	-----	-----	-----	-----	-----	-----
<i>mnfil3</i>	SPVELQRVHA	TVVKVPEVNP	SALPHKLRIK	AKAMQVKVEA	LDSEFEGMQK	LSSPADAIK
B12-1/2	-----	-----	-----	-----	-----	-----
<i>mnfil3</i>	RHFDLEKHGT	SGMAHSSLPP	FSVQVTNIQD	WSLKSEHWHH	KELSSKTQSS	FKTGVVEVKD
B12-1/2	-----	-----	-----	-----	-----	-----
<i>mnfil3</i>	GGYKVSEAEN	LYLKQGIANL	SAEVVSLKRF	IATQPISASD	SR*	
B12-1/2	-----	-----	-----	-----	-----	

Figure S43. Predicted translation products of both alleles in the *Nfil3* deletion cell.

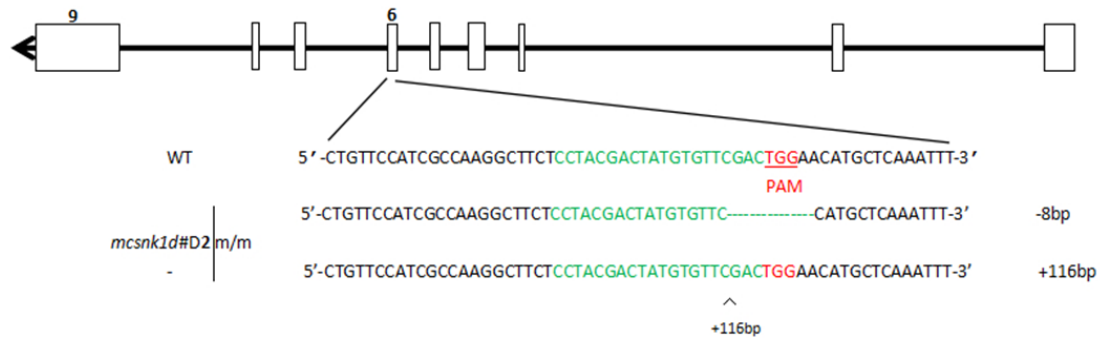


Figure S44. The sgRNA targeting the *Csnk1d* gene and the sequences of both alleles in the *Csnk1d* deletion cell strain (Knocking-out of CK1d was reported in Guo et al., JBR, 2019).

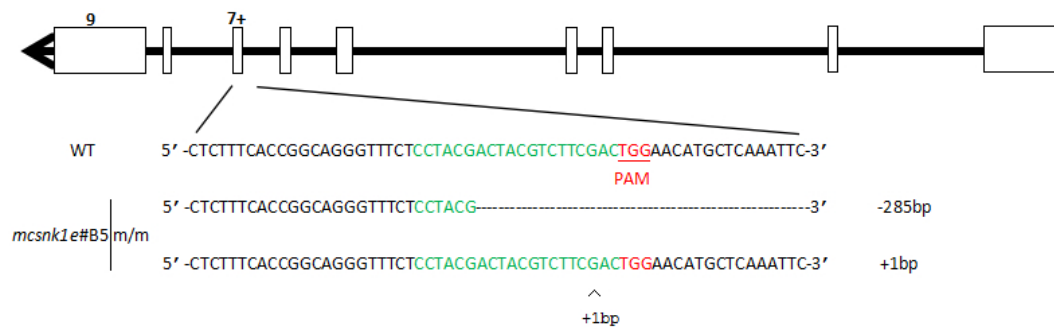


Figure S45. The sgRNA targeting the *Csnk1e* gene and the sequences of both alleles in the *Csnk1e* deletion cell strain (Knocking-out of CK1e was reported in Guo et al., JBR, 2019).

Note: No translation predictions on *Dbp*-H11, *Per2*-A2, and *Rorb*-B3 cell lines, due to the impairments of splicing signals in the targeted exons by mutated nucleotides.

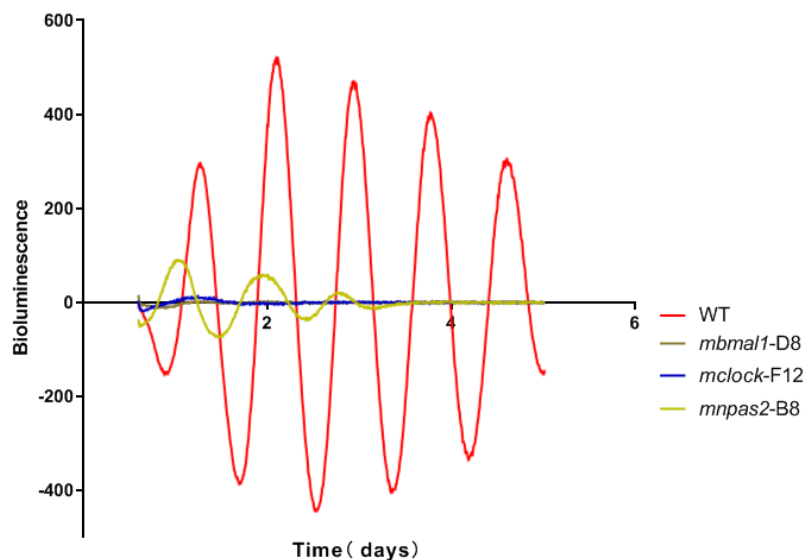


Figure S46. The bioluminescence of the wild-type, Bmal1-D8, Clock-F12, and Npas2-B8 cells. These genes belong to the core positive regulator group.

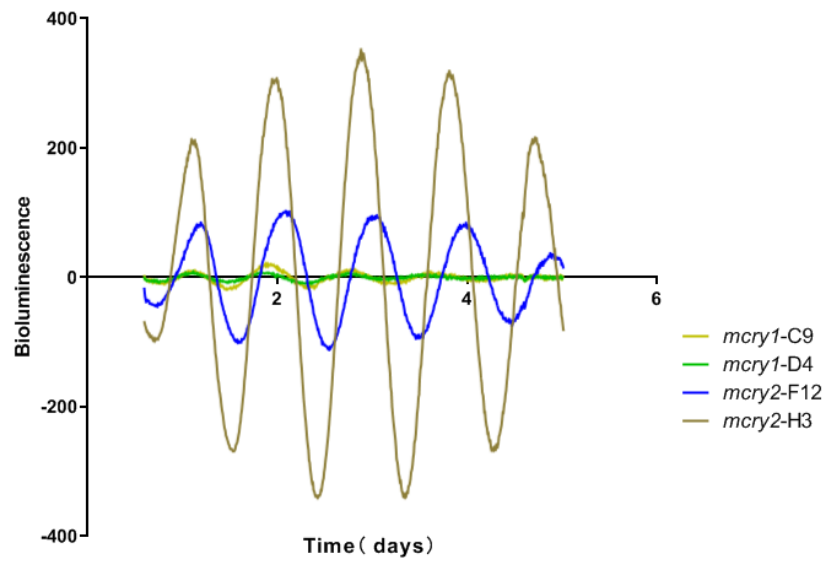


Figure S47. The bioluminescence of the Cry1 and Cry2 knock-out cells.

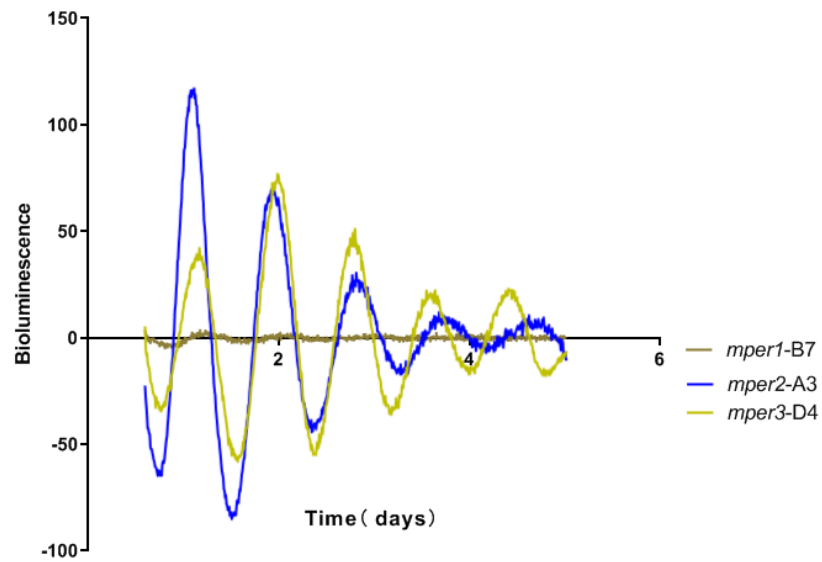


Figure S48. The bioluminescence of the Per1, Per2, and Per3 knock-out cells.

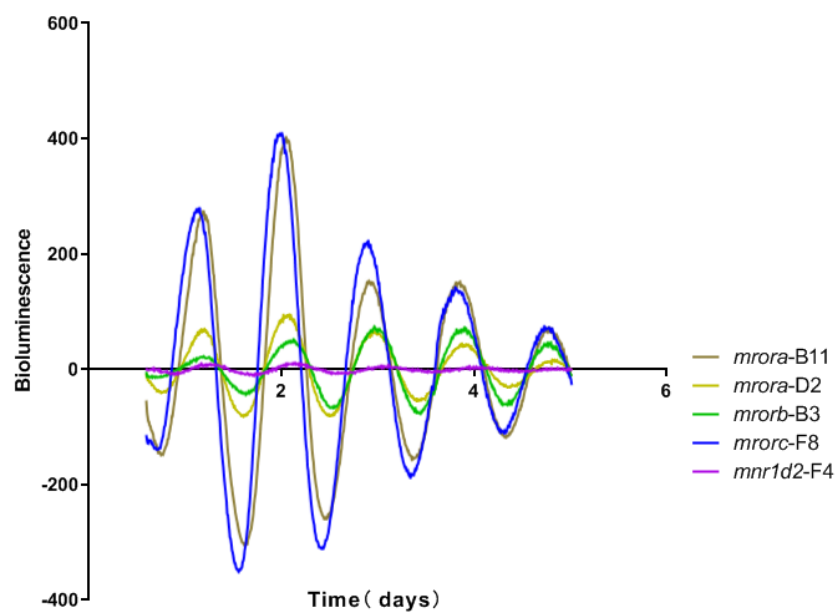


Figure S49. The bioluminescence of the *Rora*-B11, *Rora*-D2, *Rorb*-B3, *Rorc*-F8, *Nr1d2*-F4 cells. These genes represent regulators for the *Bmal1* gene.

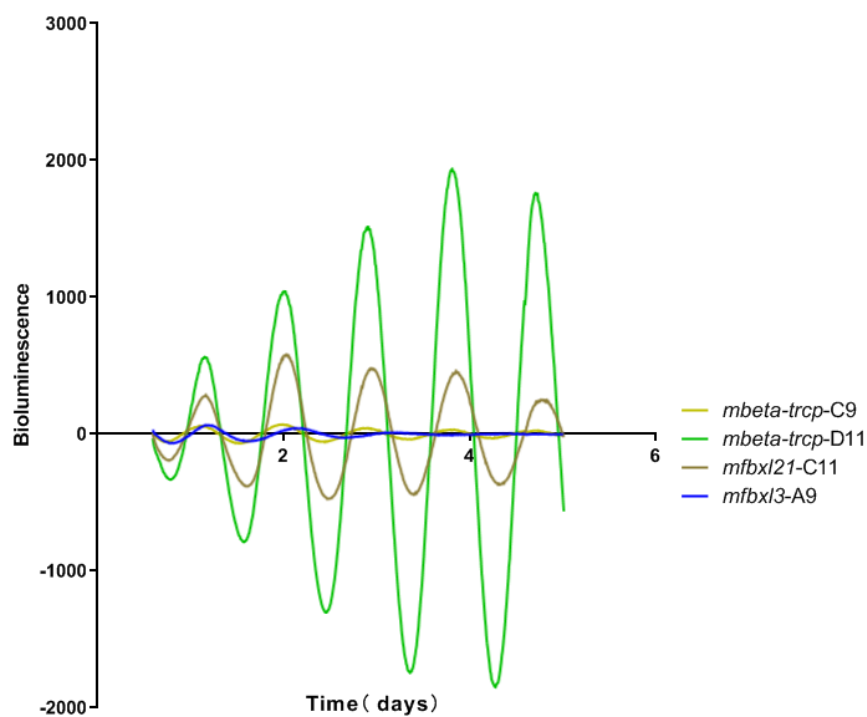


Figure S50. The bioluminescence of the *Beta-trcp*-C9, *Beta-trcp*-D11, *Fbxl21*-C11, *Fbxl3*-A9 cells. These genes represent E3 ligases.

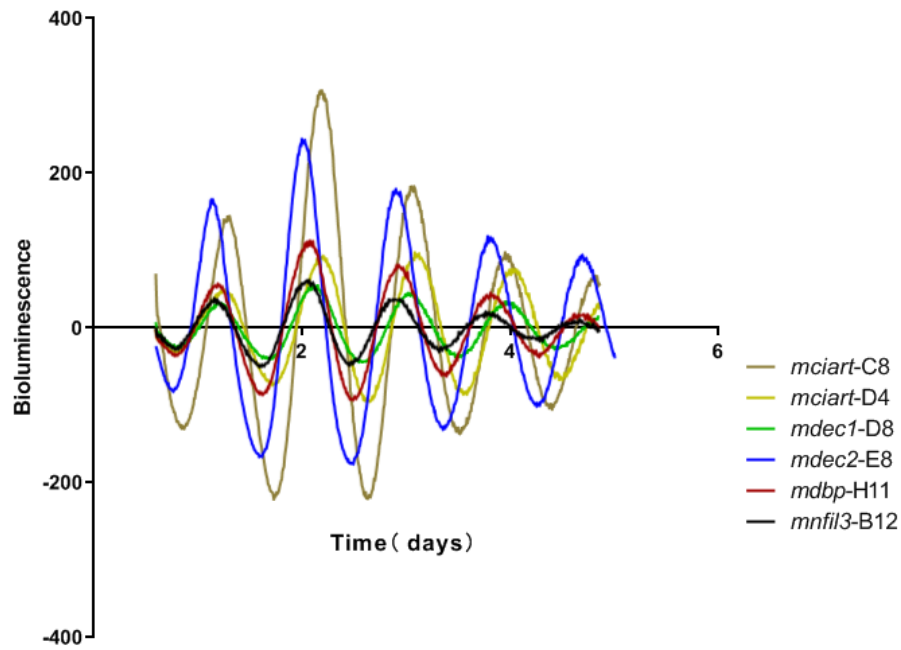


Figure S51. The bioluminescence of the Ciart-C8, Ciart-D4, Dec1-D8, Dec2-E8, Dbp-H11, Nfil3-B12 cells. These represent auxiliary regulators.

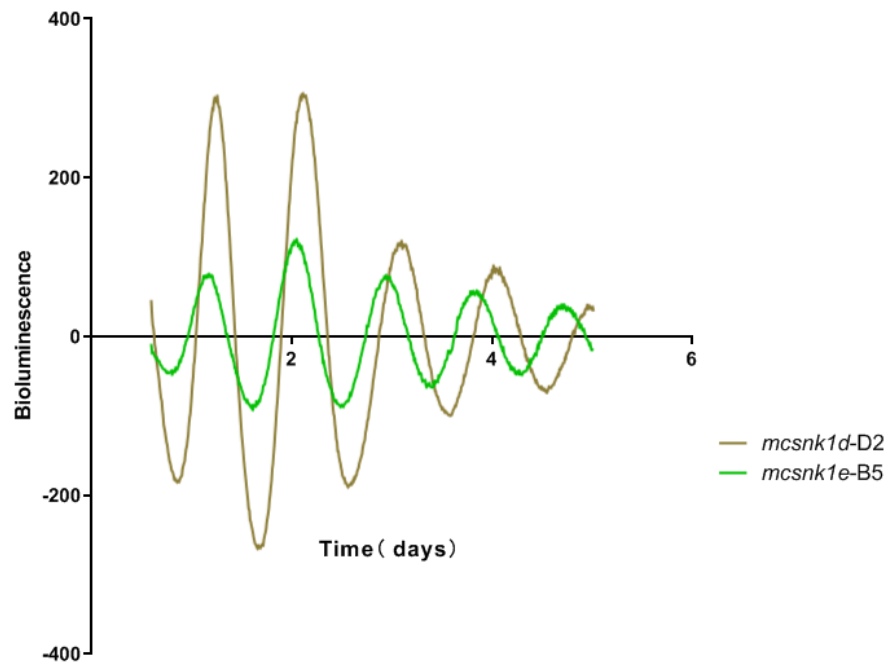


Figure S52. The bioluminescence of the casein kinase genes, Csnk1d-D2, Csnk1e-B5 cells.

Table S1. The sequence information of sgRNAs used in this study.

Target gene	sequence	Loction-Exon	Score
<i>Bmal1</i>	ACCCGTATTTCCCCGTTGCTGG	14/21	98
<i>Clock</i>	TCCATCTTTCTCGCGTTACCAAGG	6/23	94
<i>Npas2</i>	TGCCGATCATGGCCGAAGTCAGG	18/21	95
<i>Cry1</i>	TTCGCCGGCTCTTCCAACGTGGG	1/13	95
<i>Cry2</i>	ACGGTCCCCGCGCAATCGATGGG	1/12	99
<i>Per1</i>	TCGCTTCTGTGCTCGGAACGGGG	11/23	93
<i>Per2</i>	TCGATTCCGCACCCGCAACGGGG	11/23	99
<i>Per3</i>	GCCGCACTGAGCGTGGCGTCTGG	15/21	96
<i>Rora</i>	ACGCGATTTTCGTCTTCGGTCAGG	9/11	98
<i>Rorb</i>	ACCGGCGGCACATACGCCAACGG	4/10	97
<i>Rorc</i>	GTTGCGGCTGGTTCGGTCAATGG	3/10	97
<i>Nr1d1</i>	GTTGCGATTGATGCGAACGATGG	4/8	99
<i>Nr1d2</i>	AGCGTTCTTGGGATTGCCGTGG	2/8	91
<i>Dbp</i>	ACGTATTCCACGTCCCCGAAAGG	2/4	95
<i>Nfil3</i>	GATTCTTGGGCATACGCCGTGG	2/2	98
<i>Ciart</i>	CAGCCCCGGGGTCACCGTGGTGG	5/5	79
<i>Dec1</i>	CATGGACGCAGGTTGCGCGTGGG	5/5	92
<i>Dec2</i>	GGTGCGGCTATGCGCGTGCTGGG	5/5	97
<i>Beta-trcp</i>	TGGTACCGCGTGACGTCGGACGG	6/15	98
<i>Fbxl21</i>	GCCCCGGGCTCGATCTATTAAAGG	4/7	97
<i>Fbxl3</i>	TCGGACTTATCTCGACTGCCCGG	3/5	95
<i>Myc</i>	GCTGTACGGAGTCGTAGTCGAGG	2/3	98
<i>Timeless</i>	TACTCGAGCCCGTGAACGTTTGG	23/29	98
<i>Csnk1d</i>	CCTACGACTATGTGTTGACTGG	6/9	95
<i>Csnk1e</i>	CCTACGACTACGTCTTCGACTGG	7/9	98

Note: Location-Exon means the number of sgRNA's exon /total exon

Table S2. The sequence information of primers to amplify targeted sites

GeneName	Forward primer (5'to 3')	Reverse primer (5'to 3')	Product length
<i>Bmal1-C</i>	AGGTGAGACCGAATCCCACT	TAGAAAAGCCAGCTGACCACC	664bp
<i>Clock-C</i>	CTGTCTCCCCAGGCTTACG	TGACATATTTGAGCCAGGCGTG	569bp
<i>Npas2-C</i>	TGCCATCCCAGTTTAGCAGT	GGGTAGTGTACTCAAGCCGAG	552bp
<i>Cry1-C</i>	CTCCACACTATGAGTTACCTAG ACAC	GAGCTCGTGTCCGTTTCGTGGAG	983bp
<i>Cry2-C</i>	CCCACAGCACACCCCTAAAA	GAGGCGATCCAGACTCCTTG	594bp
<i>Per1-C</i>	GATCTTCACCAACCCGACACA	CCAGCGTGGAGACACAGTT	585bp
<i>Per2-C</i>	ATCTCTATCCCACAGACCCCC	GTTGGACCCACTGGGAATGC	613bp
<i>Per3-C</i>	GGCCTTAGCTGTCCGTGTAA	TCACCTGGTGCAGCCAATAA	518bp
<i>Rora-C</i>	CAGCTGACAGTGGTGGCTAA	CCGCTGAGCCATCTTTTCAC	614bp
<i>Rorb-C</i>	AGGGCAAGGGGCTAGTGATA	GAGCATGGTGCCTAGAGAGAG	1050bp
<i>Rorc-C</i>	ATCTGGGATCCACTACGGGG	CCCCCACATTCTCACCATCTC	593bp
<i>Nr1d1-C</i>	GGGGCGAGAAGGAGATATGG	AGCTCCTATCCAGTCCAGTCC	512bp
<i>Nr1d2-C</i>	ATGCCAGGAGCACTGGTTTT	CTGGTGTGAGCCAGGAATGT	547bp
<i>Beta-trcp-C</i>	TCAGGCATGTGCTGCTCTTT	TGTCTCTCAGGCTTTCTGCAA	562bp
<i>Fbxl3-C</i>	CGACCGGATCAGAAAGCTCA	TGGACACCCTTGCTTCACTC	1084bp
<i>Fbxl21-C</i>	GCACCAATCAATGCGTGGA	AACAGCCCAGTGAGAAACTG	726bp
<i>Ciart-C</i>	GGACAGGCGGACATAGGATG	ACACACCTGTTGCACAAACG	555bp
<i>Dbp-C</i>	GGCCCCTAACCCTATCCTTC	CTGCTCGCTCCCATTTTTTG	991bp
<i>Nfil3-C</i>	ATGGAGGTGGAATACGTGCC	TTGTACCAGTACCCGCTGAC	981bp
<i>Dec1-C</i>	CTCGTCACTCATCTCCATCGTG	GATCTGCTTCAAAGCCTGGAGC	696bp
<i>Dec2-C</i>	CGTACAGCCCTGGCTAGACAAG	CTGTTCCAGGCTTGGGTCGAG	715bp
<i>Csnk1d-C</i>	ATCCAGAAGGAGCTGACTCTGA GC	TGAGCTGTACCTCTACTTAGATGC TG	800bp
<i>Csnk1e-C</i>	CTCAGAAAGGGCCACCACTT	TCATCCCGCCCCCTCTTAGAT	651bp
<i>Myc-C</i>	GTATTCCCTACAGTCGCCTCC	CGACCGCAACATAGGATGGA	585bp
<i>Timeless-C</i>	AGGTAAAGGCATGGGCTCTG	CTACAGTGCTTTGTGGGGTGA	527bp

Table S3. The most possible off-target sites for each individual gene in this study

Target gene	sequence	Chromosome	Site	Score
<i>Bmal1</i>	ACCCTTATTTTCCCGTTCCCAAG	17	-91174644	0.6
<i>Clock</i>	TCCTTCCTTCTCCCGTTACCAAG	13	42768150	0.7
<i>Npas2</i>	TGCTGATCATCGCCAAAGTCTAG	15	-8659777	0.4
<i>Cry1</i>	TCCACCGGTCCTTCCAACGTCAG	10	-41714430	0.8
<i>Cry2</i>	CCTGTCCCCGTGCAATCGACTAG	11	111524673	0.4
<i>Per1</i>	TGCGTACTGTGCTCGGAACGCGG	11	51817733	0.8
<i>Per2</i>	TCCCTTCCGCAGCCGCGACGGAG	6	-100094135	0.3
<i>Per3</i>	GCAACACTGAGCGAGGCGTCGGG	13	12487247	0.4
<i>Rora</i>	AAGTGATTTCTTCTTCAGTCAAG	8	-112844682	0.3
<i>Rorb</i>	ACCGGCGGCCAGACGCCAGCAG	6	-71781796	0.4
<i>Rorc</i>	GTGGAGGGTGGTTTCGGTCACAGG	8	118850237	0.7
<i>Nr1d2</i>	AGGCTTCCTGTGATTGCCGTCAG	7	-119338549	0.8
<i>Dbp</i>	TCTTATTCCACCTCCCCGAATAG	9	-66088878	1.4
<i>Nfil3</i>	GATTCCTTGAGTATACGCCAGGG	4	86171320	0.3
<i>Ciart</i>	CTGTCCCGGGGTCACCATGGCAG	2	-131948868	1.3
<i>Dec1</i>	CCGGGAGGCAGGGTCGCCGTGAG	10	-61461408	0.4
<i>Dec2</i>	GGAGCAGACATGCGCGTGCTGGG	11	68844738	0.5
<i>Beta-trcp</i>	CGGGACAGCGTGACGTCGCAAGG	4	-151671218	0.4
<i>Fbxl21</i>	CCCAGGGCCCTATCTATTAAAGG	2	-14610824	0.5
<i>Fbxl3</i>	TGGGACTTGTCTCGACTGCATAG	6	58683716	0.9
<i>Csnk1d</i>	GGTTGGGGAAGCCTTGCGGACAG	7	51888871	1.7
<i>Csnk1e</i>	CCTACGACTATGTGTTTCGACTGG	11	-120832891	0.5

Table S4. Primers to amplify the most possible off-target site for individual genes

GeneName	Forward primer (5'to 3')	Reverse primer (5'to 3')	Product length
<i>Bmal1</i> -O	ACGATGAGGAGGTTAGTGA	TGTAAGTGGAAATGGGTA	618bp
<i>Clock</i> -O	AGTGCGGTTCTGCTATT	TTTCTGTCAACGCTTCA	488bp
<i>Npas2</i> -O	CATTAGAAGGTAGGAGCAT	CAAGATTGAACGGGTGT	601bp
<i>Cry1</i> -O	GTCATCCTCCTGCCACT	GTCCCATCAACTAATCCTT	494bp
<i>Cry2</i> -O	GTGTTACAGGCTTCCC	CTCAGCAGGTGTTTCC	199bp
<i>Per1</i> -O	CCCCATAAGTGTTCCGTAGA	CCTCAGCCCATCCTGTAGTC	499bp
<i>Per2</i> -O	CTTTGCTCACTCCCTCTGG	TCTGGCGATTGTCTTCC	395bp
<i>Per3</i> -O	CTGCGTTCAGCGAGTG	TCTAAGTTCGCGCTATTCA	545bp
<i>Rora</i> -O	GAGAACGGAAGGTGAG	CAGCATCCTGGAGACA	548bp
<i>Rorb</i> -O	ACTGCCAACGGACAACG	CTCGGCTACGGAAACAAA	445bp
<i>Rorc</i> -O	GTTCTTGACGCTCAC	GCCTCCTGGATGTTG	223bp
<i>Nr1d1</i> -O	GGTCAAGGGAAATAAAG	GGGTCTTAACGCAGT	555bp
<i>Nr1d2</i> -O	AAGGGTCCTGCTCCA	GATTCTTAGGCATTACAG	529bp
<i>Beta-trcp</i> -O	GGGCTCTAAACTTGGGACGAA	GCGGTTGAGGGCTGGATT	162bp
<i>Fbxl3</i> -O	AAACCCGAAGTCAGTAG	GATGGCAATCCAAGTAG	416bp
<i>Fbxl21</i> -O	TTTATCTCCTGCTTCTACT	CTTCTGCCTCAACCC	936bp
<i>Ciart</i> -O	GCAAGGGTTCAAGGC	AGGCAAATGGTGGTTAG	500bp
<i>Dbp</i> -O	TGGCAGCAGCACCTAA	CACCACCATCTCAGACACC	776bp
<i>Nfil3</i> -O	AAACAAGTGGGTAAAGTGC	GTTGCCCGATACAGATT	503bp
<i>Dec1</i> -O	CACCATTGTTCCCTT	CTGCTCCTCAGTGTTAG	550bp
<i>Dec2</i> -O	TCATCTTTCTTGGCTCTTC	TCCCGTGCTGACTTCTT	255bp
<i>Csnk1d</i> -O	GCACTTGTTAGGGACTTGG	CTGCGGTGATAGGAGGT	469bp
<i>Csnk1e</i> -O	TTGGCTTTTCACAACTCTA	TTTCTGCCGTTCTCTTA	269bp
<i>Myc</i> -O	TTGCTGAACGGACAAATAC	CGGGACCAATGGAGACA	1039bp
<i>Timeless</i> -O	TCCCTGCTATTGCTGC	ATGGGTTTGGTCTTTCC	308bp