

**Supplementary Table 1. Modifiers of *hop*<sup>Tum-l</sup> tumorigenesis**

Modifier of <i>Tum-l</i>	Allele tested	Tumor Index	Protein product/function	Category
<i>E(tum-l)</i>				
<i>Tp(3;Y)ry506-85C</i>	--	1.89±0.16	--	--
<i>unchained</i>	<i>unch[k15501]</i>	1.74±0.19	Unknown	--
<i>TBP-associated factor 1</i>	<i>Taf1[1]</i>	1.63±0.06	TAFII-230 TBP-binding	Transcription
<i>Df(2R)H3C1</i>	--	1.58±0.09	--	--
<i>Cdc27</i>				
<i>abnormal wing discs</i>	<i>Cdc27[L7123]</i>	1.45±0.05	Cell cycle	Cell cycle
<i>Ets at 97D</i>	<i>awd[j2A4]</i>	1.42±0.06	nm23-H1; Nucleoside-diphosphate kinase	Metabolism
<i>spindle E</i>	<i>Ets97D[tne-4]</i>	1.39±0.12	Winged-helix DNA binding domains	Transcription
<i>HEM-protein</i>	<i>spn-E[1]</i>	1.38±0.08	DEAD-box helicase; RNAi component	Chromatin modification
<i>Toll</i>	<i>Hem[03335]</i>	1.34±0.09	Receptor binding; Cell shape	Cytoskeleton
<i>sallimus</i>	<i>Tl[r4]</i>	1.33±0.04	Cytokine receptor	Signaling
<i>Krüppel</i>	<i>sls[1]</i>	1.31±0.08	Myosin-light-chain kinase activity	Cytoskeleton
<i>plume</i>	<i>Kr[1]</i>	1.29±0.16	Zinc finger, transcription repressor	Transcription
<i>rhino</i>	<i>plume[k00308]</i>	1.28±0.11	Unknown	--
<i>Suppressor of variegation 2-5</i>	<i>rhi[02086]</i>	1.24±0.12	Chromodomain; chromatin-binding	Chromatin modification
<i>Rpd3</i>	<i>Su(var)205[5]</i>	1.18±0.06	Heterochromatin Protein 1 (HP1)	Chromatin modification
<i>bellwether</i>	<i>Rpd3[04556]</i>	1.17±0.08	HDAC	Chromatin modification
<i>knirps</i>	<i>blw[1]</i>	1.07±0.06	Mitochond. ATP synthase	Metabolism
<i>Suppressor of variegation 3-4</i>	<i>knif[6]</i>	0.98±0.07	Transcription factor	Transcription
<i>moira</i>	<i>Su(var)3-4[1]</i>	0.94±0.04	Unknown	Chromatin modification
<i>hairy</i>	<i>mor[1]</i>	0.93±0.06	Chromatin binding; brahma complex	Chromatin modification
<i>labial</i>	<i>h[08247]</i>	0.91±0.07	HLH transcriptional repressor	Transcription
<i>polo</i>	<i>lab[4]</i>	0.91±0.06	Homeodomain, transcription	Transcription
<i>Deformed</i>	<i>polo[01673]</i>	0.89±0.05	Kinase, cell devision	Cell cycle
<i>Enhancer of bithorax</i>	<i>Dfd[6]</i>	0.88±0.05	Homeodomain, transcription	Transcription
<i>Vacuolar H+-ATPase 55kD B subunit</i>	<i>E(bx)[ry122]</i>	0.87±0.21	NURF complex	Chromatin modification
<i>gooseberry</i>	<i>Vha55[j2E9]</i>	0.85±0.13	H <sup>+</sup> -ATPase	Metabolism
<i>Protein tyrosine phosphatase 69D</i>	<i>gsb[01155]</i>	0.84±0.06	Homeodomain, transcription	Transcription
<i>Suppressor of variegation 3-9</i>	<i>Ptp69D[1]</i>	0.84±0.04	Tyrosine phosphatase	Signaling
<i>domino</i>	<i>Su(var)3-9[1]</i>	0.83±0.03	Histone H3-K9 methyltransferase	Chromatin modification
<i>piwi</i>	<i>dom[k08108]</i>	0.82±0.03	SNF2-related ATPase	Chromatin modification
<i>Suppressor of variegation 2-10</i>	<i>piwi[06843]</i>	0.82±0.04	RNAi component	Chromatin modification
	<i>Su(var)2-10[03697]</i>	0.80±0.04	PIAS; nuclear lamina component	Signaling/Chromatin modification
<i>Su(Tum-l)</i>				
<i>even skipped</i>	<i>eve[3]</i>	0.08±0.02	Homeodomain	Transcription
<i>baboon</i>	<i>babo[32]</i>	0.02±0.01	Activin Type I receptor	Signaling
<i>Serrate</i>	<i>Ser[VX82]</i>	0.01±0.00	Notch ligand	Signaling
<i>Df(3L)Exel6111</i>	--	0.00±0.00	--	--
<i>lethal with a checkpoint kinase</i>	<i>lack[KG07014]</i>	0.00±0.00	Smurf, HECT Ubiquitin ligase	Signaling

*hop*<sup>Tum-l</sup>/FM7 females were mated to *mutant/Balancer* males. Mutant alleles used for testing are listed in column 2. Tumor indices were calculated from *hop*<sup>Tum-l</sup>/+; *mutant*/+ F1 progeny flies. “—“ indicates functions or candidate genes are unknown.