

A. Down-regulated genes	UniGene	Entrez Gene	<i>swd^{p75jm}</i> mutants + Mg²⁺ (vs - Mg²⁺)
1. solute carrier family 25 (mitochondrial carrier, brain), member 14	Dr.16249	393133	3.54
2. v-fos FBJ murine osteosarcoma viral oncogene homolog (<i>fos</i>)	Dr.12986	394198	2.47
3. calcium binding protein 39 (<i>cap39</i>)	Dr.75164	406822	1.97
4. similar to dsRBP-ZFa	N/A	560756	1.96
5. suppressor of cytokine signaling 3a (<i>socs-3a</i>)	Dr.6431	335409	1.87
6. similar to mKIAA0782 protein	N/A	571767	1.86
7. heat shock protein 90-alpha (<i>hsp90a</i>)	Dr.75834	30591	1.85
8. connexin 44.2 (<i>cx44.2</i>)	Dr.21365	114404	1.80
9. FK506 binding protein 5 (<i>fkbp5</i>)	Dr.78793	368924	1.78
10. similar to putative transmembrane protein TA-2	N/A	796402	1.75
11. solute carrier family 20, member 1a	Dr.79853	406458	1.74
12. exosome component 6 (<i>exosc6</i>)	Dr.80144	326786	1.71
13. ATP-binding cassette, sub-family F (<i>abcf2</i>)	Dr.104616	336770	1.71
14. similar to Actinin, alpha 2	Dr.76096	566874	1.70
15. Phosducin-like 3 (<i>pdcl3</i>)	Dr.76839	403034	1.69
16. similar to APOA4 protein	N/A	570354	1.65
17. 3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1 (soluble) (<i>hmgcs1</i>)	Dr.77183	394060	1.63
18. cardiomyopathy associated 1 (<i>cmya1</i>)	Dr.152	497637	1.63
19. ATPase family, AAA domain containing 3B (<i>atad3b</i>)	N/A	403004	1.62
20. runt-related transcription factor 2a (<i>runx2a</i>)	N/A	405784	1.62
21. solute carrier family 35, member C2 (<i>slc35c2</i>)	Dr.120382	323482	1.59
22. AHA1, activator of heat shock protein ATPase homolog 1 (<i>ahsa1</i>)	Dr.119566	565968	1.58
23. hexokinase 2 (<i>hk2</i>)	Dr.80401	406339	1.57
24. dihydropyrimidine dehydrogenase (<i>dpyd</i>)	Dr.79932	405829	1.57
25. cytochrome P450 (<i>cyp2k8</i>)	Dr.78938	561462	1.56
26. similar to prostate stem cell antigen precursor-like	Dr.119714	566752	1.56
27. three prime histone mRNA exonuclease 1	Dr.119788	553641	1.55
28. annexin A4 (<i>anxa4</i>)	Dr.91161	353362	1.54
29. M-phase phosphoprotein 10 (<i>mphosph10</i>)	Dr.88789	323426	1.53
30. tetratricopeptide repeat domain 4 (<i>ttc4</i>)	Dr.79272	393981	1.52
31. zinc finger protein 259 (<i>znf259</i>)	Dr.25202	406382	1.52
32. solute carrier family 34 (sodium phosphate), member 2a (<i>slc34a2a</i>)	Dr.113486	58148	1.51
33. similar to polyprotein	Dr.103514	796921	1.51
34. wnt8-like protein 2 (<i>wnt8-2</i>)	N/A	553976	1.51
35. phosphatidylinositol transfer protein, alpha (<i>pitpna</i>)	Dr.12713	393909	1.51
36. ATPase type 13A (<i>atp13a</i>)	Dr.78072	334466	1.51
37. similar to G patch domain containing 4	Dr.134307	555692	1.51

B. Up-regulated genes	UniGene	Entrez Gene	<i>swd^{p75jm}</i> mutants + Mg²⁺ (vs - Mg²⁺)
1. hatching enzyme 1 (<i>he1</i>)	Dr.132262	407971	4.85
2. similar to cathepsin L	Dr.132540	100001785	3.20
3. cathepsin L, 1 b (<i>ctsl1b</i>)	Dr.117206	100001493	2.30

4. MAP kinase-interacting serine/threonine kinase 2 (<i>mknk2</i>)	Dr.116082	373121	1.71
5. upstream transcription factor 2, c-fos interacting (<i>usf2</i>)	N/A	406475	1.68
6. similar to sialic-acid binding protein-4	Dr.14713	100003913	1.62
7. protein tyrosine phosphatase, non-receptor type 2 (<i>ptpn2</i>)	Dr.76595	393438	1.60
8. similar to nucleolar and spindle associated protein 1	N/A	567446	1.55
9. diaphorase (NADH) (cytochrome b-5 reductase) (<i>dial</i>)	Dr.3433	336553	1.54
10. oligodendrocyte transcription factor 3 (<i>olig3</i>)	N/A	324857	1.53
11. claudin h (<i>cldnh</i>)	Dr.3267	81587	1.51
12. cytochrome P450, family 2, subfamily J, polypeptide 22 (<i>cyp2j22</i>)	Dr.132874	393592	1.51

Table S2. Transcriptional profile of the *swd^{p75fm}* mutants incubated in E3 medium with supplementary 40 mM MgCl₂ (+ Mg²⁺) as compared to *swd^{p75fm}* mutants incubated in E3 medium without supplementary MgCl₂ (– Mg²⁺) using total RNA extracted from whole larvae at 72 h.p.f. Using 1.50-fold change as the cutoff, the expression of 26 genes is up-regulated, and 91 genes down-regulated in the *swd^{p75fm}* mutants (+ Mg²⁺). Besides the 49 identified genes as listed, the other 78 genes are unidentified. The values represent the fold change. N/A, not available. The UniGene can be accessed at <http://www.ncbi.nlm.nih.gov/UniGene/UGOrg.cgi?TAXID=7955>. The Entrez Gene can be accessed at <http://www.ncbi.nlm.nih.gov/sites/entrez?db=gene>.