

**Table S2. H3K27me3-Enriched Genomic Regions**

#	Chr	Start	End	Cytoband	Included genes
1	X	4,264,600	4,514,600	4C2 – 4C10	from <i>CG12688</i> to <i>pebbled</i>
2	X	5,404,145	5,509,399	5A2 – 5A7	from <i>CG12730</i> to <i>CG4136</i>
3	X	5,886,921	5,933,880	5D1 – 5D2	from <i>CG4766</i> to <i>roughex</i>
4	X	7,453,789	7,537,367	7B4 – 7B5	from <i>CG11369</i> to <i>cut</i>
5	X	8,499,811	8,571,154	7F8 – 8A1	from <i>caf1-180</i> to <i>CG12772</i>
6	X	8,615,374	8,729,815	8A3 – 8B2	<i>Lim1</i>
7	X	9,176,154	9,210,701	8D5 – 8D6	<i>lozenge</i>
8	X	9,578,305	9,672,630	8F9 – 9A1	from <i>buttonhead</i> to <i>CG1354</i>
9	X	15,955,928	16,142,413	14A8 – 14B5	from <i>Tob</i> to <i>disconnected</i>
10	X	17,199,002	17,312,249	16A1 – 16A5	from <i>CG5445</i> to <i>CG8611</i>
11	X	17,645,348	17,715,872	16C8 – 16D4	from <i>unc-4</i> to <i>Socs16D</i>
12	X	18,171,104	18,220,640	17A4 – 17A5	from <i>unpaired3</i> to <i>CG6023</i>
13	2L	365,460	403,965	21C1 – 21C2	from <i>aristales</i> to <i>RNA polymerase I 135kD subunit</i>
14	2L	490,193	529,795	21D2 – 21E1	<i>u-shaped</i>
15	2L	576,945	602,773	21E2	from <i>Pvull-PstI</i> homology 13 to <i>CG13689</i>
16	2L	1,618,334	1,704,688	22A3 – 22B1	<i>CG31666</i>
17	2L	1,942,442	1,974,262	22B6 – 22B8	from <i>CG33673</i> to <i>CG10908</i>
18	2L	3,530,332	3,706,345	24A4 – 24C1	from <i>drumstick</i> to <i>CG31778</i>
19	2L	3,813,067	3,862,929	24C5 – 24C8	<i>sloppy paired 1</i> , <i>sloppy paired 2</i>
20	2L	5,370,948	5,516,778	25D7 – 25E5	from <i>no mechanoreceptor potential C</i> to <i>CG14020</i>
21	2L	6,526,157	6,557,925	26E1 – 26E3	from <i>CG31637</i> to <i>osm-6</i>
22	2L	6,791,189	6,852,475	27B1 – 27C1	from <i>nrv nervana 2</i> to <i>Regulator of cyclin A1</i>
23	2L	7,276,810	7,383,183	27F1 – 27F3	from <i>wingless</i> to <i>neither inactivation nor afterpotential C</i>
24	2L	8,733,913	8,913,030	29E6 – 29F3	from <i>raw</i> to <i>CG34398</i>
25	2L	9,575,541	9,617,440	30B12 – 30C1	from <i>CG4389</i> to <i>GlcAT-S</i>
26	2L	11,285,629	11,502,330	32E2 – 32F2	from <i>Osiris 21</i> to <i>CG6488</i>
27	2L	12,546,538	12,688,682	33E9 – 33F3	from <i>bun</i> to <i>POU domain protein 2</i>
28	2L	14,371,166	14,598,857	35B1 – 35B3	from <i>pickpocket</i> to <i>CG3473</i>
29	2L	15,070,253	15,113,130	35C1 – 35C2	from <i>vasa</i> to <i>CG15269</i>

#	Chr	Start	End	Cytoband	Included genes
30	2L	15,271,526	15,502,007	35D1 – 35D2	from <i>CG15261</i> to <i>Translocase inner membrane 17</i>
31	2L	16,352,576	16,491,639	35F12 – 36A2	from <i>CaBP1</i> to <i>CG4580</i>
32	2L	18,722,205	18,938,718	37A1 – 37B6	from <i>CG15167</i> to <i>CG18397</i>
33	2L	20,766,705	20,788,538	38E8 – 38E10	from <i>diaphanous</i> to <i>Pomp</i>
34	2L	21,753,202	22,081,341	40A1– 40E2	from <i>CG31612</i> to <i>CG6691</i>
35	2R	1,592,648	1,641,028	41F8 – 41F9	from <i>vulcan</i> to <i>1(2)09851</i>
36	2R	3,294,313	3,323,158	43B2 – 43C1	from <i>CG11166</i> to <i>sine oculis</i>
37	2R	3,904,824	3,941,529	44A2 – 44A4	from <i>CG14762</i> to <i>CG12761</i>
38	2R	7,349,619	7,466,616	47F14 – 48A2	from <i>Enhancer of Polycomb</i> to <i>toutatis</i>
39	2R	8,759,535	8,804,006	49D6 – 49E1	from <i>CG3790</i> to <i>1(2)01424</i>
40	2R	8,831,603	8,932,240	49E3 – 49F1	from <i>Multi drug resistance 49</i> to <i>CG13323</i>
41	2R	10,321,885	10,396,090	51A2 – 51A4	from <i>phyllopod</i> to <i>CG17390</i>
42	2R	10,663,090	10,730,990	51C2 – 51C5	from <i>knot</i> to <i>Na<sup>+</sup>-dependent inorganic phosphate cotransporter</i>
43	2R	15,130,374	15,165,327	56C4 – 56C6	from <i>coracle</i> to <i>ribbon</i>
44	2R	16,770,193	16,862,723	57B4 – 57B5	from <i>orthopedia</i> to <i>CG34115</i>
45	2R	18,104,965	18,183,183	58D2 – 58D3	from <i>CG30278</i> to <i>CG5819</i>
46	2R	19,454,116	19,554,762	59F1– 59F5	from <i>apontic</i> to <i>Phosphodiesterase 8</i>
47	2R	20,926,066	21,028,144	60F1 – 60F5	from <i>Neuropeptide-like precursor 1</i> to <i>Tyrosine kinase-related protein</i>
48	3L	365,771	434,930	61C1	from <i>tracheiless</i> to <i>klarsicht</i>
49	3L	3,616,564	3,644,352	63E5	from <i>CG10357</i> to <i>CG12029</i>
50	3L	3,840,607	3,896,783	63F3 – 63F5	from <i>Arrowhead</i> to <i>Gustatory receptor 63a</i>
51	3L	6,754,926	6,987,284	65C4 – 65D6	from <i>CG32392</i> to <i>binou</i>
52	3L	7,929,219	7,964,031	66A20 –66A21	from <i>Srp9</i> to <i>Ribonuclease X25</i>
53	3L	8,995,036	9,040,469	66F1 – 66F3	from <i>CG5087</i> to <i>CG5144</i>
54	3L	12,410,626	12,464,736	69B5 – 69C2	from <i>GTPase-activating protein 69C</i> to <i>CG10616</i>
55	3L	12,566,012	12,728,474	69C8 – 69D6	from <i>araucan</i> to <i>small nuclear ribonucleoprotein at 69D</i>
56	3L	14,076,125	14,183,875	70D2 – 70D3	from <i>CG8100</i> to <i>nanchung</i>
57	3L	14,555,711	14,612,135	70E2 – 70E4	from <i>CG34039</i> to <i>shade</i>
58	3L	19,636,298	19,678,333	76B11 – 76C1	from <i>Ornithine aminotransferase precursor</i> to <i>CG8765</i>
59	3L	20,533,576	20,712,097	77D1 – 77E3	from <i>CG4786</i> to <i>CG13253</i>

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60	3L	21,442,007	21,477,597	78D2 – 78D3	from <i>Syntaxin 7</i> to <i>crocodile</i>
61	3L	21,568,985	21,602,830	78D7 – 78E1	from <i>CG32441</i> to <i>AP-2</i>
62	3L	21,758,442	21,818,290	78F1 – 78F3	from <i>Syntrophin-like 1</i> to <i>Cyclin H</i>
63	3R	646,523	732,329	82D6 – 82E2	from <i>CG14657</i> to <i>Germ line transcription factor 1</i>
64	3R	2,485,947	2,888,201	84A1 – 84B2	from <i>labial</i> to <i>CG1988</i>
65	3R	3,125,740	3,175,059	84D3 – 84D5	from <i>rotund</i> to <i>nuclear export factor 4</i>
66	3R	3,750,304	3,794,138	84E5 – 84E6	<i>doublesex</i>
67	3R	3,953,417	4,165,317	84E13 – 84F13	from <i>CG7891</i> to <i>CG9603</i>
68	3R	6,241,765	6,501,354	86B4 – 86C4	from <i>CG6345</i> to <i>CG6465</i>
69	3R	8,049,047	8,173,498	87B3 – 87B7	from <i>CG17404</i> to <i>CG10038</i>
70	3R	8,882,095	8,905,013	87D11	<i>single-minded</i>
71	3R	9,666,675	9,784,442	88A1 – 88A3	from <i>CG31495</i> to <i>Inositol polyphosphate 1-phosphatase</i>
72	3R	11,809,275	11,869,670	89A11 – 89B1	from <i>serpent</i> to <i>pannier</i>
73	3R	12,186,970	12,258,657	89B14 – 89B16	from <i>CG14880</i> to <i>CG31279</i>
74	3R	12,480,296	12,814,366	89D6 – 89E6	from <i>Ultrabithorax</i> to <i>CG18622</i>
75	3R	17,203,138	17,399,241	93D9 – 93E4	from <i>mod(mdg4)</i> to <i>Insulin-like receptor</i>
76	3R	18,953,981	19,174,298	94E1 – 94E13	from <i>hedgehog</i> to <i>pointed</i>
77	3R	20,901,945	21,014,952	96B20 – 96C4	from <i>CG11920</i> to <i>distal antenna</i>
78	3R	24,369,978	24,428,240	98D4 – 98D6	from <i>CG12413</i> to <i>Heterogeneous nuclear ribonucleoprotein at 98DE</i>
79	3R	25,328,898	25,417,783	99B2 – 99B4	from <i>Trc8</i> to <i>alphabet</i>
80	3R	25,511,345	25,542,461	99B7 – 99B8	from <i>Odorant-binding protein 99c</i> to <i>Odorant-binding protein 99b</i>
81	3R	26,426,900	26,919,136	100A1 – 100B2	from <i>CG2246</i> to <i>Sox100B</i>
82	4	502,307	565,644	102C1 – 102C4	<i>Asator</i> , <i>Zfh2</i>
83	4	715,271	796,484	102D4 – 102E1	from <i>Myoglianin</i> to <i>bent</i>
84	4	820,302	876,918	102E1 – 102E5	from <i>CG11231</i> to <i>CG11148</i>
85	4	978,663	1,029,391	102F4 – 102F5	from <i>CG32016</i> to <i>twin of eyeless</i>
86	4	1,103,365	1,133,637	102F8	from <i>Activin-β</i> to <i>shaven</i>