

	Isogenic vs non-isogenic pairs with difference (20 total) (% of total)	GD pairs (10 total)	Up in GD isogenic
			Down in GD isogenic
		KK pairs (10 total)	Up in KK isogenic
			Down in KK isogenic
Fecundity	8 (40%)	4	2
			2
		4	2
			2
Survival upon oral infection	10 (50%)	5	1
			4
		5	1
			4
Midgut mitosis in baseline conditions	5 (25%)	2	1
			1
		3	0
			3
Midgut mitosis upon oral infection	5 (25%)	4	1
			3
		1	0
			1
Defecation rate upon oral infection	4 (20%)	2	0
			2
		2	1
			1
Fecal pH upon oral infection	4 (20%)	2	2
			0
		2	0
			2
Terminal branching in normoxia	2 (10%)	0	0
			0
		2	0
			2
Terminal branching in hypoxia	2 (10%)	0	0
			0
		2	0
			2

**Table S2:** Isogenic and non-isogenic GD and KK transgenic *UAS-RNAi* lines present variable differences in various phenotypic traits in the absence of Gal4. The last column compares the isogenic and non-isogenic strains with regards to the direction of the phenotype (up: increased, and down: decreased in the isogenic when compared to the non-isogenic).