Table S1. Organization of longitudinally projecting axons is affected by mutations in *Abl*, *trio*, *fra*, *ena* and the *Netrin* genes

Genotype	% Hemisegments with fascicle breaks* (*n*=total hemisegments scored)			% Hemisegments with fascicle fusions† (*n*=total hemisegments scored)		
	Mild (1-2)	Severe/complete (3)	Total (*n*)	Mild (1-2)	Severe/all (3)	Total (*n*)
Wild type	0.9	0	0.9 (220)	1.4	0	1.4 (220)
fra^4/fra^4	19.3	0	19.3 (176)	12.5	5.1	17.6 (176)
$fra^4/Df(2R)vg135$	5.6	0	5.6 (198)	6.1	1.5	7.6 (198)
Df(1)NP5/Y	12.7	0.4	13.2 (228)	15.4	4.4	19.7 (228)
Abl^4/Abl^1	15.7	0	15.7 (198)	6.6	1.5	8.1 (198)
$fra^4/+;Abl^4/Abl^1$	8.6	0	8.6 (256)	2.3	0.4	2.7 (256)
$Df(3L)FpaI/trio^{IMP159.4}$	69.7	0	69.7 (208)	14.4	4.3	18.8 (208)
$fra^4/+;Df(3L)FpaI/trio^{IMP159.4}$	58.8	0.6	59.4 (170)	14.7	7.6	22.4 (170)
$fra^4/fra^4;Abl^4/+$	28.1	0.5	28.6 (196)	8.2	3.1	11.2 (196)
$fra^4/fra^4;Df(3L)FpaI/+$	28.6	0	28.6 (220)	16.4	8.6	25.0 (220)
$fra^4/fra^4;Abl^4/Abl^1$	63.1	3.1	66.3 (160)	32.5	48.8	81.3 (160)
$fra^4/fra^4;Df(3L)FpaI/trio^{M89}$	34.0	0	34.0 (212)	9.9	17.0	26.9 (212)
$Df(3L)FpaI,Abl^4/trio^{IMP159.4},Abl^1$	42.5	13.0	55.5 (200)	32.5	44.5	77.0 (200)
$fra^4,ena^{GC10}/Df(2R)vg135$	13.7	0	13.7 (124)	12.1	3.2	15.3 (124)
$Df(1)NP5/Y;ena^{23}$	3.2	0	3.2 (126)	5.6	2.4	7.9 (126)
$ena^{GC10}/+;$ $trio^{IMP159.4},Abl^1/Df(3L)FpaI,Abl^4$	22.0	1.8	23.9 (218)	11.0	67.9	78.9 (218)

Stage 17 embryos were stained with mAb 1D4 and dissected.

*Fascicle breaks were scored if one or more longitudinally projecting fascicles within the longitudinal connective were discontinuous between hemisegments.

†Fascicle 'fusions' were scored when two or three fascicles appeared to fasciculate with each other within a segment or the longitudinal connective posterior to a segment. In more severe cases, distinct fascicles could not even be distinguished, although the width of the resulting bundle or intensity of staining suggested that most axons were present, but simply had collapsed into one larger longitudinal bundle (see Fig. S1 in the supplementary material).