Does dopamine block the spawning of the acroporid coral Acropora tenuis?

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1	CC	caa	caa	сса	atc	aaa	tcc	agt	ggc	tac	tga	itco	aga	cat	tgg	aga	cat	ctt	ggc	agcc
	Ρ	Ν	Ν	Q	S	Ν	Ρ	۷	Α	Т	D	Ρ	D	Ι	G	D	Ι	L	Α	Α
61	ct	ttt	agt	cgc	ctt	gct	tat	aat	ttg	cac	att	aat	cac	taa	ttg	ttt	agt	ttg	cgt	aaca
	L	L	۷	Α	L	L	Ι	Ι	С	Т	L	Ι	Т	N	С	L	۷	С	۷	Т
121	tt	tta	cct	att	taa	gga	cct	aag	gac	agt	ttg	stca	tta	ttt	tgt	cat	cag	ttt	gag	cgcg
	F	Y	L	F	Κ	D	L	R	Т	۷	С	Η	Y	F	٧	Ι	S	L	S	Α
181	gc	cga	cat	tct	tgt	tgc	tgt	agt	agc	tat	gco	ggt	ttg	gtg	tgc	gct	gca	act	aac	ttcc
	A	D	Ι	L	۷	Α	۷	۷	Α	М	Ρ	۷	W	C	Α	L	Q	L	Т	S
241	at	gca	ttg	gtc	gtt	tag	tga	oto	act	gag	gao	att	ttg	gaa	ctg	cat	gga	cat	act	ctgt
	М	Η	W	S	F	S	D	S	L	R	Т	F	W	Ν	С	М	D	Ι	L	С
301	gga	aac	agc	ttc	aat	cat	gaa	tct	cac	agc	agt	gto	aat	tga	tcg	сса	tgc	tgc	cat	tact
	G	Т	Α	S	Ι	М	Ν	L	Т	Α	۷	S	Ι	D	R	Н	Α	Α	Ι	Т
361	aa	gcc	ttt	caa	cta	ccc	gto	tgt	cat	gac	tto	ttt	tcg	cgc	tat	ttc	cat	gat	aat	cttt
	Κ	Ρ	F	Ν	Y	Ρ	S	۷	М	Т	S	F	R	Α	Ι	S	М	Ι	Ι	F
421	gt	gtg	gtt	tta	ttc	cat	agt	ggt	ttc	ggg	att	ace	ctt	agc	aac	ctg	gca	cac	caa	aaca
	V	W	F	Y	S	Ι	۷	۷	S	G	L	R	L	A	Т	W	Η	Т	Κ	Т
481	ag	tta	tat	gca	ttt	tgt	tto	tgc	aac	cag	ctt	ttt	tat	tcc	tct	ctt	cat	tat	gat	aatc
	S	Y	М	Н	F	۷	S	Α	Т	S	F	F	Ι	Ρ	L	F	Ι	М	Ι	Ι
541	at	gta	cac	aag	aat	tta	ttt	ggt	tgc	tag	gaa	aca	agc	tca	ccg	aat	gcg	taa	tgg	ccgt
	M	Y	Т	R	Ι	Y	L	۷	Α	R	Κ	Q	Α	Н	R	М	R	Ν	G	R
601	aa	cta	cgc	aag	tga	tgt	caa	ago	cgc	taa	aac	gat	cgc	tat	att	aat	cgg	ctt	gtt	cgta
	Ν	Y	Α	S	D	۷	Κ	Α	Α	Κ	T	Ι	Α	Ι	L	Ι	G	L	F	٧
661	tt	ttg	ctg	ggg	tcc	att	ttt	cgo	cat	tgt	cct	ato	tat	tgc	gca	tga	tca	gac	ggt	tgta
	F	С	W	G	Ρ	F	F	Α	Ι	۷	L	S	Ι	Α	Η	D	Q	Т	۷	٧
721	gt	tcc	tta	ctc	gct	gtt	caa	tgt	cat	caa	atg	gat	ggt	gta	ctg	cag	ttc	ttg	tct	gaac
	٧	Ρ	Y	S	L	F	Ν	۷	Ι	Κ	W	М	٧	Y	С	S	-s	С	L	Ν
781	cc	cat	aat	cta	ctc	ttg	tct	taa	itcg	caa	cta	icag	acg	tgc	att	gcg	taa	act	ttg	ccaa
	Ρ	Ι	Ι	Y	S	С	L	Ν	R	Ν	Y	R	R	Α	L	R	Κ	L	С	Q
841	Cg	tgt	cct	caa	aaa	gcg	aga	aat	ggt	cac	tga	igac	ttc	gtc	g 8	82				
						~ ~					_	<u> </u>		<u> </u>	0					

Figure S1. Nucleotide and deduced amino acid sequences of a partial ORF fragment of *Acropora tenuis* dopamine receptor-like cDNA (*At06753*). Oligonucleotide primers used to amplify the cDNA fragment by PCR were designed based on *Acropora digitifera* transcript sequence of aug_v2a.06753.t1. The cDNA was composed of 882 bases encoding a protein of 294 amino acids. The nucleotide numbers are shown to the left of each line. The putative transmembrane domains analyzed by a Kyte and Doolittle hydropathy plot are underlined with solid lines.

1	gt	ggt	gat	gat	tct	gag	cgo	tgt	gac	aac	tgt	gac	tgg	aga	atg	gat	att	tgg	agc	atgg
	۷	۷	М	Ι	L	S	Α	۷	Т	Т	۷	Т	G	Е	W	Ι	F	G	Α	W
61	tg	ctg	tca	ggc	tgt	agc	tgo	agc	ggg	tct	gac	ttt	gtc	ttt	cat	ato	aat	tct	tca	catg
	С	С	Q	Α	۷	Α	Α	Α	G	L	Т	L	S	F	Ι	S	Ι	L	Η	Μ
121	ag	ctg	cct	cag	tat	cga	tcg	ata	tat	tgc	aat	tca	igaa	acc	ctt	tag	cta	tga	atc	catc
	S	С	L	S	Ι	D	R	Y	Ι	Α	Ι	Q	Κ	Ρ	F	S	Y	Е	S	Ι
181	gt	cac	tag	aag	aag	agt	ggt	gac	ggt	ttt	aat	cct	gat	ctg	ggt	gto	tgg	agt	tgt	tgtg
	۷	Т	R	R	R	٧	۷	Т	۷	L	Ι	L	Ι	W	۷	S	G	۷	۷	٧
241	cc	taa	tat	tcc	gtt	agc	aga	ittt	tga	att	cag	ggc	cgt	gac	ata	cgg	atg	ttc	aag	tgtg
	Ρ	Ν	Ι	Ρ	L	A	D	F	Е	F	R	Α	۷	Т	Y	G	С	S	S	۷
301	ga	gtt	tga	aaa	cac	ccg	gcg	gtc	ttt	ttc	t <u>cc</u>	tta	itat	tat	ttt	cct	tgt	cgg	aat	attt
	Е	F	Е	Ν	Т	R	R	S	F	S	Ρ	Y	Ι	Ι	F	L	۷	G	Ι	F
361	gt	tgt	cat	acc	ttt	cgc	tgt	tat	ttg	ctt	ttc	gaa	icgc	agt	ggt	ttt	caa	gac	agc	tttt
	٧	۷	Ι	Ρ	F	Α	۷	Ι	С	F	S	N	Α	۷	۷	F	Κ	Т	Α	F
421	aa	tca	cgc	aag	aca	gct	gag	cag	agt	tga	gaa	igag	ttt	aga	igcg	gtc	ttc	agc	aga	tatt
	Ν	Н	Α	R	Q	L	S	R	۷	Е	Κ	S	L	Е	R	S	S	Α	D	Ι
481	tg	cga	aag	gga	gga	gca	aca	igca	agc	gaa	acc	acg	cgt	aga	aaa	icca	ctc	gtt	gaa	aaga
	С	Е	R	Е	Е	Q	Q	Q	Α	Κ	Ρ	R	۷	Е	Ν	Н	S	L	Κ	R
541	ga	gat	caa	atc	agc	gca	cac	ctt	tgc	gct	tgt	agt	cgg	att	att	ttt	gct	atg	tta	catt
	Е	Ι	Κ	S	Α	Н	Т	F	Α	L	۷	۷	G	L	F	L	L	С	Y	Ι
601	сс	att	tta	ictc	agt	cgg	cac	cta	cag	gaa	gct	ago	tcg	ato	cgo	taa	cgt	aca	ttc	tagt
	Ρ	F	Y	S	۷	G	Т	Y	R	Κ	L	Α	R	S	Α	Ν	۷	Н	S	S
661	ga	tgt	gcg	cat	cac	cat	gtg	ggt	tgc	ttt	cgc	caa	ittc	ttt	tat	caa	CCC	gat	tgt	ttat
	D	۷	R	Ι	Т	М	W	۷	Α	F	Α	Ν	S	F	Ι	Ν	Ρ	Ι	۷	Y
721	gg	ctt	gag	gta	ttc	acc	gtt	tcg	caa	agc	ttt	taa	att	att	atg	tct	agc	ccg	ctg	tagt
	G	L	R	-Υ	S	Ρ	F	R	Κ	Α	F	Κ	L	L	С	L	Α	R	С	S
781	ga	gcg	acg	cca	ttc	tca	caa	ictg	caa	gag	aat	cag	sttc	ttg	gag	acg	tga	aag	gga	cggt
	Е	R	R	Н	S	Н	Ν	С	Κ	R	Ι	S	S	W	R	R	Е	R	D	G
841	ac	cac	gtt	atc	aag	tac	tto	cgc	tct	cta	g 8	70								
	Т	Т	L	S	S	Т	S	Α	L	*										

Figure S2. Nucleotide and deduced amino acid sequences of a partial ORF fragment of *Acropora tenuis* dopamine receptor-like cDNA (*At07635*). Oligonucleotide primers used to amplify the cDNA fragment by PCR were designed based on *Acropora digitifera* transcript sequence of aug_v2a.07635.t1. The cDNA was composed of 870 bases encoding a protein of 289 amino acids. The translation stopcodon is indicated by the asterisk (*). The nucleotide numbers are shown to the left of each line. The putative transmembrane domains analyzed by a Kyte and Doolittle hydropathy plot are underlined with solid lines.

1	ta	ttt	atc	gct	ctt	ggt	cgt	aat	tgc	ttt	ggg	agg	taa	tgg	ttt	gct	tat	aac	ggt	tata
	Y	L	S	L	L	۷	۷	Ι	Α	L	G	G	Ν	G	L	L	Ι	Т	۷	Ι
61	ct	caa	gag	aaa	act	cct	tca	aaa	agt	tca	tta	ctt	ctt	cat	act	tag	gtct	ggc	ggc	gtct
	L	K	R	Κ	L	L	Q	Κ	V	Н	Y	F	F	Ι	L	S	L	Α	Α	S
121	aa	ttt	ctt	aaa	cgc	ctt	ttt	taa	igat	acc	tac	cac	gat	ttt	agg	gace	gctt	tga	tcg	aaac
	Ν	F	L	Ν	Α	F	F	Κ	Ι	Ρ	Т	Т	Ι	L	G	R	F	D	R	Ν
181	tg	gta	ссс	taa	tca	cac	aat	atg	cta	ctt	cac	cac	ccc	cct	ggg	gtgt	gct	gtt	tgg	cgcg
	W	Y	Ρ	Ν	Н	Т	Ι	С	Y	F	Т	Т	Ρ	L	G	۷	L	F	G	Α
241	gc	atc	tgt	gtt	cag	cct	ato	ago	ggt	agc	tat	caa	icag	ata	cct	tgt	gat	ttc	ctc	gccg
	A	S	۷	F	S	L	S	Α	۷	Α	Ι	Ν	R	Y	L	۷	Ι	S	S	Ρ
301	ct	taa	cta	ttc	tga	tcg	aat	gco	acc	gat	g <u>tt</u>	ggc	caa	aag	cat	ttt	ggc	tgg	aat	ttgg
	L	Ν	Y	S	D	R	М	Ρ	Ρ	М	L	Α	Κ	S	Ι	L	Α	G	Ι	W
361	tt	cgc	aag	ttt	ttc	ttt	ggo	cgt	CCC	tcc	tgt	cat	gtg	gag	aga	igaa	igga	agc	cat	ttgc
	F	А	S	F	S	L	Α	۷	Ρ	Ρ	۷	М	W	R	Е	Κ	Е	Α	Ι	С
421	cg	aag	cgg	tag	aat	ttc	caa	aga	aca	tta	cac	cto	gga	a <u>at</u>	gct	tta	ictt	ttt	ctt	ggcc
	R	S	G	R	Ι	S	Κ	Е	Н	Y	Т	S	Е	М	L	Y	F	F	L	Α
481	tt	gtg	gct	gtt	tgt	cat	cat	tgt	tcc	ttc	cat	tgt	tat	gag	cat	tto	tta	cgt	gaa	gatc
	L	W	L	F	۷	Ι	Ι	۷	Ρ	S	Ι	۷	М	S	Ι	S	Y	۷	Κ	I
541	tt	tct	tat	tgc	gcg	cta	cca	cgo	gtt	gca	aat	aga	icac	gcg	aaa	itca	agc	att	cgc	agat
	F	L	Ι	Α	R	Y	Н	Α	L	Q	Ι	D	Т	R	Ν	Q	А	F	Α	D
601	tg	cca	aca	aac	aaa	gcg	aag	gag	gaa	aga	c <u>tt</u>	gaa	ago	tgc	tgt	agt	tct	agc	agt	gatc
	С	Q	Q	Т	Κ	R	R	R	Κ	D	L	Κ	Α	Α	۷	۷	L	Α	۷	Ι
661	gg	agg	aat	ctt	cat	tat	ttg	ctg	gat	tcc	ttt	ctt	cgt	tgt	aca	igac	tat	t <u>ca</u>	caa	gttt
	G	G	Ι	F	Ι	Ι	С	W	Ι	Ρ	F	F	۷	۷	Q	Т	Ι	Н	Κ	F
721	gg	aaa	ggg	aaa	aat	tag	tto	tat	tta	ctt	caa	cat	att	tct	ctg	gogt	cat	gta	<u>c</u> 7	76
	G	Κ	G	Κ	Ι	S	S	Ι	Y	F	Ν	Ι	F	L	С	۷	М	Y		

Figure S3. Nucleotide and deduced amino acid sequences of a partial ORF fragment of *Acropora tenuis* dopamine receptor-like cDNA (*At08250*). Oligonucleotide primers used to amplify the cDNA fragment by PCR were designed based on *Acropora digitifera* transcript sequence of aug_v2a.08250.t1. The cDNA was composed of 776 bases encoding a protein of 258 amino acids. The nucleotide numbers are shown to the left of each line. The putative transmembrane domains analyzed by a Kyte and Doolittle hydropathy plot are underlined with solid lines.

1	atggo	cgt	cag	caa	ttc	tac	cgc	aat	gcc	ccc	aac	aga	tat	aga	icgg	gagt	ttg	сса	acaa
	MA	۷	S	Ν	S	Т	А	М	Ρ	Ρ	Т	D	Ι	D	G	۷	С	Q	Q
61	gcaad	gaa	gcc	cga	gtt	tat	tgt	tta	cag	cgt	ttt	ttt	ggt	gct	aat	:cat	gtt	agc	caca
	A T	K	Ρ	E	F	I	V	Y	S	V.	F	L	V	L	Ι	M	L	А	T
121	ttgtt	tgg	aaa	tgt	gtt	agt	tat	aac	cgc	ggt	tta	itca	ttt	tca	itce	gctt	gcg	acg	a <u>atg</u>
101	LF	G	N	۷.	L.	V	1	Ι	Α.	. V	Y	Н.	. ۲	H.	R	L.	R	R	. M
181	actaa		ctt	cat	cat	cto	tct	ggc	cgt		cga	tct	tct	cgt	tgo	act	agg	tca	tctg
0.4.1	I N	+		1	1	8	L	A	V	8	U	L	L	V	A	L	G	Н	L
Z4 I	CCTCT	CCg.	τατ	tga	τca	aag	Cgt	τса	caa		ITaa	ictg w	gtg	τττ	Cga:		gac	gcc n	caat
201	r L	Т СООО	1	U otr	ų oro	ა ~+~	۷ ++~	П ~~+	N QCO	N Ant	N 	W	0 + ~ +	Г ~++	U	N soto	 + ~ ~	۲ «+۰	N 00++
301		.аас т	аас	olg r	CgC	g La v	W	gai T	ago A	M	.gga D	T			.0ag		LgC	e c	
261	treas	1 1	ו ממד	+ 0+	м са†	1 ato	w aat	ן בת+	н †са	-+++	u tot	. a u o I	v cat		0 0000	0		ა ითა	1 atac
501			V	V	T	<u>acc</u>	iaa L	n D	TR	F		.ag∪ ∆	I	T	K K	D	F	F	V
421	Caaaa	L L	v oat	vac	r caa	σco	t ot	υ τσσ	ctt	++c	∟ oct	rcat.	r ar	+++	·tot	י ++ס	oot	∟ cta	coct
721		R	M	T	K	R	V	G	F	S		.0010 I		F	V		V	Y	A
481	ttact	atg	σσσ	tøt	cct	120	toot	ogt	tga	tte	rgad	aag	ggo	aga	tcc	taa	CgC	cac	tcac
101		W	<u>6</u>	V	1	S	1	<u>v</u>		W	T	R	Ă	D	P	N	A	T	H
541	aggca	ntat	ctt	cgt	cat	cgt	aaa	aaa	tca	aac	aaa	itga	gCg	ago	gtg	cgg	caa	gaa	agac
	RH	I	F	V	I	V	K	N	Q	Т	N	E	R	A	C	G	K	K	D
601	aaggt	gta	tta	cac	tac	tgo	aat	ggc	tgt	tgo	gct	att	ttt	acc	gct	tct	cat	agt	catc
601	aaggt K V	gta Y	tta Y	c <u>ac</u> T	tac T	tgo A	aat M	ggc A	tgt V	tgo A	gct L	att F	ttt L	acc P	cgct L	tct L	cat I	agt V	<u>catc</u> I
601 661	aaggt K V gccad	gta Y gta	tta Y tgc	c <u>ac</u> T	tac T cgt	tgo A ttt	aat M ccg	ggc A cgt	tgt V agc	tgo A gtt	gct L tac	<u>satt</u> F gca	ttt L ggc	acc P gaa	sgot L ago	tct L ggt	icat I agc	agt V cct	<u>catc</u> I actt
601 661	aaggt K V gccac A T	gta Y gta Y	tta Y tgo A	cac T ctg C	tac T cgt V	tgo A ttt F	aat M ccg R	ggc A cgt V	tgt V agc A	tgo A gtt F	sgct L tac T	r F gca Q	ttt L ggc A	acc P gaa K	egct L ago A	tct L ggt V	icat I agc A	agt V cct L	<u>catc</u> I actt L
601 661 721	aaggt K V gccac A T gatco	gta Y gta Y aac	tta Y tgc A caa	T C agg	tac T cgt V aaa	tgo A ttt F gag	aat M ccg R gaca	ggc A cgt V cat	tgt V agc A ttt	A gtt F gcg	sgot L tac T goga	iatt F gca Q att	ttt L ggc A gaa	P gaa K ago	E L ago A Sgac	tct L ggt V caa	I agc A aac	agt V cct L tat	<u>catc</u> I actt L cgct
601 661 721	aaggt K V <u>gccac</u> A T gatco D P	gta Y gta Y aac T	tta Y tgc A caa K	r T ctg C agg G	tac T cgt V aaa K	tgc A ttt F gag R	aat M cccg R gaca H	ggc A cgt V cat I	tgt V agc A ttt L	A gtt F gcg R	sgct L tac T goga E	r F gca Q att L	ttt L ggc A gaa K	P gaa K agc A	sgct L ago A sgac T	tct L ggt V caa K	icat I agc A aac T	agt V cct L tat I	<u>catc</u> I actt L cgct A
601 661 721 781	aaggt K V gccad A T gatco D P gttgt	gta Y gta Y aac T tat	tta Y tgc A caa K cgg	cac T ctg c agg G ggt	tac T cgt V aaa K att	tgo A ttt F gag R cat	M CCCG R Gaca H Sggt	ggc A cgt V cat I gtg	tgt V agc A ttt L ttg	A gtt F gcg R gct	E E E E E E E E	F gca Q att L gag	ttt ggc A gaa K ttt	P gaa K agc A tat	sgot L ago A sgac T tat	stct L Sggt V Caa K	icat I agc A aac T tgt	agt V cct L tat I att	<u>catc</u> I actt L cgct A gagt
601 661 721 781	aaggt K V gccad A T gatco D P gttgt V V	gta Y sgta Y aac T tat	tta Y tgc A caa K cgg G	C T C agg G ggt V	tac T cgt V aaa K att F	ttt A ttt F gag R cat M	aat M cccg R aca H <u>sggt</u> V	ggc A cgt V cat I gtg C	tgt V agc A ttt L ttg W	A gtt F gcg R gct L	E E E E E E E E E E E E E E E E E E E	F gca Q att L gag S	ttt ggc A gaa K ttt F	P gaa K ago A tat	sgot L ago A sgao T tat	L sggt V caa K cat	icat I agc A aac T tgt V	agt V cct L tat I att L	<u>catc</u> I actt Cgct A <u>gagt</u> S
601 661 721 781 841	aaggt K V gccac A T gatcc D P gttgt V V ctatg	gta Y y y aac T tat I ggtg	tta Y caa K cgg G tca	icac T ictg c agg G iggt V gga	tac T cgt V aaa K att F ctg	ttt F gag R cat M	A ccg R ccg R ccg R ccg R cca R c cca R c c c c	ggc A cgt V cat I gtg C gcc	tgt V agc A ttt L ttg W gtt	A gtt F gcg R gct L ttt	E E E E E E E E E E E E E E E E E E E	F gca Q att L gag S acaa	ttt ggc A gaa K ttt F caa	P gaa K agc A tat I aaa	sgot L ago Sgac T tat I atot	L Sggt V Caa K Cat I	icat I agc A aac T tgt V	agt V cct L tat I att Ctc	<u>catc</u> I actt Cgct A <u>gagt</u> S tata
601 661 721 781 841	aaggt K V gccad A T gatco D P gttgt V V ctatg L W	gta Y Saac T tat I ggtg C	tta Y tgc A caa K cgg G tca Q	cac T ctg c agg G ggt V gga D	tac T cgt aaa K att F ctg C	tgc A ttt F gag R cat M ttt	aat M cccg R aca H <u>sggt</u> V caa K	ggc A cgt V cat I gtg C gcc P	tgt V agc A ttt L ttg W gtt F	tgc gtt gcg gcg gct L ttt L	E E E E E E E E E E E E E E E E E E E	F gca Q natt L gag S ncaa N	ttt ggc A gaa K ttt F caa K	P gaa K ago A tat I aaa N	sgat lago A sgac T tat I atct	L Sggt V Caa K Cat I S	icat I agc A aac T tgt V tct	agt V cct L tat I att L ctc S	catc I actt Cgct A gagt S tata I
601 661 721 781 841 901	aaggt K V gccac A T gatcc D P gttgt V V ctatg L W aggat	gta Y aac T tat I ggtg C cat	tta Y tgc A caaa K cgg G tca Q ttt	cac T ctg c agg G ggt V gga D tgt	tac T cgt V aaa K att F ctg C gac	ttt F gag R cat M tttt F cat	aat M cccg R aca H <u>cggt</u> V ccaa K ccaa	ggc A cgt V cat I gtg C gcc P gcc	tgt V agc A ttt L ttg W gtt F ggt	A gtt F gcg R gct L tttt L cat	E E E E E E E E E E E E E E E E E E E	iatt F Q Q Aatt L S S N Caa N Cag	ttt L ggc A gaa K ttt F caa K ttc	P gaa K agc A tat I aaa N tct	Eget Lago A Sgac T Stat L Stat	Etct L Sggt V Caaa K Cat I S S S	icat I agc A aac T tgt V tct L ggt	agt V cct L tat I <u>att</u> C C C S gat	catc I actt C cgct A <u>gagt</u> S tata I ttat
601 661 721 781 841 901	aaggt K V gccac A T gatco D P gttgt V V ctatg L W aggat R I	rgta Y caac T ctat I ggtg C ccat I	tta Y tgc A caa K cgg G tca Q tta F	cac T cctg C aggg G G ggt V gga D tgt V	tac T cgt V aaaa K att F ctg C gac T	tgc A tttt F gag R cat M tttt F cat I	M CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG R CCCG CCG	ggc A cgt V cat I gtg C gcc P gcc P	tgt V agc A ttt L ttg W gtt F ggt V	A gtt F gcg R gcg t t t t t t t t t t t t t	eget L tac T coga E cacc P cgga D caaa N	iatt F gca Q hatt S ncaa N ncag S	ttt L ggc A gaa K ttt F caa K ttc S	P gaaa K agc A tat I aaaa N tct L	Eget L aago A Egao T Etat L Etat L Eaaa N	Ettet L cggt V ccaa K ccat I Ccat S tte P	icat I agc A aaac T tgt V tct L ggt V	agt V cct L tat I att C ctc S gat I	catc I actt Cgct A <u>gagt</u> S tata I ttat
601 661 721 781 841 901 961	aaggt K V gccac A T gatcc D P gttgt V V ctatg L W aggat R I acagt	gta Y sgta Y saac T ttat I ggtg C C cat I :ttt	tta Y caa K cgg G tca Q ttt F caa	cac T ctg C agg G ggt V gga D tgt V cca	tac T cgt aaa K tt F ctg C gac T aga	tgc A tttt F gag R cat M tttt F cat I gtt	M cccg R caca H caca H Caca K tttt L cccg	ggc A cgt V cat I gtg C gcc P gcc P aat	tgt V agc A tttt L ttg W gtt F ggt V ggc	A gtt F gcg R gct L ttt L cat I cct	eget L tac T ccga E ccga D ccga D ccga N ccag	Eatt F gca Q hatt L gag S hcaa N hcag S tcg	ttt L ggc A gaa K ttt F caa K ttc S aat	P gaaa K agco A ttat I aaaa N ttot L cgct	Eget L aago A Sgao T tatet L tatet L caaa N cotg	Etct L Sggt V Ccaa K Ccat I Ettc S atcc P gcag	icat I agc A aac T tgt V tct L ggt V agg	agt V cct L tat I att C tcc S gat I tcg	catc I actt Cgct A <u>gagt</u> S tata I ttat Y aact
601 661 721 781 841 901 961	aaggt K V gccac A T gatcc D P gttgt V V ctatg L W aggat R I acagt T V	gta Y saac T stat I ggtg C cat I tttt F	tta Y tgc A caa K cgg G tca Q ttt F caa N	cac T ctg C agg G ggt V gga D tgt V cca Q	tac T cgt aaa K att F ctg C c gac T aga E	tgc A ttt F gag R cat M ttt F cat I gtt F	aat M cccg R aca H <u>sggt</u> V caaa K tttt Cccg R	ggc A cgt V cat I gtg C cat P gcc P aat M	tgt V agc A ttt L ttg W gtt F ggt V ggc A	A gtt F gcg R gcg L tttt L cat F cat	egct L tac T ccga E cacc P cgga D caaa N ccag S	Eatt F cgca Q natt L cgag S ncaa N ncag S ctcg R	ttt ggc gaa K ttt F caa K ttc S aat M	acc P gaa K agc A ttat I aaaa N ttct L gct L	Eget Lago A Sgac T ttat L tat L caaa N cctg C	Etct L Sggt V Ccaa K Ccat I Ettco P Scag R R	cat agc A aac T tgt V tct L ggt V agg G	agt V cct I tat I ctc S gat I tcg R	catc I actt Cgct A gagt S tata I ttat Y aact T
601 661 721 781 841 901 961	aaggt K V gccac A T gatcc D P gttgt V V ctatg L W aggat R I acagt T V ccacg	gta Y saac T stat I ggtg C cat F ggag	tta Y tgc A caa K cgg G tca Q ttt F caa N cgc	cac T ctg C agg G ggt V gga D tgt V cca Q agc	tac T gt aa K tt F g gac aga E aga tga	tgc A ttt F gag R cat M ttt F cat I gtt F cgt	M cccg R caca H caca K C cccg R cccg R tttt C ccg R	ggc Acgt Cat Igtg Cc P gcc P aat M att	tgt V agc A ttt U ggt V ggt V ggc A ctc	A gtt F gcg R gcg L tttt L cat F ggt K L cat F ggt K C G C C C C C C C C C C C C C	egct L tac T ccga E ccga E ccga D ccag S ccag S tac	Eatt F gca Q hatt Eggag S hcaa N hcag S tcg R ccga	ttt ggA aa Ktt Faa Ktc S at Aaa Aaaa	acc P gaa K agc A tat I aaa N tct L aac	Eget Lage A Sgac T Etat L Etat L C C C C C C C	tct L sggt V ccaa K ccat I tcc S tcca R attc	cat I agc A aac T tgt V tct L cggt V cagg G C	agt V cct I tat I ctc S gat I tcg R aac	catc I actt Cgct A <u>gagt</u> S tata I ttat Y aact T gcga
601 661 721 781 841 901 961 1021	aaggt K V gccac A T gatco D P gttgt V V ctatg L W aggat R I acagt T V ccacg P R	gta Y sgta Y saac T ttat Sgtg C C cat I C tttt F Sgag S	tta Y caa K cgg G tca Q ttt F caa N cgc A	cac T ctg agg G ggt V gga D tgt V cca Q agc A	tac T gt aa K tt G gac T aga E gac t gac t gac	tgc A ttt F gag R cat M ttt F cat I gtt F cgt V	aat M cccg R aca H <u>ggt</u> V caaa K tttt L cccg R R ttga E	ggc Acgt Ccat I <u>gg</u> C Pca Pc Pca A M T	tgt V agc A ttt L ttg W gtt F ggt V ggc A ctc S	tgo A ggtt F ggcg R ggct L tttt L ccat F ggt V	egct L tac T ccga E ccga E ccga D ccga D ccga D ccag S ccag C T	Eatt F cgca Q hatt L cgag S ccaa N ccaa S ccaa S ccaa S ccaa R ccga C C C C C C C C C C C C C C C C C C C	ttt ggc aa Ktt Faa Ktc Saat Maca Q	acc P gaa K agc A tat I aaaa N tct L cgct L aaac T	sgot Laago A Sgac T tatt L tatt L caaa C Saaa N	tct L sggt V ccaa K ccat I tcc S atco R atco S atco S atco S	cat I agc A aac T ttt V ttt L ggt G G tgc A	agt V cct I tat I ctc S gat I cg aac T	catc I actt Cgct A gagt S tata I ttat T aact T gcga R
601 661 721 781 841 901 961 1021	aaggt K V gccac A T gatcc D P gttgt V V ctatg L W aggat R I acagt T V ccacg P R gtgaa	gta Y aac T tat I ggtg C cat F ggag S agt	tta Y caa Caa Caa Caa Caa Caa Caa Caa Caa Caa	cac T ctg G ggt V gga G tgt V cca Q agc A aac T	tac gt a K tt F tg gt a K tt F tg a ga t ga t ga t ga t ga t ga	ttt F gag R cat M tttt F cat I gtt F cgt V agg	A ccg R aca B aca B aca B aca B aca B aca C ccg R aca C ccg C ccg	ggc cgt cat ggC gcc gcc gcc Pcc aat faas	tgt V agc A ttt U ggt V ggc A ctc S cag	A gtt F gcg R gcg L tttt L cat F ggt V accord F gcg R C gcg R C C C C C C C C C C C C C	sgct L tac T cgga E cgga D caaa N ccag S ctac T caaa	Eatt F gca Q hatt E gag S hcaa S tcg R ccaa S tcg R ccaa S tcg R ccaa S	tt ggAaaKtt caKtcSat aQtw	acc P gaa K agc A tat I aaaa N ttot L aac T ggtt	sect Lago A sector C caaaa N cctg C caaaa N ccaaaa N ccaaaa N	tct L sggt V ccaa K ccat I ccat S tcco R attco S attco S attco S attco	cat I agc A aac T tgt V tct L ggt V agg G ctgc A gaa	agt V cct I tat I ctc S gat I tcg R aac T cgg	catc I actt Cgct A gagt S tata I ttat T aact T gcga R tgga
601 661 721 781 841 901 961 1021 1081	aaggt K V gccac A T gatcc D P gttgt V V ctatg L W aggat R I acagt T V ccacg P R gtgaa V K	igta Y saac T itat ggtg C cat I ittt F ggag S agt V	tta Y caa K cgg G tca Q ttt F caa N cgc A gca Q gca Q	cac T ctg agg G ggt V gga C ggt V gga D tgt V cca Q cag C agg A aac T	tac T gt a K tt F gg T aga E aga L ga L g	$\frac{tgc}{A}$ ttt F gag R cat M ttt F cat I gtt F cgt V agg G g	A ccg R R R R R R R R R R R R R R R R R R R	ggc Acgt Cat Igc Cat Igc C C P Cat A C C P C A C C C C C C C C C C C C C C	tgt V agc A ttt L tgg V ggt A ctc S cag R	tgc A ggtt F ggcg R ggt L tttt L cat F ggt V acc P	egct L tac T ccga E ccga E ccga D ccag S ccag S ccag S tac T ccag S C C C C C C C S C C C C C C C C C C	Eatt F cgca Q hatt L cgag S ccaa N hcag S ccaa N ccaa R ccga C C C C C C C C C C C C C C C C C C C	ttt ggC aaa Ktt Faa Ktc Saat Maca Q gW	A A A A A A A A A A A A A A	Eget Laago A Cgao T ttot L ttot L caaa N cctg C caaa N ccaa N	tct L sggt V ccaa K ccat I ttcc P gcag R attcc S atcc S atcc M	icat I agc A aac T tgt V tct L ggt V agg G tgc A gaa N	agt V cct I tat I ctc S gat I tcg R aac T cgg G	catc I actt Cgct A <u>gagt</u> S tata I ttat T gcga R tgga G
601 661 721 781 841 901 961 1021 1081 1141	aaggt K V gccac A T gatcc D P gttgt V V ctatg L W aggat R I acagt T V ccacg P R gtgaa V K ggcga	gta Y aac T tat I ggtg C cat I cat F ggag S agt V ttt	tta Y caa Caa Caa Caa Caa Caa Caa Caa Caa Caa	cac T agg G ggt V gga D tgt V cca Q agc A aac T cag	tac g a K t c C a a K t c C a C a K t c c C a K t c c c c c c c c c c c c c	ttt F gag R cat M ttt F cat F cgt V agg G g 1	A cccg R aca B ggt V ccaa K ttt Cccg R ttga E aaa K 158	ggc cg cg cg cc cc gc cc gc cc cc cc cc	tgt V agc Att L ggt V ggt C S cag R	tgc A ggtt F ggcg R gct L tttt L tttt F ggt V acco P	egct L tac r cga E cga E cgga D caaaa N ccag S ctac S ctac K	Eatt F cg ca Q aatt Cg ag S caa N ccaa S ccaa S ccaa S ccaa S ccaa S ccaa S ccaa C C C C C C C C C C C C C C C C C	tt ggAaaKtt caKtcSatMacQ gW	acc P gaa K agc A tat I aaa N tct L aac T ggtt F	sgot Lago A sgac T tat L tat L tat C Saaa N C C Saaa N	tct L sggt V ccaa K ccat I sttco P scag R attco S attco S attco M	cat I agc A aac T tgt V tct L ggt V agg G tgc A gaa N	agt V cct I tat I ctc S gat I tcg G G	catc I actt Cgct A <u>gagt</u> S tata I ttat T gcga R tgga G

Figure S4. Nucleotide and deduced amino acid sequences of a complete ORF fragment of *Acropora tenuis* dopamine receptor-like cDNA (*At14160*). Oligonucleotide primers used to amplify the cDNA fragment by PCR were designed based on *Acropora digitifera* transcript sequence of aug_v2a.14160.t1. The cDNA was composed of 1158 bases encoding a protein of 385 amino acids. The translation stopcodon is indicated by the asterisk (*). The nucleotide numbers are shown to the left of each line. The putative transmembrane domains analyzed by a Kyte and Doolittle hydropathy plot are underlined with solid lines.

1	gt	cac	tgc	gat	ctg	tgg	aaa	ictt	act	cgt	atg	cct	ggc	cat	tto	act	gaa	cag	gcg	ctta
	٧	Т	Α	Ι	С	G	Ν	L	L	۷	С	L	Α	Ι	S	L	Ν	R	R	L
61	cg	aaa	gac	cac	caa	cta	ctt	cat	att	ctc	cct	ggc	gat	ttc	tga	tct	ttt	gac	agc	atca
	R	K	Т	Т	Ν	Y	F	Ι	F	S	L	Α	Ι	S	D	L	L	Т	Α	S
121	tg	ctc	aat	gtc	ttt	tga	tgt	tca	agt	tct	ttt	gca	acc	att	ggg	ctg	gaa	tca	cgg	agag
	C	S	М	S	F	D	۷	Q	۷	L	L	Q	Ρ	L	G	W	Ν	Н	G	Е
181	tt	tgt	ctg	caa	ttt	ctg	gac	ctt	cgt	tta	tct	gat	cgc	tgc	gco	gac	ctc	cat	act	taat
	F	۷	С	Ν	F	W	T	F	٧	Y	L	Ι	Α	Α	Ρ	Τ	S	Ι	L	Ν
241	ct	tat	ggc	ggt	cag	cat	tga	icag	gta	сса	ago	aat	cag	taa	tco	tct	ccg	ata	cta	cgac
	L	М	A	V	S	Ι	D	R^{-}	Ŷ	Q	Ā	Ι	S	Ν	Ρ	L	R	Y	Y	Ď
301	aa	aat	gag	acc	gag	acg	tgo	tat	ggc	tat	cat	ago	agc	aat	ttg	gct	cta	ctc	ctt	cgcg
	Κ	М	R	Ρ	R	R	Ā	М	A	Ι	Ι	A	A	Ι	W	L	Y	S	F	A
361	tt	tac	agt	tgc	tgg	gat	ggc	tgg	ttg	gcc	cta	itta	itga	aca	aag	tgt	tcg	gga	tgg	aatg
	F	Т	V	Ā	G	M	Ā	G	W	Ρ	Y	Y	E	Q	S	۷	R	D	G	Μ
421	tg	cta	ttt	taa	tat	cag	tcc	tta	cta	ttc	tgt	agt	gag	ctc	ggo	gat	gaa	ttt	cat	tttc
	С	Y	F	Ν	Ι	S	Ρ	Y	Υ	S	۷	۷	S	S	Α	М	Ν	F	Ι	F
481	сс	cac	aat	ggt	gat	gtg	tgt	gat	cta	ttt	caa	aat	cta	tct	gat	cgc	tcg	cgc	gca	tgca
	Ρ	Т	М	٧	М	С	٧	Ι	Y	F	Κ	Ι	Y	L	Ι	A	R	A	H	Α
541	ca	acg	gct	tgt	gca	gca	tga	iggt	ccc	ggt	cac	cac	cgc	ago	aac	ato	ttg	ctc	caa	cgag
	Q	R	L	۷	Q	Η	Е	۷	Ρ	۷	Т	Т	Α	Α	Т	S	С	S	Ν	E
601	ga	ttc	tgg	cac	tat	aac	cto	tga	aaa	gaa	acg	cct	gaa	aag	aaa	tat	taa	ggc	ggc	aaag
	D	S	G	Т	Ι	Т	S	Е	Κ	Κ	R	L	Κ	R	Ν	Ι	Κ	Α	Ā	K
661	ac	aat	cgc	cat	tat	tgt	gto	aac	ttt	tct	cct	atg	ttg	ggt	ccc	ttt	cac	ttt	ggt	ttca
	T	Ι	Ă	Ι	Ι	V	S	Τ	F	L	L	C	W	V	Ρ	F	Τ	L	V	S
721	ac	cat	tac	ttc	cct	ctg	tca	ata	ctg	cat	cgc	caa	ttt	cgc	ggt	agt	tat	taa	ctc	acta
	Т	Ι	Т	S	L	C	Q	Y	C	Ι	Ā	Ν	F	Ă	V	V	Ι	Ν	S	L
781	ct	tgt	ggt	ggc	gta	cat	gaa	icto	cgc	act	caa	ic 8	13							
	L	V	۷	Ā	Y	Μ	Ν	S	Ā	L	Ν									

Figure S5. Nucleotide and deduced amino acid sequences of a partial ORF fragment of *Acropora tenuis* dopamine receptor-like cDNA (*At17552*). Oligonucleotide primers used to amplify the cDNA fragment by PCR were designed based on *Acropora digitifera* transcript sequence of aug_v2a.17552.t1. The cDNA was composed of 813 bases encoding a protein of 271 amino acids. The nucleotide numbers are shown to the left of each line. The putative transmembrane domains analyzed by a Kyte and Doolittle hydropathy plot are underlined with solid lines.



Figure S6. Unrooted phylogenetic tree of dopamine receptor proteins. The neighbor-Joining method and CLUSTAL W (http://clustalw.ddbj.nig.ac.jp/top-e.html) were used to construct the phylogenetic tree. One thousand bootstrap repetitions were performed, and bootstrap values are shown at the nodes. The scale bar refers to a phylogenetic distance of 0.1 amino acid substitution per site. The position of the Acropora tenuis dopamine receptor-like proteins were indicated by box. The accession numbers for dopamine receptor proteins used in the phylogenetic trees analysis are as follows: BID1 (*Branchiostoma lanceolatum* D1, CAA06536); DmD1 (*Drosophila melanogaster* D1, P41596); DmD2 (*Drosophila melanogaster* D2, Q24563); DrD1 (*Danio rerio* D1, NP_001129448); DrD2 (*Danio rerio* D2, NP_898891); DrD3 (*Danio rerio* D3, NP_898890); DrD4 (*Danio rerio* D4, NP_001012634); GgD1 (*Gallus gallus* D1, NP_001138320); GgD2 (*Gallus gallus* D2, NP_001106761); GgD3 (*Gallus gallus* D3, ACR48171); GgD4 (*Gallus gallus* D4, NP_001136321); HpD1 (*Hemicentrotus pulcherrimus* D1, BAJ14803); HsD1 (*Homo sapiens* D1, NP_000785); HsD2 (*Homo sapiens* D2, AAB26819); HsD3 (*Homo sapiens* D3, P35462); HsD4 (*Homo sapiens* D4, NP_000788); HsD5 (*Homo sapiens* D5, AAA52329); MmD1 (*Mus musculus* D1,

NP_034206); MmD2 (*Mus musculus* D2, NP_034207); MmD3 (*Mus musculus* D3, NP_031903); MmD4 (*Mus musculus* D4, NP_031904); SpD1 (*Strongylocentrotus purpuratus* D1, XP_003726379); XlD1 (*Xenopus laevis* D1, P42289); XlD2 (*Xenopus laevis* D2, CAA42088); XlD5 (*Xenopus laevis* D5, P42290).