SUPPLEMENTARY MATERIAL

Table S1. Identification of phototransduction and circadian genes in the mantel tissue of *Patinopecten yessoensis* based on Kyoto Encyclopedia of Genes and Genomes (KEGG) pathway annotations. NMDA, N-methyl D-aspartate; ROR, receptor-related orphan receptors; RXR, Retinoid X Receptor; MAP, mitogen-activated protein.

KEGG Pathway	Annotation	KOG description
Phototransduction-fly	1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase beta-4	Phospholipase C
	PREDICTED: 1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase beta-1-like isoform 2	Phospholipase C
	actin	Actin and related proteins
	actin-2	Actin and related proteins
	beta-actin	Actin and related proteins
	calcium/calmodulin-dependent protein kinase type II delta chain	Ca2+/calmodulin-dependent protein kinase, EF-Hand protein superfamily
	calmodulin	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: calmodulin 2-like	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: calmodulin-like	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: calmodulin-like isoform 3	Calmodulin and related proteins (EF-Hand superfamily)
	calmodulin-1	Calmodulin and related proteins (EF-Hand superfamily)
	calmodulin-2	Calmodulin and related proteins (EF-Hand superfamily)
	calmodulin-like protein	Calmodulin and related proteins (EF-Hand superfamily)
	chitin synthase	Myosin VII, myosin IXB and related myosins
	G protein-coupled receptor kinase 1	G protein-coupled receptor kinase
	Guanine nucleotide-binding protein subunit gamma-e	G protein gamma subunit
	inositol trisphosphate receptor	Inositol 1,4,5-trisphosphate receptor

	myosin IIIA	Myosin VII, myosin IXB and related myosins
	myosin IIIB	Myosin VII, myosin IXB and related myosins
	Pinus taeda anonymous locus	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: myosin-IIIa	Myosin VII, myosin IXB and related myosins
	PREDICTED: similar to muscle actin isoform 2	Actin and related proteins
	protein kinase C I	Serine/threonine protein kinase
	short transient receptor potential channel 3	Receptor-activated Ca2+-permeable cation channels (STRPC family)
	Sn1-specific diacylglycerol lipase alpha	Predicted lipase/calmodulin-binding heat-shock protein
	transient receptor potential-gamma protein	Receptor-activated Ca2+-permeable cation channels (STRPC family)
	troponin C-long	Calmodulin and related proteins (EF-Hand superfamily)
Phototransduction	calmodulin	Calmodulin and related proteins (EF-Hand superfamily)
	arrestin	Arrestin
	calmodulin-1	Calmodulin and related proteins (EF-Hand superfamily)
	calmodulin-2	Calmodulin and related proteins (EF-Hand superfamily)
	calmodulin-like protein	Calmodulin and related proteins (EF-Hand superfamily)
	Pinus taeda anonymous locus	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: calmodulin 2-like	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: calmodulin-like	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: calmodulin-like isoform 3	Calmodulin and related proteins (EF-Hand superfamily)
	troponin C-long	Calmodulin and related proteins (EF-Hand superfamily)
Circadian rhythm	5'-AMP-activated protein kinase catalytic subunit alpha-2	Serine/threonine protein kinase
	5'-AMP-activated protein kinase subunit beta-2	Serine/threonine protein kinase
	5'-AMP-activated protein kinase subunit gamma-2	Serine/threonine protein kinase

	cAMP-responsive element modulator	Transcriptional activator FOSB/c-Fos and related bZIP transcription factors
	casein kinase I isoform epsilon	Casein kinase (serine/threonine/tyrosine protein kinase)
	circadian locomotor output cycles protein kaput (CLOCK)	Aryl-hydrocarbon receptor nuclear translocator
	cleavage stimulation factor 77 kDa subunit	cryptochrome
	cryptochrome-1	cryptochrome
	cryptochrome-2	cryptochrome
	cullin-1	Cullins
	cycle	-
	ecdysone-induced protein	Nuclear receptor
	nuclear receptor ROR-alpha	Steroid hormone nuclear receptor
	period circadian protein	Circadian clock protein period
	Putative nuclear hormone receptor HR3	Steroid hormone nuclear receptor
	retinoic acid receptor RXR-alpha	FOG: Hormone receptors
	S-phase kinase-associated protein 1	SCF ubiquitin ligase, Skp1 component
	WD repeat-containing protein 86	Cdc4 and related F-box and WD-40 proteins
	calcium/calmodulin-dependent protein kinase type II delta chain	Ca2+/calmodulin-dependent protein kinase, EF-Hand protein superfamily
Circadian entrainment	1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase beta-4	Phospholipase C
	adenylate cyclase type 1	Adenylate/guanylate cyclase
	adenylate cyclase type 2	Adenylate/guanylate cyclase
	adenylate cyclase type 9	Adenylate/guanylate cyclase
	Ca(2+)/calmodulin-responsive adenylate cyclase	Adenylate/guanylate cyclase
	calmodulin	Calmodulin and related proteins (EF-Hand superfamily)

	calmodulin-1	Calmodulin and related proteins (EF-Hand superfamily)
	calmodulin-2	Calmodulin and related proteins (EF-Hand superfamily)
	calmodulin-like protein	Calmodulin and related proteins (EF-Hand superfamily)
	cAMP-responsive element modulator	Transcriptional activator FOSB/c-Fos and related bZIP transcription factors
	cGMP-dependent protein kinase, isozyme 1	cGMP-dependent protein kinase
	chain A, Complex Of Gs-Alpha With The Catalytic Domains Of Mammalian Adenylyl Cyclase	-
	G protein B subunit	G-protein beta subunit
	G protein-activated inward rectifier potassium channel 2	Inward rectifier K+ channel
	G protein-activated inward rectifier potassium channel 4	Inward rectifier K+ channel
	Glutamate [NMDA] receptor subunit 1	NMDA selective glutamate-gated ion channel receptor subunit GRIN1
	Glutamate [NMDA] receptor subunit epsilon-2	-
	Glutamate receptor	Glutamate-gated AMPA-type ion channel receptor subunit GluR2 and related subunits
	Glutamate receptor 1	Glutamate-gated AMPA-type ion channel receptor subunit GluR2 and related subunits
	Glutamate receptor 4	Glutamate-gated AMPA-type ion channel receptor subunit GluR2 and related subunits
	Glutamate receptor, ionotropic kainate 3	Glutamate-gated AMPA-type ion channel receptor subunit GluR2 and related subunits
	G-protein a-subunit s class	G protein subunit Galphas, small G protein superfamily
	Guanine nucleotide binding protein gamma 7	G protein gamma subunit
	Guanine nucleotide-binding protein G(i) alpha subunit	G-protein alpha subunit (small G protein superfamily)
	Guanine nucleotide-binding protein G(i) subunit alpha	G-protein alpha subunit (small G protein superfamily)

	Guanine nucleotide-binding protein G(o) subunit alpha	G-protein alpha subunit (small G protein superfamily)
	Guanine nucleotide-binding protein subunit beta-5	G-protein beta subunit
	Guanine nucleotide-binding protein subunit gamma-1	-
	Guanine nucleotide-binding protein subunit gamma-e	G protein gamma subunit
	Guanylate cyclase soluble subunit beta-1, partial	Adenylate/guanylate kinase
	inositol trisphosphate receptor	Inositol 1,4,5-trisphosphate receptor
	MAP kinase, partial	Mitogen-activated protein kinase
	nitric oxide synthase	NADP/FAD dependent oxidoreductase
	period circadian protein	Circadian clock protein period
	Pinus taeda anonymous locus	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: 1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase beta-1-like isoform 2	Phospholipase C
	PREDICTED: calmodulin 2-like	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: calmodulin-like	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: calmodulin-like isoform 3	Calmodulin and related proteins (EF-Hand superfamily)
	PREDICTED: carboxyl-terminal PDZ ligand of neuronal nitric oxide synthase protein-like	Nitric oxide synthase-binding protein, contains PTB domain
	PREDICTED: similar to camp-dependent protein kinase catalytic subunit	cAMP-dependent protein kinase catalytic subunit (PKA)
	protein kinase C I	Serine/threonine protein kinase
	ribosomal protein S6 kinase alpha-5	Ribosomal protein S6 kinase
	ryanodine receptor 44F	Inositol 1,4,5-trisphosphate receptor
	soluble guanylyl cyclase alpha	Adenylate/guanylate kinase
	soluble guanylyl cyclase beta-1 subunit	Adenylate/guanylate kinase
	troponin C-long	Calmodulin and related proteins (EF-Hand superfamily)

	voltage-dependent calcium channel type D subunit alpha-1	Voltage-gated Ca2+ channels, alpha1 subunits
	period circadian protein	Circadian clock protein period
Circadian rhythm-fly	circadian locomotor output cycles protein kaput (CLOCK)	Aryl-hydrocarbon receptor nuclear translocator
	Cycle	-
	glycogen synthase kinase-3 beta	Glycogen synthase kinase-3
	PAR domain subfamily bZIP	Basic region leucine zipper transcription factor