

TABLE S4. Analysis of suboptimal elements in FFAT-like motifs described in this study

A. GLTP/FAPP2			B. Other FFAT-like motifs in ORPs, rabphilin-11 homologues and an Opi1p variant		
#			# suboptimal elements		# suboptimal elements
#1	GLTP fish: sablefish	M T LLL D NQ /		At2g28320	s l v d ld E FFD V p E ps 2
	GLTP fish: lancelet	m A FF T DY E HQ 5		At3g54800	l n da s d E FFD V p E pn 2
	GLTP fungus: Debaryomyces	m s TFF D EM K S 5.5		At4g19040=Edr2	d s ddd d E F QIA e Seq 2.5
	GLTP sea squirt: Oikopleura	maa d ntCYFD D QM K R 6		At5g45560	d s ddd d E F QIP d S e p 3.5
	GLTP fungus: stem rust	maa d ntCYFD D QM K R 6			
	GLTP protist: Capsaspora	apqqa T FFDTmP y s 3.5		Orp1c At	f de en T FFDT r Df l 1
	FAPP2 sponge: Amphimedon	a t idy d TFFS k 1Ph k 5		Orp1c Gm	t dd dn A FFDT r Df l 1.5
	FAPP2 sea squirt: Ciona	n e dep l TFFS A mL h s 2.5		Orp1c Os	t dd en I YFD T rDf l 2.5
	FAPP2 lizard: anole	t n kdf k TFFS A mS i r 3		Orp1c Zm	t d deanLYFD T rDf l 3
	FAPP2 mammal: human	g ke vip T FFSTmN t s 4		Orp1c1 Vv	t dd dn T FFDT r Df l 1
	FAPP2 mammal: opossum	eeeevq T FFSAmN t s 2		Orp1c2 Vv	d dd dd E FFDT q Df l 0.5
	FAPP2 bird: zebra finch	n e ndsp T FFSVmS n r 3.5		Orp1c Pi	d ad de n LFVDAqDy l 2
	FAPP2 sea squirt: Oikopleura	s e ive k MFFNE <i>b</i> E <i>h</i> s 5.5		Orp1d At	s de dd v PYFD T nD <i>l</i> 3
#2	GLTP mammal: human	k qi et g PFLEAv Sh l 4		Orp1d Os	t de de v MYFD T rDf l 2.5
	GLTP fish: sablefish	k ai dt k LFL E sv Sh i 4.5		Orp1a At	s dd ne Q FDE A e E m 2.5
	GLTP fish: lancelet	g kv et g PFLLAs L r l 5.5		Orp2a1 Os	s de de f HFYD T rQ s f 2.5
	GLTP fungus: Debaryomyces	k ki id a SF LE As E sl 3		Orp2a2 Os	t c edes T FFDAaDy f 0.5
	GLTP sea squirt: Oikopleura	e gi hveQFL S As R sy 5.5		Orp2a Vv	s de ee t SFFDT r Ed f 1
	GLTP fungus: stem rust	e gv dt l AF LE Ac E dl 3		Orp2a At	s eede p S FHDT k Eff 2.5
	GLTP protist: Capsaspora	y gi at l PF LN Av H at 6		Orp3a At	g q k f ap K WF D Et E ev 6
	FAPP2 sponge: Amphimedon	e gi pt ds FLQ C c S dl 5			
	FAPP2 sea squirt: Ciona	g gi ds i S F LL S c E gi 4.5	ORPs from other species	<i>A. gossypii</i>	as if se V FFDA l D d n 2
	FAPP2 lizard: anole	e gi pte E FLR S c Y ei 5.5		<i>C. intestinalis</i>	f l s de d E FYDA <i>b</i> S g d 1.5
	FAPP2 mammal: human	s gi pte A FL S c C av 5.5		<i>T. gondii</i>	e dd dv E FFEC e D q e 0
	FAPP2 mammal: opossum	s gi pte A FL S c Y av 4.5		<i>B. bovis</i>	c gh 1 dd E FF E C e D ia 1
	FAPP2 bird: zebra finch	e gi pte E FL S c Y ai 3.5		<i>T. guttata</i>	s il see Q FYDA v S d s 2.5
	FAPP2 sea squirt: Oikopleura	l el pv n QFL S Aa A dl 5		<i>C. parvum</i>	s e stee I FYDA f S d f 2
#3	GLTP mammal: human	av sh lp P FF D C l G s p 3.5		<i>C. muris</i>	t se et d t F YDA l S d i 1.5
	GLTP fish: sablefish	s v ship S FF D C l G s s 3		<i>T. parva</i>	e sk l d t k F Y E a S t e 4
	GLTP fish: lancelet	a s l r 1 l PFF D M l G p t 4.5	Rab11bp	<i>H. sapiens</i>	s e s d t e E F YDA p E d v 0.5
	GLTP fungus: Debaryomyces	a s e s l k L F D L G s s 5.5		<i>T. nigroviridis</i>	d t s d t e E F YDA p Ed n 0.5
	GLTP sea squirt: Oikopleura	a s r s y l E F Y D L g gt 4		At5g53500	s qe el Q FFDA n E e m 1.5
	GLTP fungus: stem rust	a c e d lv R LF D L g sk 5		At5g24320	e ee es R FFDA h E ei 1
	GLTP protist: Capsaspora	a v hat i PL F DT l G m l 5		At1g64610	de ed ed R FFDA p E v v 1
	FAPP2 sponge: Amphimedon	c c s d ll P FF D A s p t 3		At1g48870	e vv dd L FFD S s D v l 2
	FAPP2 sea squirt: Ciona	s c eg ii P F LD T i G st 5		At5g42010	ne ee ed W F S DA r E e v 2
	FAPP2 lizard: anole	s c y e iv P V L D k l G p t 7.5		At5g02430	f edd dd H FFD S s N r <i>i</i> 2.5
	FAPP2 mammal: human	s c c a vv P V L D k l G p t 7.5		At2g37670	e ded dd R FF E T h D r l 1.5
	FAPP2 mammal: opossum	s c y a vv P V L D k l G p t 7.5	Opi1	<i>A. gossypii</i>	e eed ge Q Y F D a S e i 2
	FAPP2 bird: zebra finch	s c y a iv P V L D k l G p t 7.5			
	FAPP2 sea squirt: Oikopleura	a a a d ll I I D k l G sk 7.5			

Scoring criteria developed in Table S2 were applied to (A) the FFAT-like motifs identified in GLTPs and FAPPs in Figure 4, and (B) the FFAT-like motifs identified in Figure 3 in: StART proteins related to Edr2; ORPs in plants and other species; rabphilin-11 homologues; and a variant of Opi1p.