Gene Cluster ID	Atp6v0c
Drosophila melanogaster gene	**Vha16-1 (CG3161)**
FlyBase ID	FBgn0262736
Predicted function	**ATPase, H+ transporting, lysosomal 16kDa, V0 subunit c**

Atp6v0c CLEAR element conservation:

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Sinv\  GCTCGTCACTCATCACATGACCCGCGCCACTG  CTTGTGCGATTGTCATGTGACTGC------CAACGTGAGAATCATGTGACTGCAATTTCCA
Cflo\  GCTCGTCACTCATCACATGACCCGCGCCACCG  GGGACTTGATTGTCATGTGACTGC------CAACGTGAGAATCATGTGACTGCGACTTCCA
Pbar\  ACTCGTCACTCATCACATGACCCGCGCCACTG  CTTGTACGATTGTCATGTGACTGC------CAACGTGAGAATCATGTGACTGCGATTACCA
Lhum\  GCTCGTCACTCATCACATGACCCGCGCCACAG  CTTGTACGATTGTCATGTGACTGC------CAACGTGAGAATCATGTGACTGTAATTTCCA
Hsal\  GCTCGTCACTCATCACATGACCCGTGCCCGTG  CTTGAACGATTGTCATGTGACTGC------CAACGTGAGAATCATGTGACTGCGATCTCCA
Ngir\  CAGCTCGGCTCGTCACATGACCGCGCGCAGCC  TACATGCGATTGTCATGTGACTCGTGAGCGCAACGTGAGAGTCATGTGACTGGCTGTGGGG
Nlon\  CAGCTCGGCTCGTCACATGACCGCGCGCAGCC  TACATGCGATTGTCATGTGACTCGTGAGCGCAACGTGAGAGTCATGTGACTGGCTGTGGGG
Nvit\  CAGCTCGGCTCGTCACATGACCGCGCGCAGCC  TACATGCGATTGTCATGTGACTCGAGAGCGCAACGTGAGAGTCATGTGACTGGCTGTGGGG

Lful\  AATCTTCTCACATCACATGACCCTCTCTCACA

Rpro\  gctaaccctcaaTCACATGAtcatatctacct
Phum\  aatttcgattcaTCACATGAccctctgctact
Dpul\  aggtgctttcggTCACGTGAccacgagtcacg
Isca\  aaaacgctcccaTCACGTGAtataaaaataaa  cgggtcgtgcaaTCATGTGActgagattccgc  aatggggtgtttTCACATGAcgtcgatctgcc
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Atpv0c gene structure comparisons:

(Click on orthologs for genomic, mRNA and protein sequence informations)

Key: UTR region. CDS region

Order	Species	Atp6v0c orthologs	5' exon	intron	exon		intron	exon	intron	exon3'		Extended CLEAR region	Position	bps from TSS
Diptera (Drosophilidae)	*Drosophila_melanogaster*	Dmel\Vha16-1	134		29	85	4105	190	57	205	2228	ttagatttctaaTCACGTGAgtgaaaaagcag (8 CLEAR elements)	exon/int intron1	130
Diptera (Muscidae)	*Musca_domestica*	Mdom\Atp6v0c				76	2950	190	102	205		atatgacttaaaTCATATGActttgactgcaa (4 CLEAR elements)	5' intron1	>-1056
Diptera (Tephritidae)	*Ceratitis_capitata*	Ccap\Atp6v0c	99	1115	43	82	6761	190	125	205	278	tacaaccctgctTCACGTGAgctgtcaataaa (7 CLEAR elements)	5' intron	-681
Diptera (Glossinidae)	*Glossina_morsitans*	Gmor\Atp6v0c	94	750	124	82	1722	190	68	205	180	aactttgtaagTCATATGAccaaatgaaaaa	5'	-168
Diptera (Psychodidae)	*Lutzomyia_longipalpis*	Llon\Atp6v0c				79	8538	190	88	205	180	ctgtcttttctgTCATATGActtcgtaaaatt (7 CLEAR elements)	5'	>-289
	Phlebotomus_papatasi	Ppap\Atp6v0c				79	5505?	190	ND	205		ctgagctttctgTCATATGAccctcgtccaag (5 CLEAR elements)	5'	>-296
Diptera (Culicidae)	*Anopheles_gambiae*	Agam\atp6v0c AGAP028154			195	79	4335	190	1143	205	470	accgttcgctggTCATATGAtgataaccgcta (7 CLEAR elemnts)	5' intron1	1080
	Anopheles_arabiensis	Aara\Atp6v0c				79	4377	190	1167	205		accgttcgctggTCATATGAtggtaaccgcta (7 CLEAR elemnts)	5' intron1	>-1273
	Anopheles_quadriannulatus	Aqan\Atp6v0c				79	4346	190	1144	205		accgttcgctggTCATATGAtggtaaccgcta (7 CLEAR elemnts)	5' intron1	>-1272
	Anopheles_christyi	Achr\Atp6v0c				79	3957?	190	>483	205		acaatttgcaggTCATATGAcggtagccgcta (7 CLEAR elemnts)	5' intron1	>-1127
	Anopheles_epiroticus	Aepi\Atp6v0c				79	3936	190	740	205		caaacacgcaggTCATATGAtggccagcaaac (7 CLEAR elemnts)	5' intron1	>-1267
	Anopheles_minimus	Amin\Atp6v0c				79	3587	190	572	205		acaattcgcaggTCATATGAtgccaaagctaa (8 CLEAR elemnts)	5' intron1	>-1052
	Anopheles_funestus	Afun\Atp6v0c				79	3832	190	575	205		acaattcgcaggTCATATGAtggtaaagctaa (7 CLEAR elemnts)	5' intron1	>-1114

	Anopheles_stephensi	Aste\Atp6v0c				79	3944	190	673	205			gcgatacgcaggTCATATGAtggtgaggctag (9 CLEAR elemnts)	5' intron1	>-1269
	Anopheles_dirus	Adir\Atp6v0c				79	4584	190	901	205			gtgctgagcaggTCATGTGAtagcggtgcaaa (6 CLEAR elemnts)	5' intron1	>-1081
	Anopheles_nili	Anil\Atp6v0c				79	3459	190	843	205			tcggtacgcaggTCATATGAtggtaaagctaa (7 CLEAR elemnts)	5' intron1	>-1422
	Anopheles_albimanus	Aalb\Atp6v0c				79	3308	190	444	205			ggacagggctggTCATATGAcgctagctacgt (7 CLEAR elemnts)	intron1	>-956
	Anopheles_darlingi	Adar\Atp6v0c				79	3187	190	480	205	421		aaatcgTCATGTGAaatcgTCATGTGAgcgcaa (7 CLEAR elemnts)	intron1	>-270
	Aedes_aegypti	Aaeg\Atp6v0c AAEL000291			176	79	14503	190	7422	205	421		tttgccagacagTCATGTGAttacattcgtgt (5 CLEAR elements)	5'	-260
	Culex_pipiens_qui.	Cqui\Atp6v0c CPIJ011018			139	79	9830	190	3506	205	100		ccacacgcaagTCATGTGAccagcactcgtg (7 CLEAR elemnts)	5' intron1	-164 370
Diptera (Cecidomyiidae)	*Mayetiola_destructor*	Mdes\Atp6v0c				88	4932	190	79	205			catagccgtgtgTCATATGAccatttttatatc (7 CLEAR elements)	5' intron1	>-471
Lepidoptera	*Bombyx_mori*	Bmor\Atp6v0c				73	1501	190	1221	205	275		caacattcttcgTCATATGAcccattctgttg (4 CLEAR elements)	5' intron1	>-130
	Manduca_sexta	Msex\Atp6v0c				70	2514	187	1163	208			gaacatcaatcgTCATATGAcccattctatcg (6 CLEAR elements)	5' intron1	>-129
	Danaus_plexippus	Dple\Atp6v0c				73	1511	190	221	211			gaacatcaatcgTCATATGAcccattctattg (5 CLEAR elements)	5' intron1	>-130
	Heliconius_melpomene	Hmel\Atp6v0c				73	1931	190	991	211			gaacatcaatcgTCATATGAcccattctaccg (7 CLEAR elements)	5' intron1	>-135
	Plutella_xylostella	Pxyl\Atp6v0c			66	73	1933	190	779	208	255		gaacatcaatcgTCATATGAcccattctaccg (5 CLEAR elements)	5' intron1	>-135
Strepsiptera	*Mengenilla_moldrzyki*	Mmol\Atp6v0c				477							ND		
Coleoptera	*Tribolium_castaneum*	Tcas\Atp6v0c LOC656327			99	82	2459	193	ND	205	273		aatttctaatcgTCATATGAcccattcctgct (8 CLEAR elements)	5'	-16
	Dendroctonus_ponderosae	Dpon\Atp6v0c			120	85	ND	193	678	208	217		attttcttatcgTCATATGAcccattcttgct (7 CLEAR elements)	5'	-4
Hymenoptera	*Apis_mellifera*	Amel\Atp6v0c GB19405			58	76	1840	190	556	205	53		actcgtcactcgTCACATGAcccgcactcctg (3 CLEAR elements)	5' intron1	-91
	Apis_florea	Aflo\Atp6v0c				76	1810	190	588	205			actcgtcactcgTCACATGAcccgcactcctg (3 CLEAR elements)	5' intron1	>-149
	Bombus_terrestris	Bter\Atp6v0c				85	2086	190	539	205			actcgtcactcgTCACATGAcccgcactcctg (3 CLEAR elements)	5' intron1	>-150
	Bombus_impatiens	Bimp\Atp6v0c				85	2091	190	538	205			actcgtcactcgTCACATGAcccgcactcctg (3 CLEAR elements)	5' intron1	>-150
	Megachile_rotundata	Mrot\Atp6v0c				76	2472	190	787	205			ggccgtcactcgTCACATGAcccgcactcctg (3 CLEAR elements)	5' intron1	>-150
	Acromyrmex_echinatior	Aech\Atp6a0c				79	3543	190	186	205			gctcgtcactcaTCACATGAcccgcgccactg (3 CLEAR elements)	5' intron1	>-180
	Atta_cephalotes	Acep\Atp6v0c				76	3488	190	182	205			gctcgtcactcaTCACATGAcccgcgccactg (3 CLEAR elements)	5' intron1	>-182

	Solenopsis_invicta	Sinv\Atp6v0c				79	3010	190	191	205			gctcgtcactcaTCACATGAcccgcgccactg (3 CLEAR elements)	5' intron1	>-177
	Pogonomyrmex_barbatus	Pbar\Atp6v0c				76	2937	187	256	208			actcgtcactcaTCACATGAcccgcgccactg (3 CLEAR elements)	5' intron1	>-173
	Camponotus_floridanus	Cflo\Atp6v0c				82	2659	190	224	205			gctcgtcactcaTCACATGAcccgcgccaccg (3 CLEAR elements)	5' intron1	>-176
	Linepithema_humile	Lhum\Atp6v0c				79	2561	190	166	205			gctcgtcactcaTCACATGAcccgcgccacag (3 CLEAR elements)	5' intron1	>-173
	Harpegnathos_saltator	Hsal\Atp6v0c				82	2639	187	446	205			gctcgtcactcaTCACATGAcccgtgcccgtg (3 CLEAR elements)	5' intron1	>-174
	Nasonia_vitripennis	Nvit\Atp6v0c			254	88	2051	190	88	211	447		cagctcggctcgTCACATGAccgcgcgcagcc (3 CLEAR elements)	5' intron1	-64
	Nasonia_giraulti	Ngir\Atp6v0c				88	ND	190	88	211			cagctcggctcgTCACATGAccgcgcgcagcc (3 CLEAR elements)	5' intron1	>-334
	Nasonia_longicornis	Nlon\Atp6v0c				88	ND	190	88	211			cagctcggctcgTCACATGAccgcgcgcagcc (3 CLEAR elements)	5' intron1	>-331
Hemiptera	*Acyrthosiphon_pisum*	Apis\Atp6v0c			376	82	2440	190	109	205			ND		
	Rhodnius_prolixus	Rpro\Atp6a0c				79	2505	190	1608	205			gctaaccctcaaTCACATGAtcatatctacct	5'	>-152
Phthiraptera	*Pediculus_humanus*	Phum\Atp6a0c				ND	ND	184	105	205			aatttcgattcaTCACATGAccctctgctact	5'	>-139
Odonata	*Ladona_fulva*	Lful\Atp6v0c				82	372	190	1279	205			aatcttctcacaTCACATGAccctctctcaca	5'	>-116
Crustacea	*Daphnia_pulex*	Dpul\Atp6a0c			72	91	332	190	59	205	181		aggtgctttcggTCACGTGAccacgagtcacg	5'	-79
Ixodida	*Ixodes_scapularis*	Isca\Atp6v0c-1 ISCW018346			152	76	2174	184	1782	208	1126		aaaacgctcccaTCACGTGAtataaaaataaa (3 CLEAR elements)	5' intron1	-26
		Isca\Atp6v0c-2 ISCW012283				471							ND		
	Homo_sapiens	ATP6V0C			234	79	5035	184	139	205	478		gcggggcccaggTCATGTGAcgcggccgcggc	5'UTR	53
Cnidaria	*Nematostella_vectensis*	v1g162114			92	76	74	159	1262	25	612	211	826	ND		
Placozoa	*Trichoplax_adhaerens*	Tadh\Atp6v0c			98	79	211	159	141	28	904	211	47	ND		