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APPENDIX 1: List of stocks that comprise the deficiency kit used in this study.

BL Stock	Chr	Deficiency name	Break Points
1329	1	Df(1)BA1	1A1;2A
1546	1	T(1;3)sc[J4]	1B;3A3
936	1	Df(1)64c18	2E1-2;3C2
935	1	Df(1)JC19	2F6;3C5
729	1	Df(1)N-8	3C2-3;3E3-4
939	1	Df(1)dm75e19	3C11;3E4
940	1	Df(1)A113	3D6-E1;4F5
944	1	Df(1)JC70	4C15-16;5A1-2
5705	1	Df(1)BA2-8	4F5;5A13
945	1	Df(1)C149	5A8-9;5C5-6
946	1	Df(1)N73	5C2;5D5-6
5281	1	Df(1)dx81	5C3-10;6C3-12
3196	1	Df(1)Sxl-bt	6E2;7A6
948	1	Df(1)ct-J4	7A2-3;7C1
3221	1	Df(1)ct4b1	7B2-4;7C3-4
949	1	Df(1)C128	7D1;7D5-6
950	1	Df(1)RA2	7D10;8A4-5
951	1	Df(1)KA14	7F1-2;8C6
3651	1	lz-90b24	8B5-6;8D8-9
952	1	Df(1)C52	8E;9C-D
954	1	Df(1)v-L15	9B1-2;10A1-2
3560	1	Df(1)v-N48	9F;10C3-5
957	1	Df(1)KA7	10A9;10F6-7
959	1	Df(1)HA85	10C1-2;11A1-2
962	1	Df(1)N105	10F7;11D1
964	1	Df(1)JA26	11A1;11D-E
967	1	Df(1)C246	11D-E;12A1-2
966	1	Df(1)N12	11D1-2;11F1-2
727	1	Df(1)g	12A3-10;12E9
998	1	Df(1)RK2	12D2-E1;13A2-5
1039	1	Df(1)RK4	12F5-6;13A9-B1
7339	1	In(1)AC2[L]AB[R]	9D5-E1;9E7-8 + 13B5-6;13E1-2
3347	1	Df(1)sd72b	13F1;14B1
125	1	Df(1)4b18	14B8;14C1
3217	1	Tp(1;2)r[+]75c	14B13;15A9;35D-E
5272	1	Df(1)r-D1	14C5-6;15B1
4741	1	Df(1)B25	15D3;16A4-6
4953	1	Df(1)BK10	16A2;16C7-10
6217	1	Df(1)RR79	16C;16F
970	1	Df(1)N19	17A1;18A2
971	1	Df(1)JA27	18A5;18D
972	1	Df(1)HF396	18E1-2;20
977	1	Df(1)DCB1-35b	19F1-2;20E-F
3714	1	Df(1)A209	20A;20F
3638	2	Df(2L)net-PMF	21A1;21B7-8
6283	2	Df(2L)BSC4	21B7-C1;21C2-3

BL Stock	Chr	Deficiency name	Break Points
6608	2	Df(2L)BSC16	21C3-4;21C6-8
3084	2	Df(2L)ast2	21D1-2;22B2-3
3133	2	Df(2L)dp-79b	22A2-3;22D5-E1
7144	2	Df(2L)BSC37	22D2-3;22F1-2
6648	2	Df(2L)dpp[d14]	22E4-F2;22F3-23A1
90	2	Df(2L)C144	22F3-4;23C3-5
1567	2	Df(2L)JS17	23C1-2;23E1-2
6875	2	Df(2L)BSC28	23C5-D1;23E2
6965	2	Df(2L)BSC31	23E5;23F4-5
6507	2	Df(2L)drm-P2	23F3-4;24A1-2
5330	2	Df(2L)ed1	24A2;24D4
693	2	Df(2L)sc19-8	24C2-8;25C8-9
3813	2	Df(2L)sc19-4	25A5;25E5
781	2	Df(2L)cl-h3	25D2-4;26B2-5
490	2	Df(2L)E110	25F3-26A1;26D3-11
6299	2	Df(2L)BSC5	26B1-2;26D1-2
6338	2	Df(2L)BSC6	26D3-E1;26F4-7
6374	2	Df(2L)BSC7	26D10-E1;27C1
2414	2	Df(2L)spd[j2]	27C1-2;28A
5420	2	Df(2L)Dwee1-W05	27C2-3;27C4-5
4956	2	Df(2L)XE-3801	27E2;28D1
7147	2	Df(2L)BSC41	28A4-B1;28D3-9
140	2	Df(2L)Trf-C6R31	28DE;28DE
179	2	Df(2L)TE29Aa-11	28E4-7;29B2-C1
2892	2	Df(2L)N22-14	29C1-2;30C8-9
6478	2	Df(2L)BSC17	30C3-5;30F1
1045	2	Df(2L)Mdh	30D-30F;31F
3366	2	Df(2L)J2	31B;32A
7142	2	Df(2L)BSC32	32A1-2;32C5-D1
7143	2	Df(2L)BSC36	32D1;32F1-3
5869	2	Df(2L)FCK-20	32D1;33F1-2
3079	2	Df(2L)Prl	32F1-3;33F1-2
6999	2	Df(2L)BSC30	34A3;34B7-9
3138	2	Df(2L)b87e25	34B12-C1;35B10-C1
3588	2	Df(2L)TE35BC-24	35B4-6;35F1-7
1491	2	Df(2L)r10	35D1;36A6-7
2583	2	Df(2L)cact-255rv64	35F-36A;36D
420	2	Df(2L)TW137	36C2-4;37B9-C1
567	2	Df(2L)pr-A16	37B2-12;38D2-5
167	2	Df(2L)TW161	38A6-B1;40A4-B1
4959	2	Df(2L)C'	h35;h38L
739	2	Df(2R)M41Aa4	41A;41A
749	2	In(2R)bw[VDe21]Cy[R]	41A-B;42A2-3
1007	2	Df(2R)nap9	42A1-2;42E6-F1
1888	2	Df(2R)ST1	42B3-5;43E15-18
3368	2	Df(2R)cn9	42E;44C
198	2	Df(2R)H3C1	43F;44D3-8
201	2	Df(2R)H3C1	44D1-4;44F12

BL Stock	Chr	Deficiency name	Break Points
3591	2	Df(2R)Np5	44F10;45D9-E1
4966	2	Df(2R)w45-30n	45A6-7;45E2-3
6917	2	Df(2R)BSC29	45D3-4;45F2-6
1743	2	Df(2R)B5	46A;46C
1702	2	Df(2R)X1	46C;47A1
447	2	Df(2R)stan1	46D7-9;47F15-16
190	2	Df(2R)en-A	47D3;48B2
1145	2	Df(2R)en30	48A3-4;48C6-8
7145	2	Df(2R)BSC39	48C5-D1;48D5-E1
4960	2	Df(2R)CB21	48E;49A
7146	2	Df(2R)BSC40	48E1-2;48E2-10
5879	2	Df(2R)BSC3	48E12-F4;49A11-B6
754	2	Df(2R)vg-C	49A4-13;49E7-F1
442	2	Df(2R)CX1	49C1-4;50C23-D2
6516	2	Df(2R)BSC18	50D1;50D2-7
6455	2	Df(2R)BSC11	50E6-F1;51E2-4
3518	2	Df(2R)Jp1	51D3-8;52F5-9
3520	2	Df(2R)Jp8	53F5-9;52F10-53A1
7445	2	Df(2R)BSC49	53D9-E1;54B5-10
6404	2	Df(2R)P803-Delta15	53E;53F11
6916	2	Df(2R)ED1	53E10;53F9
7414	2	Df(2R)BSC44	54B1-2;54B7-10
5680	2	Df(2R)robl-c	54B17-C4;54C1-4
5574	2	Df(2R)k10408	54C1-4;54C1-4
7441	2	Df(2R)BSC45	54C8-D1;54E2-7
6779	2	Df(2R)14H10Y-53	54D1-2;54E5-7
6780	2	Df(2R)14H10W-35	54E5-7;55B5-7
1547	2	Df(2R)PC4	55A;55F
757	2	Df(2R)P34	55E2-4;56C1-11
6866	2	Df(2R)BSC26	56C4;56D6-10
6647	2	Df(2R)BSC22	56D7-E3;56F9-12
543	2	Df(2R)017	56F5;56F15
3467	2	Df(2R)AA21	56F9-17;57D11-12
6609	2	Df(2R)BSC19	56F12-14;57A4
5246	2	Df(2R)Egfr5	57D2-8;58D1
282	2	Df(2R)X58-12	58D1-2;59A
3909	2	Df(2R)59AD	59A1-3;59D1-4
7273	2	Df(2R)vir130	59B;59D8-E1
1682	2	Df(2R)or-BR6	59D5-10;60B3-8
2604	2	Df(2R)Px2	60C5-6;60D9-10
2471	2	Df(2R)M60E	60E2-3;60E11-12
3157	2	Df(2R)ES1	60E6-8;60F1-2
4961	2	Df(2R)Kr10	60F1;60F5
2577	3	Df(3L)emc-E12	61A;61D3
439	3	Df(3L)Ar14-8	61C5-8;62A8
5411	3	Df(3L)Aprt-32	62B1;62E3
2400	3	Df(3L)R-G7	62B8-9;62F2-5
6755	3	Df(3L)BSC23	62E8;63B5-6

BL Stock	Chr	Deficiency name	Break Points
3650	3	Df(3L)M21	62F;63D
3649	3	Df(3L)HR119	63C2;63F7
463	3	Df(3L)GN34	63E6-9;64A8-9
3686	3	Df(3L)GN24	63F6-7;64C13-15
3096	3	Df(3L)ZN47	64C;65C
4393	3	Df(3L)XD198	65A2;65E1
6867	3	Df(3L)BSC27	65D4-5;65E4-6
6964	3	Df(3L)BSC33	65E10-F1;65F2-6
1420	3	Df(3L)pbl-X1	65F3;66B10
5877	3	Df(3L)ZP1	66A17-20;66C1-5
1541	3	Df(3L)66C-G28	66B8-9;66C9-10
6460	3	Df(3L)BSC13	66B12-C1;66D2-4
3024	3	Df(3L)h-i22	66D10-11;66E1-2
4500	3	Df(3L)Scf-R6	66E1-6;66F1-6
7079	3	Df(3L)BSC35	66F1-2;67B2-3
997	3	Df(3L)AC1	67A2;67D11-13
6471	3	Df(3L)BSC14	67E3-7;68A2-6
2611	3	Df(3L)vin5	68A2-3;69A1-3
2612	3	Df(3L)vin7	68C8-11;69B4-5
5492	3	Df(3L)eyg[C1]	69A4-5;69D4-6
6456	3	Df(3L)BSC10	69D4-5;69F5-7
6457	3	Df(3L)BSC12	69F670A1;70A1-2
4366	3	In(3LR)C190[L]Ubx[42TR]	70A1-2;70C3-4
3124	3	Df(3L) fz-GF3b	70C1-2;7-D4-5
3126	3	Df(3L) fz-M21	70D2-3;71E4-5
6551	3	Df(3L)XG5	71C2-3;72B1-C1
3640	3	Df(3L)brm11	71F1-4;72D1-10
2993	3	Df(3L)st-f13	72C1-D1;73A3-4
2998	3	Df(3L)81k19	73A3;74F
6411	3	Df(3L)BSC8	74D3-75A1;75B2-5
2608	3	Df(3L)W10	75A6-7;75C1-2
2990	3	Df(3L)Cat	75B8;75F1
6754	3	Df(3L) fz2	75F10-11;76A1-5
6646	3	Df(3L)BSC20	76A7-B1;76B4-5
3617	3	Df(3L)kto2	76B1-2;76D5
5126	3	Df(3L)XS533	76B4;77B
2052	3	Df(3L)rdgC-co2	77A1;77D1
3127	3	Df(3L)ri-79c	77B-C;77F-78A
5878	3	Df(3L)ri-XT1	77E2-4;78A2-4
4429	3	Df(3L)ME107	77F3;78C8-9
4430	3	Df(3L)Pc-2q	78C5-6;78E3-79A1
4506	3	Df(3L)Ten-m-AL29	79C1-3;79E3-8
5951	3	Df(3L)HD1	79D3-E1;79F3-6
6649	3	Df(3L)BSC21	79E5-F1;80A2-3
1518	3	Df(3R)ME15	81F3-6;82F5-7
4787	3	Df(3R)3-4	82F3-4;82F10-11
5694	3	Df(3R)e1025-14	82F8-10;83A1-3
7443	3	Df(3R)BSC47	83B7-C1;83C6-D1

BL Stock	Chr	Deficiency name	Break Points
1990	3	Df(3R)Tpl10	83C1-2;84B1-2
2393	3	Df(3R)WIN11	83E1-2;84A4-5
1884	3	Df(3R)Scr	84A1-2;84B1-2
1842	3	Df(3R)Antp17	84B1-2;84D11-12 OR 84A6;84D14
1968	3	Df(3R)p712	84D4-6;85B6
1962	3	Df(3R)p-XT103	85A2;85C1-2
6756	3	Df(3R)BSC24	85C4-9;85D12-14
1931	3	Df(3R)by10	85D8-12;85E7-F1
7080	3	Df(3R)BSC38	85F1-2;86C7-8
3128	3	Df(3R)M-Kx1	86C1;87B1-5
3003	3	Df(3R)T-32	86E2-4;87C6-7
3007	3	Df(3R)ry615	87B11-13;87E8-11
1534	3	Tp(3;Y)ry506-85C	87D1-2;88E5-6
383	3	Df(3R)ea	88E87-13;89A1
756	3	Df(3R)sbd105	88F9-89A1;89B9-10
1920	3	Df(3R)sbd104	89B5;89C
1467	3	Df(3R)P115	89B7-8;89E7
4431	3	Df(3R)DG2	89E1-F4;91B1-B2
3011	3	Df(3R)Cha7	90F1-F4;91F5
3012	3	Df(3R)DI-BX12	91F1-2;92D3-6
4962	3	Df(3R)H-B79	92B3;92F13
7413	3	Df(3R)BSC43	92F7-93A1;93B3-6
2425	3	Df(3R)e-N19	93B;94
3340	3	Df(3R)e-R1	93B6-7;93D2
2586	3	Df(3R)23D1	94A3-4;94D1-4
4940	3	Df(3R)mbc-30	95A5-7;95C10-11
2585	3	Df(3R)mbc-R1	95A5-7;95D6-11
4432	3	Df(3R)crb-F89-4	95D7-D11;95F15
2363	3	Df(3R)crb87-5	95F7;96A17-18
3468	3	Df(3R)slo8	96A2-7;96D2-4
5601	3	Df(3R)Esp113	96F1;97B1
1910	3	Df(3R)TI-P	97A;98A1-2
823	3	Df(3R)D605	97E3;98A5
7412	3	Df(3R)BSC42	98B1-2;99A6-8
430	3	Df(3R)3450	98E3;99A6-8
669	3	Df(3R)Dr-rv1	99A1-2;99B6-11
3547	3	Df(3R)L127	99B5-6;99E4-F1
3546	3	Df(3R)B81	99C8;100F5
1785	4	C(4)RM	101F1;102F8
7084	4	Df(4)O2	<102C02;102D02>
7083	4	Df(4)C3	102D6;102F
759	4	Df(4)G	102E2;102E10

BL stock #: Stock number assigned by the Bloomington Stock Centre

Chr: Chromosome that contains the described aberration

Break-points: Cytological position of aberration

Note stocks are ordered in relation to the cytological position of the aberrations contained within.

APPENDIX 2: *D. melanogaster* stocks used in this study

Use	Fly Strain	Genotype/Phenotype	Source	Stock Number
Wild-type control	w1118	white eyes w1118	Bloomington	4829
Mapping transgene insertions to a chromosome	double-balancer	Rough eyes, curly wings, stubby bristles, hairy shoulders If/CyO;MKRS/TM6B	Garcia-Bellido	
Apoptosis Screen	GMRhid	GMRhid-SM1	Kurada and White	
Testing suitability of GMR>DRAD21DM for genetic screen	Separase	Deficiency	Bloomington	6463
	auroraB	Deficiency	Bloomington	1469
	sumo2	Deficiency	Bloomington	4393
	topoII	Deficiency	Bloomington	3784
	mus209	Insertion	Bloomington	10361
	Scs3	Duplication	Bloomington	1065
	sumo (CG1010)	Insertion	Bloomington	13870
	fzy	Point	Bloomington	2492
	prod	Insertion	Bloomington	10814
	lin 19	Insertion	Bloomington	12764
	pasc	Insertion	Bloomington	15438
	Polo	Null	Bloomington	546
	polo	Insertion	Bloomington	11543
	pros26	Point	Bloomington	6182
	pim	Point	Bloomington	3117
	cyclin B	Deletion	Bloomington	6630
	timeout	Deficiency	Bloomington	6171
	nipped B	Insertion	Bloomington	11143
	Scs3	Deficiency	Bloomington	2414
	meiS332	Truncation	Bloomington	671
	Grapes	insertion	Bloomington	12219
	Sumo2	insertion	Bloomington	13870
	aurora	amorphic	Bloomington	6188
	thr	EMS generated	Bloomington	6275
	Top1	deletion	Bloomington	5876
	ZW10	amorphic	Bloomington	4282
	mei-41	strong	Bloomington	4183
DTS3	EMS generated	Bloomington	3014	
sumo2	duplication	Bloomington	4484	
Genetic dissection of region S122	Df(3L)ED4470	Df(3L)ED4470/TM6C	Bloomington	8068
	Df(3L)BK9	Df(3L)BK9/TM3	Bloomington	2991
	Df(3L)vin3	Df(3L)vin3/TM3	Bloomington	2609
	CycA[C8LR1]	CycA[C8LR1]/TM3	Bloomington	6227
	CycA[03946]	CycA[03946] /TM3	Bloomington	11616

Use	Fly Strain	Genotype/Phenotype	Source	Stock Number
Genetic dissection of region S107	Df(2L)AP1	Df(2L)AP1/SM1	Bloomington	6114
	lid[10424]	lid[10424]/CyO	Bloomington	12367
	eIF-4a[k01501]	eIF-4a[k01501]/CyO	Bloomington	10506
	eIF-4a[02439]	eIF-4a[02439] cn[1]/CyO	Bloomington	11190
Genetic dissection of region S79	hep[G0107]	hep[G0107]/FM7c	Bloomington	10082
	lic[G0252]	lic[G0252]/FM7c	Bloomington	11880
	sno[KG10357]	sno[KG10357]	Bloomington	15257
	HDAC4[KG09091]	HDAC4[KG09091]/FM7c	Bloomington	15159
Genetic dissection of region S67	Df(2R)XTE-18	Df(2R)XTE-18/CyO	Bloomington	2468
	Df(2R)XTE-11	Df(2R)XTE-11/CyO	Bloomington	6764
	dup[k03308]	dup[k03308]/CyO	Bloomington	10530
	dup[a3]	dup[a3]/CyO	Bloomington	7276
	dup[a1]	dup[a1]/CyO	Bloomington	7275
Genetic dissection of region S81	Df(2L)D20	Df(2L)D20/In(2LR)Gla	Bloomington	3911
	Drp1[KG03815]	Drp1[KG03815]/CyO	Bloomington	13510
	Su(var)2-4[01]	Su(var)2-4[01] pie[54]/CyO	Bloomington	6883
	lilli[k05431]	lilli[k05431]/CyO	Bloomington	10388
	Scim12[2]	Scim12[2]/SM1	Bloomington	14796
	Scim13[1]	Scim13[1]/SM1	Bloomington	14563
Genetic dissection of regions S82 and S158	Df(1)ovo44	Df(1)ovo44/FM6	Bloomington	6005
	rg[KG02343]	rg[KG02343]	Bloomington	12980
	Df(1)JB254	Df(1)JB254/FM7c	Bloomington	4557
Genetic dissection of region E97	kni[ri-1]	kni[ri-1]	Bloomington	566
	kni[10]	kni[10]/TM3	Bloomington	5339
Genetic dissection of region E60	Act42A[EY05608]	Act42A[EY05608]	Bloomington	15460
	mle[9]	mle[9]/CyO	Bloomington	5873
	mle[1]	mle[1]/SM1	Bloomington	4235
	EcR[V559fs]	EcR[V559fs]/CyO	Bloomington	4901
	EcR[225]	EcR[225]/CyO	Bloomington	4899
	Src42A[E1]	Src42A[E1]/CyO	Bloomington	6408
	Src42A[KG02515]	Src42A[KG02515]/CyO	Bloomington	13751
	Src42A[myri]	Src42A[myri]/CyO	Bloomington	6453
Genetic dissection of polytene divisions 26,27 and 28	Bub1[k03113]	Bub1[k03113]/CyO	Bloomington	10526
	smt3[04493]	smt3[04493]/CyO	Bloomington	11378
	Hrb27C[k02814]	Hrb27C[k02814]/CyO	Bloomington	10375
	Hrb27C[02647]	Hrb27C[02647]/CyO	Bloomington	11204
	xl6[k00230]	xl6[k00230]/CyO	Bloomington	10472
	I(2)k09022[k09022]	I(2)k09022[k09022]/CyO	Bloomington	10852
	wee[DS1]	wee[DS1]/CyO	Bloomington	3499
	wee[ES1]	wee[ES1]/CyO	Bloomington	5833
	Df(2L)BSC41	Df(2L)BSC41/CyO	Bloomington	7147
	Df(2L)J-H	Df(2L)J-H/SM5	Bloomington	1357
	Df(2L)ade3	Df(2L)ade3/CyO	Bloomington	6790
	Df(2L)DE	Df(2L)DE/CyO	Bloomington	6653