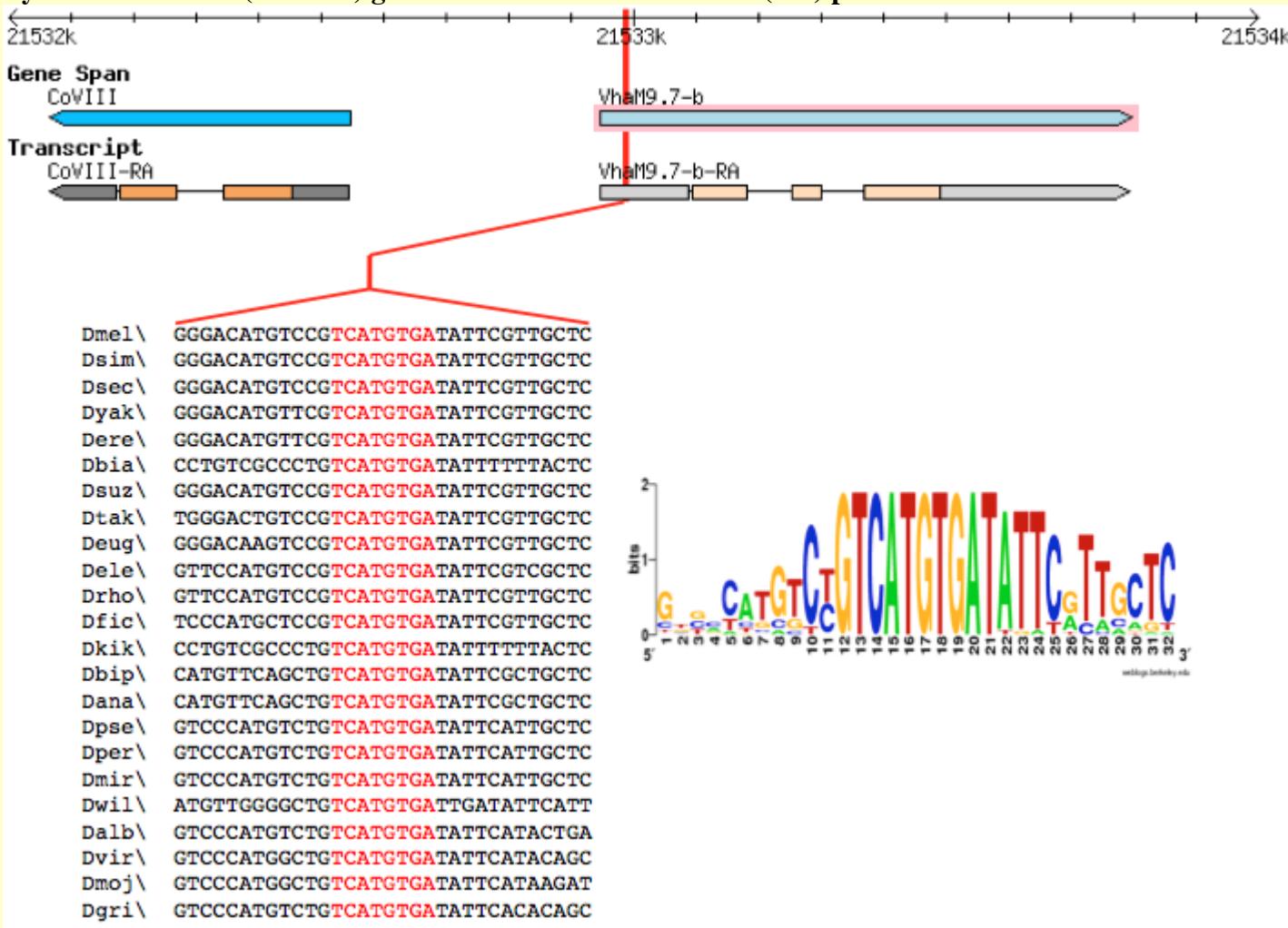


|                              |  |
|------------------------------|--|
| Gene Cluster ID              | Atp6v0e  |
| Drosophila melanogaster gene | <b>VhaM9.7-b (CG7625)</b>  |
| FlyBase ID                   | <a href="#">FBgn0028663</a>  |
| Predicted function           | <b>ATPase, H<sup>+</sup> transporting, lysosomal 9kDa, V<sub>0</sub> subunit e</b>                           |
| Protein size                 | 89 amino acids   |
| Cytogenetic map              | 3L: <a href="#">78D5-78D5</a>  |
| Gene sequence location       | <a href="#">3L:21532946..21533798</a> [+]  |
| Dmel CLEAR sequence          | TCATGTGA   |
| CLEAR sequence location      | 3L:21532984..21532991  |
| Drosophila Atp6v0e paralogs  | <a href="#">VhaM9.7-a</a> (CG1268); <a href="#">VhaM9.7-c</a> (CG11589); <a href="#">VhaM9.7-d</a> (CG14909) |

### FlyBaseVhaM9.7-b (CG7625) gene model & CLEAR element (red) position:



### Atp6v0e gene structure comparison:

Key: UTR region (blue), CDS region (red)

| Species                        | Atp6v0e orthologs | 5'exon | intron | exon | intron | exon3' | Extended CLEAR region | Position | bps from TSS |
|--------------------------------|-------------------|--------|--------|------|--------|--------|-----------------------|----------|--------------|
| <i>Drosophila melanogaster</i> | Dmel\VhaM9.7-b    | 142    | 95     | 70   | 48     | 68     | 127 303               | 5'UTR    | 38           |

|                                 |                                 |     |    |    |     |     |  |                                   |        |  |
|---------------------------------|---------------------------------|-----|----|----|-----|-----|--|-----------------------------------|--------|--|
| <i>Drosophila_simulans</i>      | <a href="#">Dsim\GD14971</a>    | 95  | 70 | 48 | 105 | 127 |  | gggacatgtccgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_sechellia</i>     | <a href="#">Dsec\GM22381</a>    | 95  | 70 | 48 | 105 | 127 |  | gggacatgtccgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_yakuba</i>        | <a href="#">Dyak\GE19768</a>    | 95  | 63 | 48 | 101 | 127 |  | gggacatgttcgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_erecta</i>        | <a href="#">Dere\GG16199</a>    | 95  | 58 | 48 | 100 | 127 |  | gggacatgttcgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila.biarmipes</i>     | <a href="#">Dbia\VhaM9.7-b</a>  | 95  | 53 | 48 | 111 | 127 |  | gggacatgtccgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_suzukii</i>       | <a href="#">Dsuz\VhaM9.7-b</a>  | 95  | 51 | 48 | 106 | 127 |  | gggacatgtccgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_takahashii</i>    | <a href="#">Dtak\VhaM9.7-b</a>  | 95  | 70 | 48 | 102 | 127 |  | tgggactgtccgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_eugracilis</i>    | <a href="#">Deug\VhaM9.7-b</a>  | 95  | 52 | 48 | 59  | 127 |  | gggacaagtccgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_elegans</i>       | <a href="#">Dele\VhaM9.7-b</a>  | 95  | 56 | 48 | 84  | 127 |  | gttccatgtccgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_rhopaloa</i>      | <a href="#">Drho\VhaM9.7-b</a>  | 95  | 56 | 48 | 78  | 127 |  | gttccatgtccgTCATGTGAtattcggtgtc   | 5'UTR? |  |
| <i>Drosophila_ficusphila</i>    | <a href="#">Dfic\VhaM9.7-b</a>  | 95  | 56 | 48 | 78  | 127 |  | tcccatgtccgTCATGTGAtatcggtgtc     | 5'UTR? |  |
| <i>Drosophila_kikkawai</i>      | <a href="#">Dkik\VhaM9.7-b</a>  | 95  | 54 | 48 | 72  | 127 |  | cctgtcgccctgTCATGTGAtatttttactc   | 5'UTR? |  |
| <i>Drosophila_bipectinata</i>   | <a href="#">Dbip\VhaM9.7-b</a>  | 95  | 59 | 48 | 92  | 127 |  | catgttcagctgTCATGTGAtatcggtgtc    | 5'UTR? |  |
|                                 | <a href="#">Dbip\VhaM9.7-b2</a> | 270 |    |    |     |     |  |                                   |        |  |
| <i>Drosophila_ananassae</i>     | <a href="#">Dana\GF23725</a>    | 95  | 59 | 48 | 92  | 127 |  | catgttcagctgTCATGTGAtatcggtgtc    | 5'UTR? |  |
| <i>Drosophila_pseudoobscura</i> | <a href="#">Dpse\GA20488</a>    | 98  | 54 | 48 | 105 | 127 |  | gtccccatgtctgTCATGTGAtattcattgtc  | 5'UTR? |  |
| <i>Drosophila_persimilis</i>    | <a href="#">Dper\GL11891</a>    | 98  | 54 | 48 | 105 | 127 |  | gtccccatgtctgTCATGTGAtattcattgtc  | 5'UTR? |  |
| <i>Drosophila_miranda</i>       | <a href="#">Dmir\VhaM9.7-b</a>  | 98  | 54 | 48 | 105 | 127 |  | gtccccatgtctgTCATGTGAtattcattgtc  | 5'UTR? |  |
| <i>Drosophila_willistoni</i>    | <a href="#">Dwil\GK17834</a>    | 95  | 81 | 48 | 348 | 127 |  | atgttgggctgTCATGTGAttgatattcatt   | 5'UTR? |  |
| <i>Drosophila_albomicans</i>    | <a href="#">Dalb\VhaM9.7-b</a>  | 95  | 65 | 48 | 102 | 127 |  | gtccccatgtctgTCATGTGAtattcatactga | 5'UTR? |  |
| <i>Drosophila_mojavensis</i>    | <a href="#">Dmoj\Tes122</a>     | 95  | 75 | 48 | 118 | 127 |  | gtccccatggctgTCATGTGAtattcataagat | 5'UTR? |  |
| <i>Drosophila_virilis</i>       | <a href="#">Dvir\GJ13542</a>    | 95  | 58 | 48 | 123 | 127 |  | gtccccatggctgTCATGTGAtattcatacagc | 5'UTR? |  |

|                                 |                                |    |    |     |    |     |     |  |                                  |        |  |
|---------------------------------|--------------------------------|----|----|-----|----|-----|-----|--|----------------------------------|--------|--|
| <i>Drosophila_grimshawi</i>     | <a href="#">Dgr\GH14789</a>    |    | 95 | 71  | 48 | 114 | 127 |  | gtcccatgtctgTCATGTGAtattcacacage | 5'UTR? |  |
| Paralog:VhaM9.7-a (CG1268)      |                                |    |    |     |    |     |     |  |                                  |        |  |
| <i>Drosophila_melanogaster</i>  | <a href="#">Dmel\VhaM9.7-a</a> | 20 |    | 258 |    | 162 |     |  |                                  |        |  |
| <i>Drosophila_simulans</i>      | <a href="#">Dsim\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_sechellia</i>     | <a href="#">Dsec\GM14641</a>   |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_yakuba</i>        | <a href="#">Dyak\GE21432</a>   |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_erecta</i>        | <a href="#">Dere\GG15212</a>   |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_biarmipes</i>     | <a href="#">Dbia\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_suzukii</i>       | <a href="#">Dsuz\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_takahashii</i>    | <a href="#">Dtak\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_eugracilis</i>    | <a href="#">Deug\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_elegans</i>       | <a href="#">Dele\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_rhopaloa</i>      | <a href="#">Drho\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_ficusphila</i>    | <a href="#">Dfic\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_kikkawai</i>      | <a href="#">Dkik\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_bipectinata</i>   | <a href="#">Dbip\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_ananassae</i>     | <a href="#">Dana\GF20098</a>   |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_pseudoobscura</i> | <a href="#">Dpse\GA11753</a>   |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_persimilis</i>    | <a href="#">Dper\GL12843</a>   |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_miranda</i>       | <a href="#">Dmir\VhaM9.7-a</a> |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_willistoni</i>    | <a href="#">Dwil\GK19005</a>   |    |    | 258 |    |     |     |  |                                  |        |  |
| <i>Drosophila_albomicans</i>    | <a href="#">Dalb\VhaM9.7-a</a> |    |    | 261 |    |     |     |  |                                  |        |  |

|                                 |                                |  |     |  |  |  |  |
|---------------------------------|--------------------------------|--|-----|--|--|--|--|
| <i>Drosophila_mojavensis</i>    | <a href="#">Dmo\GI16589</a>    |  | 258 |  |  |  |  |
| <i>Drosophila_virilis</i>       | <a href="#">Dvir\GJ12841</a>   |  | 258 |  |  |  |  |
| <i>Drosophila_grimshawi</i>     | <a href="#">Dgr\GH15937</a>    |  | 258 |  |  |  |  |
| Paralog: VhaM9.7-c (CG11589)    |                                |  |     |  |  |  |  |
| <i>Drosophila_melanogaster</i>  | <a href="#">Dmel\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_simulans</i>      | <a href="#">Dsim\GD13283</a>   |  | 255 |  |  |  |  |
| <i>Drosophila_sechellia</i>     | <a href="#">Dsec\GM14003</a>   |  | 255 |  |  |  |  |
| <i>Drosophila_yakuba</i>        | <a href="#">Dyak\GE20639</a>   |  | 255 |  |  |  |  |
| <i>Drosophila_erecta</i>        | <a href="#">Dere\GG14211</a>   |  | 255 |  |  |  |  |
| <i>Drosophila_biarmipes</i>     | <a href="#">Dbia\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_suzukii</i>       | <a href="#">Dsuz\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_takahashii</i>    | <a href="#">Dtak\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_eugracilis</i>    | <a href="#">Deug\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_elegans</i>       | <a href="#">Dele\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_rhopaloa</i>      | <a href="#">Drho\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_ficusphila</i>    | <a href="#">Dfic\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_kikkawai</i>      | <a href="#">Dkik\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_bipectinata</i>   | <a href="#">Dbip\VhaM9.7-c</a> |  | 252 |  |  |  |  |
| <i>Drosophila_ananassae</i>     | <a href="#">Dana\GF20059</a>   |  | 252 |  |  |  |  |
| <i>Drosophila_pseudoobscura</i> | <a href="#">Dpse\GA11084</a>   |  | 255 |  |  |  |  |
| <i>Drosophila_persimilis</i>    | <a href="#">Dper\GL12731</a>   |  | 255 |  |  |  |  |
| <i>Drosophila_miranda</i>       | <a href="#">Dmir\VhaM9.7-c</a> |  | 255 |  |  |  |  |
| <i>Drosophila_willistoni</i>    |                                |  |     |  |  |  |  |

|                                 |                                |    |     |     |  |  |  |
|---------------------------------|--------------------------------|----|-----|-----|--|--|--|
| <i>Drosophila_albomicans</i>    | <a href="#">Dalg\VhaM9.7-c</a> |    | 258 |     |  |  |  |
| <i>Drosophila_mojavensis</i>    | <a href="#">Dmoj\GI16823</a>   |    | 258 |     |  |  |  |
| <i>Drosophila_virilis</i>       | <a href="#">Dvir\GJ12571</a>   |    | 258 |     |  |  |  |
| <i>Drosophila_grimshawi</i>     | <a href="#">Dgri\GH15548</a>   |    | 279 |     |  |  |  |
| Paralog: VhaM9.7-d (CG14909)    |                                |    |     |     |  |  |  |
| <i>Drosophila_melanogaster</i>  | <a href="#">Dmel\VhaM9.7-d</a> | 14 | 267 | 213 |  |  |  |
| <i>Drosophila_simulans</i>      | <a href="#">Dsim\GD19123</a>   |    | 267 |     |  |  |  |
| <i>Drosophila_sechellia</i>     | <a href="#">Dsec\GM15188</a>   |    | 267 |     |  |  |  |
| <i>Drosophila_yakuba</i>        | <a href="#">Dyak\GE24594</a>   |    | 267 |     |  |  |  |
| <i>Drosophila_erecta</i>        | <a href="#">Dere\GG21840</a>   |    | 267 |     |  |  |  |
| <i>Drosophila_biarmipes</i>     | <a href="#">Dbia\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_suzukii</i>       | <a href="#">Dsuz\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_takahashii</i>    | <a href="#">Dtak\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_eugracilis</i>    | <a href="#">Deug\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_elegans</i>       | <a href="#">Dele\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_rhopaloa</i>      | <a href="#">Drho\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_ficusphila</i>    | <a href="#">Dfic\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_kikkawai</i>      | <a href="#">Dkik\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_bipectinata</i>   | <a href="#">Dbip\VhaM9.7-d</a> |    | 267 |     |  |  |  |
| <i>Drosophila_ananassae</i>     | <a href="#">Dana\GF17072</a>   |    | 267 |     |  |  |  |
| <i>Drosophila_pseudoobscura</i> | <a href="#">Dpse\GA13345</a>   |    | 267 |     |  |  |  |
| <i>Drosophila_persimilis</i>    | <a href="#">Dper\GL24534</a>   |    | 267 |     |  |  |  |

|                              |                                       |  |     |  |  |  |  |  |  |
|------------------------------|---------------------------------------|--|-----|--|--|--|--|--|--|
| <i>Drosophila_miranda</i>    | <a href="#"><u>Dmir\VhaM9.7-d</u></a> |  | 267 |  |  |  |  |  |  |
| <i>Drosophila_willistoni</i> | <a href="#"><u>Dwil\GK18963</u></a>   |  | 267 |  |  |  |  |  |  |
| <i>Drosophila_albomicans</i> |                                       |  |     |  |  |  |  |  |  |
| <i>Drosophila_mojavensis</i> | <a href="#"><u>Dmoj\GI23846</u></a>   |  | 267 |  |  |  |  |  |  |
| <i>Drosophila_virilis</i>    | <a href="#"><u>Dvir\GJ10560</u></a>   |  | 267 |  |  |  |  |  |  |
| <i>Drosophila_grimshawi</i>  | <a href="#"><u>Dgr\GH19550</u></a>    |  | 267 |  |  |  |  |  |  |