

Gene Cluster ID	Atp6v1A
Drosophila melanogaster gene	Vha68-2 (CG3762)
FlyBase ID	<a href="#">FBgn0020367</a>
Predicted function	ATPase, H <sup>+</sup> transporting, lysosomal 70kDa, V1 subunit A
Protein size	614 amino acids
Cytogenetic map	2L:34A3-34A3
Gene sequence location	<a href="#">2L:12,974,322..12,978,607 [±]</a>
Dmel CLEAR sequence	TCAGCTGA; TCAGCTGA; TCACGTGA; TCAGCTGA
CLEAR sequence location	2L:12974792..12974799; 2L:12975013..12975020; 2L:12975303..12975310; 2L:12975499..12975506
Drosophila Atp6v1A paralogs	<a href="#">Vha68-1</a> (CG12403); <a href="#">Vha68-3</a> (CG5075)

# FlyBase gene model & CLEAR element (red) positions:



# Atp6v1A gene structure comparison:

Key: UTR region, CDS region

Species	Atp6v1A orthologs	5'exon	intron	exon	intron	exon	intron	exon	intron	exon3'		Extended CLEAR region	Position	bps from TSS	
<i>Drosophila_melanogaster</i>	<a href="#">Dmel\Vha68-2</a>	124	1170	23	76	413	698	108	978	67	93	546	tattttgccttgTCAGCTGAcccccttccccg tttttcatttgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAaacgaaagctct acctgccccctgTCAGCTGAcagaggcgctgag	intron1 intron1 intron1 intron1	470 691 981 1177
<i>Drosophila_simulans</i>	<a href="#">Dsim\Vha68-2</a>				76	346	698	104	978	67	93		tattttgccttgTCAGCTGAcccccttccccg tttttcatttgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAaacgaaagctct acctgccccctgTCAGCTGAcagaggcgctgag	intron1 intron1 intron1 intron1	
<i>Drosophila_sechellia</i>	<a href="#">Dsec\GM10085</a>				76	357	698	108	978	67	93		tattttgccttgTCAGCTGAcccccttccccg tttttcatttgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAaacgaaagctct acctgccccctgTCAGCTGAcagaggcgctgag	intron1 intron1 intron1 intron1	
<i>Drosophila_yakuba</i>	<a href="#">Dyak\GE18610</a>				76	352	698	111	978	67	93		tattttgccttgTCAGCTGAcccccttccccg tttttcatttgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAagcgaaagctct acctgccccctgTCAGCTGAcagaggcgccaag	intron1 intron1 intron1 intron1	
<i>Drosophila_erecta</i>	<a href="#">Dere\GG23804</a>				76	378	698	111	978	69	93		tattttgccttgTCAGCTGAcccccttccccg tttttcatttgTCAGCTGAcggcaatgacag ttcaaaagctccgTCACGTGAaacgaaagctct acctgtccccctgTCAGCTGAcagaggcgccaag	intron1 intron1 intron1 intron1	
<i>Drosophila_biarmipes</i>	<a href="#">Dbia\Vha68-2</a>				76	440	698	66	978	63	93		tatttgccttgTCAGCTGAcccccttccccg cttttcaactgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAaccgaaagctct tcacctgccccgTCAGCTGAcgaggcgctaac	intron1 intron1 intron1 intron1	
<i>Drosophila_suzukii</i>	<a href="#">Dsuz\Vha68-2</a>	98	1132	22	76	634	698	67	978	66	93		aattttgccttgTCAGCTGAcccccttccccg tttttcatttgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAaacgaaagctct cctgccccctcgTCAGCTGAcgaaggcgtaac	intron1 intron1 intron1 intron1	430 636 919 1118
<i>Drosophila_takahashii</i>	<a href="#">Dtak\Vha68-2</a>				76	546	698	332	978	65	93		tattttgccttgTCAGCTGAcccccttccccg tttttcatttgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAaacgaaagctcc cctgcccccttgTCAGCTGAcagaggcgtaac	intron1 intron1 intron1 intron1	
<i>Drosophila_eugracilis</i>	<a href="#">Deug\Vha68-2</a>				76	427	698	63	978	65	93		tattttgccttgTCAGCTGAcccccttccccg tttttcatttgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAaacgaaagctct ctgctctcttgTCAGCTGAcaaaactaaacc	intron1 intron1 intron1 intron1	
<i>Drosophila_elegans</i>	<a href="#">Dele\Vha68-2</a>				76	503	698	66	978	66	93		tattttaccttgTCAGCTGAcccccttccccg tttttcaactgTCAGCTGAcggcaatgacag ttcaaaagctctgTCACGTGAaacgaaagctct cctgcccccttgTCAGCTGAcaatggccaac	intron1 intron1 intron1 intron1	

<i>Drosophila_rhopaloea</i>	<a href="#">Drho\Vha68-2</a>				76	718	698	60	978	67	93		tattttgccttgTCAGCTGAccccctccccg tttttcatttgTCAGCTGAcggcaatgacag ttaaagctctgTCACGTGAaacgaaagctct cctgcgctctgTCAGCTGAcagtggccaac	intron1 intron1 intron1 intron1	
<i>Drosophila_ficusphila</i>	<a href="#">Dfic\Vha68-2</a>				76	452	698	65	978	67	93		tattttgccttgTCAGCTGAccccctccccg tttttcgctcgTCAGCTGAcggcaatgacag ttcaaagctctgTCACGTGAaacgaaagctct cctgtttttgTCAGCTGAcagaagagccaa	intron1 intron1 intron1 intron1	
<i>Drosophila_kikkawai</i>	<a href="#">Dkik\Vha68-2</a>				76	403	1676			68	93		tattttgccttgTCAGCTGAccccgctccccg tttttcatttgTCAGCTGAcggcaatgacag cgcaaagctctgTCACGTGAaacgaaagctct acctgttcttgTCAGCTGAcaaaaggcccaa	intron1 intron1 intron1 intron1	
<i>Drosophila_bipectinata</i>	<a href="#">Dbip\Vha68-2</a>				76	162	698	159	978	65	93		tattttgcttgTCAGCTGAccctccctctc ttttccacttgTCAGCTGAcagtgtcttctg cgcaaagcttgTCACGTGAaccgaaagctct tctcgctgtcgTCAGCTGAcagaggcccaa	intron1 intron1 intron1 intron1	
<i>Drosophila_ananassae</i>	<a href="#">Dana\GF14214</a>				76	109	698	109	978	63	93		tattttgccttgTCAGCTGAccctctccctc ttttccacttgTCAGCTGAcagcggtcttctg cgcaaagcttgTCACGTGAaccgaaagctct tctggcccgctgTCAGCTGAcagaggcgcaac	intron1 intron1 intron1 intron1	
<i>Drosophila_pseudoobscura</i>	<a href="#">Dpse\GA28953</a>				76	62	698	73	978	68	93		tattttgccttgTCAGCTGAccctccctcgc tttttcatttgTCAGCTGAcgccaatgacag gccaaagcttgTCACGTGAaacgaaagctct cacctcgatttgTCAGCTGAcaaaaggccag	intron1 intron1 intron1 intron1	
<i>Drosophila_persimilis</i>	<a href="#">Dper\Vha68-2</a>				76	62	700?	73	978	68	93		tattttgccttgTCAGCTGAccctccctcgc tttttcatttgTCAGCTGAcgccaatgacag gccaaagcttgTCACGTGAaacgaaagctct cacctcgatttgTCAGCTGAcaaaaggccag	intron1 intron1 intron1 intron1	
<i>Drosophila_miranda</i>	<a href="#">Dmir\Vha68-2</a>				76	62	698	65	978	68	93		tattttgccttgTCAGCTGAccctccctcgc tttttcatttgTCAGCTGAcgccaatgacag gccaaagcttgTCACGTGAaacgaaagctct cacctcgatttgTCAGCTGAcaaaaggccag	intron1 intron1 intron1 intron1	
<i>Drosophila_willistoni</i>	<a href="#">Dwil\GK15307</a>				76	70	698	57	978	72	93		tttttcgcttgTCAGCTGAcctccctcgc ttctccaattgTCAGCTGAcagaaaagaca cgcaaagcttgTCACGTGAaatgaaagctct	intron1 intron1 intron1 intron1	
<i>Drosophila_albomicans</i>	<a href="#">Dalb\Vha68-2</a>				76	68	698?	62	978	170	93		atagttgcacagTCAGCTGAccttcgctcgc tttttcatttgTCAGCTGAcacatgacagt attaacctgttgTCAGCTGAcagtataagaa	intron1 intron1 intron1 intron1	
<i>Drosophila_mojavensis</i>	<a href="#">Dmoj\GI18088</a>				76	78	698	62	978	68	93		atattgtcaagTCAGCTGAccttacgccgt ccagttgtcgtTCAGCTGAcagcatgacagt tgcaaagcttgTCACGTGAaatgaaagctct gcgctctatgTCAGCTGAcagtataagaa	intron1 intron1 intron1 intron1	
<i>Drosophila_virilis</i>	<a href="#">Dvir\GJ16804</a>				76	74	698	58	978	83	93		ataattgttcagTCAGCTGAccttcgccccg ttcagtcgctgTCAGCTGAcagcatgacagt tgaaaagcttgTCACGTGAaataaaagctct gcctctatatgTCAGCTGAcagcataagaa	intron1 intron1 intron1 intron1	

<i>Drosophila_grimshawi</i>	<a href="#">Dgri\GH11385</a>				76	60	698	59	978	61	93		ataattggatagTCAGCTGAccttccactgc ttttccatttgTCAGCTGAcagcatgacagc cttaagccttgTCAGCTGAaagaaaagctct ctctcgggtgtgTCAGCTGAaacgataagaa	intron1 intron1 intron1	
Vha68-1 (CG12403)															
<i>Drosophila_melanogaster</i>	<a href="#">Dmel\Vha68-1</a>				76	263	698	85	978	55	93		-		
<i>Drosophila_simulans</i>	<a href="#">Dsim\GD22093</a>				76	240	698	85	978	55	93				
<i>Drosophila_sechellia</i>	<a href="#">Dsec\GM25943</a>				76	187	698	85	978	55	93				
<i>Drosophila_yakuba</i>	<a href="#">Dyak\GE11978</a>				76	334	698	95	978	58	93		-		
<i>Drosophila_erecta</i>	<a href="#">Dere\GG10233</a>				76	240	698	85	978	58	93		-		
<i>Drosophila_biarmipes</i>	<a href="#">Dbia\Vha68-1</a>				76	217	698	285	978	99	93				
<i>Drosophila_suzukii</i>	<a href="#">Dsuz\Vha68-1</a>			56	76	220	698	423	978	97	93				
<i>Drosophila_takahashii</i>	<a href="#">Dtak\Vha68-1</a>				76	612	698	364	978	55	93		-		
<i>Drosophila_eugracilis</i>	<a href="#">Deug\Vha68-1</a>				76	236	698	87	978	96	93				
<i>Drosophila_elegans</i>	<a href="#">Dele\Vha68-1</a>				76	101	698	679	978	318	93				
<i>Drosophila_rhopaloea</i>	<a href="#">Drho\Vha68-1</a>				76	146	698	141	978	54	93		-		
<i>Drosophila_ficusphila</i>	<a href="#">Dfic\Vha68-1</a>				76	469	698	364	978	83	93				
<i>Drosophila_kikkawai</i>	<a href="#">Dkik\Vha68-1</a>				76	86	698	1178	978	55	93		-		
<i>Drosophila_bipunctata</i>	<a href="#">Dbip\Vha68-1</a>				76	71	698	74	978	80	93		-		
<i>Drosophila_ananassae</i>	<a href="#">Dana\GF15651</a>				76	76	698	66	978	58	93				
<i>Drosophila_pseudoobscura</i>	<a href="#">Dpse\GA11612</a>				76	77	698	70	978	66	93				
<i>Drosophila_persimilis</i>	<a href="#">Dper\GL24783</a>				76	77	698	70	978	66	93		-		
<i>Drosophila_miranda</i>	<a href="#">Dmir\Vha68-1</a>				76	74	698	70	978	66	93				
<i>Drosophila_willistoni</i>	<a href="#">Dwil\GK14815</a>				76	87	698	57	978	59	93		-		
<i>Drosophila_albomicans</i>	<a href="#">Dalb\Vha68-1</a>				76	ND	698	66	978	59	93				
<i>Drosophila_mojavensis</i>	<a href="#">Dmoj\GI21237</a>				76	84	698	62	978	68	93				
<i>Drosophila_virilis</i>	<a href="#">Dvir\GJ11069</a>				76	70	698	58	978	70	93		-		
<i>Drosophila_grimshawi</i>	<a href="#">Dgri\GH10350</a>				76	79	698	59	978	70	93		-		
Vha68-3 (CG5075)															

<i>Drosophila_melanogaster</i>	<a href="#">Dmel\Vha68-3</a>				1149	63	1083				
<i>Drosophila_simulans</i>	<a href="#">Dsim\GD23861*</a>				1149	96	1083				
<i>Drosophila_sechellia</i>	<a href="#">Dsec\GM10088</a>				1149	94	1083				
<i>Drosophila_yakuba</i>	<a href="#">Dyak\GE18611</a>				1149	99	1083				
<i>Drosophila_erecta</i>	<a href="#">Dere\GG23805</a>				1122	165	1083				
<i>Drosophila_eugracilis</i>											
<i>Drosophila_suzukii</i>	<a href="#">Dsuz\Vha-3</a>				1170	1787	1083				
<i>Drosophila_takahashii</i>											
<i>Drosophila_ficusphila</i>	<a href="#">Dfic\Vha68-3</a>				1251	632	1083				
<i>Drosophila_elegans</i>	-										
<i>Drosophila_rhopaloea</i>	<a href="#">Drho\Vha68-3</a>				783	1210	1083				
<i>Drosophila_kikkawai</i>											
<i>Drosophila_biarmipes</i>	-										
<i>Drosophila_bipectinata</i>	<a href="#">Dbip\Vha68-3</a>				1158	108	1083				
<i>Drosophila_ananassae</i>											
<i>Drosophila_pseudoobscura</i>	<a href="#">Dpse\GA18641</a>				1083	65	1089				
<i>Drosophila_persimilis</i>	<a href="#">Dper\GL24733*</a>				1080	65	1089				
<i>Drosophila_miranda</i>	<a href="#">Dmir\Vha68-3</a>				1083	65	1089				
<i>Drosophila_willistoni</i>	<a href="#">Dwil\GK15309</a>				1104	57	1086				
<i>Drosophila_mojavensis</i>											
<i>Drosophila_virilis</i>											
<i>Drosophila_grimshawi</i>	<a href="#">Dgri\GH11386</a>				1161	502	1086				