

TABLE S1. Molecular analysis of some GOF modifiers of the Vpu-induced wing and eye phenotypes

Uyi ¹	Gene ²	Insertion site ³	Molecular information / Function	wing ⁴	eye ⁴	Human homolog ⁵
Class 1: Transcriptional factors						
146	<i>cropped (crop)</i>	2nd intron	Unknown domain / Function	S	0	<i>TFAP4</i>
181	<i>tramtrack (ttk)</i>	-11700 pb	Transcription factor / Peripheral nervous system	S	0	BTB/POZ family proteins
195	<i>lola</i>	According to transcripts	Transcription factor / Axonal guidance	S	0	BTB/POZ family proteins
1238*	<i>su(H)</i>	+32pb (AS)	Transcription activator / Notch transduction	E	E	<i>CBF1/RBPJ</i>
1526	<i>mes⁻⁴</i>	+40pb (AS)	Histone methyl transferase / Gene silencing	S	0	<i>NSD1</i>
1877	<i>emc</i>	+208pb	Transcription repressor / Cell-cell signaling; cell proliferation	L	0	<i>Inhibitor of DNA binding4</i>
1170	<i>shnurri (shn)</i>	-3490pb (AS)	Transcription factor / Wing morphogenesis; Cell proliferation	E	0	<i>HIV-EP3</i>
Class 2: Translation, splicing						
1028	<i>Rpl7</i>	-1983pb	Structural constituent of ribosome / Mitosis	0	S	<i>RPL7</i>
1276**	<i>eIF3-S10</i>	-85pb	Translation initiation factor / Mitosis	S	E	<i>EIF3A</i>
1652*	<i>heph</i>	4th intron	Translation repressor / Notch signaling pathway	E	E	<i>hnRNP1/PTB1</i>
3006	<i>fusilli</i>	(AS)	mRNA binding / EGFR signaling	S	0	<i>ESRP1</i>
1051**	<i>waharan</i>	-38bp (AS)	Aminoacyl-tRNA ligase activity; ATP binding / Multiple processes	E	S	-
Class 3: Apoptosis						
1206	<i>mir-278 stem loop</i>	NK	miRNA-gene / Negative regulation of apoptosis	S	0	-
15	<i>anterior open (aop)</i>	-107bp	Transcription repressor / Positive regulation of apoptosis	S	L	<i>ETV6</i>
1835	<i>thread (th)/diap1</i>	+2088bp	Apoptosis inhibitor / Apoptosis	S	0	<i>IAP</i>
1027*	<i>malic enzyme (men)</i>	2nd exon	Malate dehydrogenase / Regulation of apoptosis	S	S	<i>malic enzyme I cytosolic</i>
1238*	<i>l(2)35Bq</i>	-713bp	Unknown / Apoptosis inhibitor related	E	E	<i>Ciapin1</i>

Class 4: Ubiquitin, Proteasome

1339*	<i>partner of paired (ppa)</i>	-45bp	Unknown domain / Ubiquitin-dependent protein catabolic process	E	E	<i>FBXL14</i>
1323	<i>CG2218</i>	-186bp	Ubiquitin-protein ligase activity / Ubiquitylation	S	0	<i>UBOX5</i>

Class 5: Signaling pathways

1261	<i>CG14945</i>	-45bp	Phospholipase C activity / intracellular signal transduction	0	L	<i>Phospholipase C family</i>
1726	<i>target of wingless(tow)</i>	+126bp (AS)	Unknown domain / Regulation of Smoothened signaling pathway	S	0	-
1755	<i>pxb</i>	-43bp (AS)	Unknown domain / Smoothened signaling pathway	S	0	-
1033	<i>eathbound 1 (ebd1)</i>	1st exon	DNAbinding / Positive regulation of WG signaling	0	S	-

Class 6: Metabolism

1283	<i>CG2098</i>	-364bp	Ferrochelatase / Protoporphyrinogen IX biosynthetic process	0	E	<i>FECH</i>
1030	<i>CG7910</i>	+162bp (AS)	Fatty acid amide hydrolase / Unknown function	S	0	<i>fatty acid amide hydrolase</i>
1730	<i>O-GlcNAcase (oga)</i>	+54bp (AS)	Hyaluronoglucosaminidase / Unknown function	0	L	<i>MGEA5</i>
1751	<i>Ssadh</i>	+2281bp (AS)	Succinate-semialdehyde dehydrogenase / Gamma-aminobutyric acid catabolic process	S	0	<i>ALDH5A1</i>

Class 7: Cell adhesion, extracellular matrix, cytoskeleton

1228**	<i>CG14394</i>	-2682bp	Unknown domain / Tissue regeneration; Cell adhesion	S	E	<i>Ninjurin 2</i>
1526	<i>CG5514</i>	-800bp	Structural constituent of cell wall / Unknown function	S	0	-
1702	<i>Kuzbanian (Kuz)</i>	1st intron	Metallo-endopeptidase / Peripheral nervous system	S	0	<i>ADAM10</i>
1332	<i>scr64</i>	+1500bp	Tyrosine kinase / Actin filament-based process	0	E	<i>FYN</i>
1116	<i>viking (vkg)</i>	+8bp	Extracellular matrix structural constituent / Skeletal muscle development	0	L	<i>Type IV collagen</i>
1290	<i>Laminine B1 (LanB1)</i>	-39bp	Unknown / Organ development; Cell migration; Basement membrane assembly	0	S	<i>Laminin B</i>

Class 8: Traffic

3113*	<i>liprin alpha</i>	-48bp	Protein binding / Axon guidance	L	E	<i>PPF1A1/Liprin</i>
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1051**	<i>c(3)G</i>	-410bp	Reciprocal meiotic recombination	E	S	<i>Restin/CLIP-170</i>
1228	<i>Past1</i>	+562bp	Calcium ion binding / Endocytosis	S	0	<i>HPAST1/EHD1</i>
1824	<i>CG8451</i>	-374bp	Multivitamin transmembrane transporter / Membrane transport	S	0	<i>SSSF</i>
Class 9: Others						
1199	grapes (<i>grp</i>)	-99bp	Ser/thr kinase / Cell cycle; DNA damage checkpoint.	0	E	<i>CHEK1</i>
1213		-183bp		0	E	<i>CHEK1</i>
1776		-200bp		0	E	<i>CHEK1</i>
1324	<i>CG4552</i>	+634bp (AS)	Rab GTPase activator activity / Phagocytosis, engulfment	S	0	<i>TBC1D23</i>
1751	<i>CG4673</i>	-900bp (AS)	Structural constituent of nuclear pore / Neurogenesis	S	0	<i>NPLOC4</i>
5377	<i>amnesiac (amn)</i>	+1010bp	Neuropeptide hormone / Learning, memory;Antimicrobial humoral response	E	0	-
1702	<i>B4</i>	-1843bp (AS)	Unknown domain / Imaginal disc development; Circadian rythm.	S	0	-
3110	<i>cht11</i>	+1269bp	ChitinaseII / Chitin catabolic process	E	0	-
1348	<i>CG8003</i>	-448bp	Zinc ion binding / Unknown function	E	0	<i>ANKMY2</i>
1730	<i>CG3353</i>	-100bp	Zinc ion binding / Unknown function	0	L	<i>SMYD5</i>
1001	<i>CG32369</i>	1st intron (AS)	Zinc ion binding / Proteolysis	S	0	<i>LONRF2</i>
1657	<i>Esyt2</i>	-8553bp	C2 membrane targeting protein / Unknown function	0	L	<i>ESYT2</i>

¹ P[yellow+ -UAS] insertion line number

² In **bold** are the genes verified to be deregulated by the insertion of the P[yellow⁺ -UAS] element

³ Insertion site corresponds to the location of the P element relative to the known/putative transcriptional start site of the candidate gene. All P element insertions are in the sense transcriptional orientation relative to the candidate gene unless specified by (AS). NK: transcription start site not known

⁴ Modification of the Vpu-induced phenotype in the wing or in the eye. S: suppressor, E: enhancer, L: léthal, 0: no modification.

⁵ - No human homolog identified

* Insertion lines that modified both wing and eye Vpu-induced phenotypes in the same direction

** Insertion lines that modified wing and eye Vpu-induced phenotypes in the opposite direction