

**Supplemental Table S1. Chromosomal deficiencies tested in the AiP screen on 2L.**

\* These deficiencies could not be scored because of lethality of ey>hid-p35/Df flies.

| <b>Deficiencies</b> | <b>Deleted Segments</b> | <b>Effects on ey&gt;hid-p35</b> |
|---------------------|-------------------------|---------------------------------|
| Df(2L)net-PMC       | 21A1;21B6-7             | no effect                       |
| Df(2L)ED19          | 21B3;21B7               | no effect                       |
| Df(2L)BSC106        | 21B7;21C2               | no effect                       |
| Df(2L)BSC4          | 21B7-C1;21C2-3          | no effect                       |
| Df(2L)BSC16         | 21C3-4;21C6-8           | no effect                       |
| Df(2L)S2            | 21C6-D1; 22A6-B1        | no effect                       |
| Df(2L)ast2          | 21D1-21D2;22B2-22B3     | no effect                       |
| Df(2L)frtz17        | 21E3-4;22B5-7           | no effect                       |
| Df(2L)Exel6006      | 22B5;22D1               | no effect                       |
| Df(2L)ED123         | 22B8;22D4               | enhancement                     |
| Df(2L)BSC37         | 22D2-3;22F1-2           | no effect                       |
| Df(2L)dpp[d14]      | 22E4-F2;22F3-23A1       | no effect                       |
| Df(2L)C144          | 22F4-23A1;23C2-4        | suppression                     |
| Df(2L)ED136         | 22F4;23A3               | suppression                     |
| Df(2L)Exel6277      | 23A2;23B1               | no effect                       |
| Dp(2;1)JS13         | 23A3;23D6               | no effect                       |
| Df(2L)ED206         | 23B6;23D1               | suppression                     |
| Df(2L)JS17          | 23C1-2;23E1-2           | suppression                     |
| Df(2L)JS32          | 23C3;23D2               | no effect                       |
| Df(2L)Exel7014      | 23C4;23C5               | suppression                     |
| Df(2L)BSC162        | 23C5;23D4               | no effect                       |
| Df(2L)BSC28         | 23C5-D1;23E2            | suppression                     |
| Df(2L)S2590         | 23D2;23E3               | no effect                       |
| Df(2L)Exel8008      | 23E3;23E5               | no effect                       |
| Df(2L)BSC31         | 23E5;23F4-5             | suppression                     |
| Df(2L)tim-02        | 23F2-3;23F6-24A1        | no effect                       |
| Df(2L)Exel7016      | 23F3;23F3               | no effect                       |
| Df(2L)drm-P1        | 23F3-4;24A1             | no effect                       |
| Df(2L)BSC292        | 23F6;24A2               | no effect                       |
| Df(2L)ed1           | 24A2;24D4               | no effect                       |
| Df(2L)sc19-7        | 24D2-4;25C2-3           | no effect                       |
| Df(2L)Exel8012      | 25B1;25B5               | no effect                       |
| Df(2L)Exel7022      | 25B10;25C3              | no effect                       |
| Df(2L)Exel7021      | 25B3;25B9               | no effect                       |
| Df(2L)Exel8013      | 25B5;25B10              | no effect                       |
| Df(2L)BSC110        | 25C1;25C4               | no effect                       |
| Df(2L)BSC109        | 25C4;25C8               | no effect                       |
| Df(2L)Exel6011      | 25C8;25D5               | lethality*                      |
| Df(2L)cl-h3         | 25D2-4;26B2-5           | no effect                       |

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| Df(2L)BSC5      | 26B1-2;26D1-2   | no effect   |
| Df(2L)ED384     | 26B2;26D7       | no effect   |
| Df(2L)BSC7      | 26D10-E1;27C1   | no effect   |
| Df(2L)BSC6      | 26D3-E1;26F4-7  | enhancement |
| Df(2L)BSC9      | 26F5-7;27A2-B2  | no effect   |
| Df(2L)ED6569    | 27A1;27C4       | no effect   |
| Df(2L)J-H       | 27C2-9;28B3-4   | no effect   |
| Df(2L)ade3      | 27D1-2;27F1-2   | no effect   |
| Df(2L)BSC41     | 28A4-B1;28D3-9  | no effect   |
| Df(2L)Exel6018  | 28B1;28C1       | no effect   |
| Df(2L)ED508     | 28B1;28C4       | enhancement |
| Df(2L)Trf-C6R31 | 28DE;28DE       | no effect   |
| Df(2L)Exel7034  | 28E1;28F1       | lethality*  |
| Df(2L)TE29Aa-11 | 28E4-7;29B2-C1  | no effect   |
| Df(2L)ED611     | 29B4;29C3       | enhancement |
| Df(2L)N22-5     | 29C3;30C9       | no effect   |
| Df(2L)gamma7    | 30A9-B1;30D2-F4 | no effect   |
| Df(2L)BSC17     | 30C3-5;30F1     | no effect   |
| Df(2L)Exel7043  | 30D1;30F1       | no effect   |
| Df(2L)Mdh       | 30D-30F;31F     | no effect   |
| Df(2L)BSC205    | 30F5;31A2       | no effect   |
| Df(2L)Exel9032  | 31A3;31B1       | no effect   |
| Df(2L)J1        | 31B;31D         | no effect   |
| Df(2L)BSC206    | 31B1;31D9       | no effect   |
| Df(2L)J3        | 31D;31F         | no effect   |
| Df(2L)Exel7048  | 31E3;31F5       | enhancement |
| Df(2L)ED746     | 31F4;32A5       | no effect   |
| Df(2L)BSC32     | 32A1-2;32C5-D1  | no effect   |
| Df(2L)FCK-20    | 32D1;32F1-3     | no effect   |
| Df(2L)Prl       | 32F1-3;33F1-2   | no effect   |
| Df(2L)prd1.7    | 33B3;34A1-34A2  | no effect   |
| Df(2L)ED778     | 33E9;34A7       | no effect   |
| Df(2L)BSC30     | 34A3;34B7-9     | no effect   |
| In(2L)b82a1     | 34B7;34E3       | no effect   |
| Df(2L)BSC147    | 34C1;34C6       | no effect   |
| Df(2L)b80e3     | 34C4;35A4       | no effect   |
| Df(2L)64j       | 34D1;35C1       | no effect   |
| Df(2L)ED1050    | 35B8;35D4       | enhancement |
| Df(2L)Sco[rv14] | 35D1;35E2       | no effect   |
| Df(2L)RA5       | 35E1;36A1       | no effect   |
| Df(2L)Exel7066  | 36A1;36A12      | no effect   |
| Df(2L)Exel7067  | 36A12;36B2      | no effect   |
| Df(2L)Exel8036  | 36B1;36C9       | no effect   |
| Df(2L)TW137     | 36C2-4;37B9-C1  | suppression |

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| Df(2L)TW119    | 36C4;36E1      | no effect   |
| Df(2L)M36F-S5  | 36D1;36F11     | no effect   |
| Df(2L)TW50     | 36E4;38A7      | no effect   |
| Df(2L)M36F-S6  | 36E6-F1;36F7-9 | no effect   |
| Df(2L)Exel6041 | 36F6;37A2      | no effect   |
| Df(2L)Exel7071 | 37A1;37A4      | no effect   |
| Df(2L)Exel7072 | 37A2;37B6      | no effect   |
| Df(2L)BSC341   | 37B11;37D3     | no effect   |
| Df(2L)hk-UC1   | 37B2;37B13     | no effect   |
| Df(2L)Exel6042 | 37B8;37C5      | no effect   |
| Df(2L)ED1226   | 37B9;37E3      | no effect   |
| Df(2L)Exel8040 | 37C1;37C5      | no effect   |
| Df(2L)Exel6043 | 37C5;37D7      | no effect   |
| Df(2L)ED1231   | 37C5;37E3      | no effect   |
| Df(2L)ED1272   | 37C5;38A2      | suppression |
| Df(2L)Exel8041 | 37D7;37F2      | no effect   |
| Df(2L)ED1303   | 37E5;38C6      | suppression |
| Df(2L)ED1317   | 38D1;38F5      | no effect   |
| Df(2L)Exel7080 | 38F3;39A2      | enhancement |
| Df(2L)DS6      | 38F5;39E7-F1   | no effect   |
| Df(2L)Exel6047 | 39A2;39B4      | no effect   |
| Df(2L)ED1473   | 39B4;40A5      | no effect   |
| Df(2L)BSC151   | 40A5;40E5      | no effect   |