

Table S1. Zfrp8 genetic interactions

Pathway	Control genotype	Tested genotype	Monitored phenotype	Result	Lymph gland size
Ras	UAS-Ras1 ^{v12} /+; hsp70-GAL4/+	Df(2R)SM206/UAS-Ras1 ^{v12} ; hsp70-GAL4/+	Lethality, melanotic phenotype	-	-
	UAS-Ras1 ^{v12} /+; hsp70-GAL4/+	Zfrp8 ^{M-1-1} /UAS-Ras1 ^{v12} ; hsp70-GAL4/+	Lethality, melanotic phenotype	-	-
	UAS-Ras1 ^{v12} /+; arm-GAL4/+	Df(2R)SM1183/UAS-Ras1 ^{v12} ; arm-GAL4/+	Lethality	-	-
	Df(2R)SM206/+	Df(2R)SM206/UAS-Ras1.v12; hsp70-GAL4/+	Lymph gland size increase	-	2.1 (0.2)
Toll	Toll ^{10B}	Df(2R)SM206/+; Toll ^{10B}	Melanotic masses, lymph gland overgrowth	-	Same as Toll ^{10B}
	Toll ^{10B}	Zfrp ^{M-1-1} /+; Toll ^{10B}	Melanotic masses, lymph gland overgrowth	-	Same as Toll ^{10B}
	Toll ^β	Df(2R)SM206/+; Toll ^β	Melanotic masses, lymph gland overgrowth	-	Same as Toll ^β
	Df(2R)SM206/+	Df(2R)SM206/cactus ^{Δ2}	Lymph gland size increase	-	2.5 (0.7)
JAK/STAT	Df(2R)SM206/+	Df(2R)SM206/cactus ¹	Lymph gland size increase	-	-
	Hop ^{Tum}	Df(2R)SM206/+; Hop ^{Tum}	Melanotic masses	-	Same as Hop ^{Tum}
	Hop ^{Tum}	Zfrp8 ^{M-1-1} /+; Hop ^{Tum}	Melanotic masses	-	Same as Hop ^{Tum}
	Hop ^{Tum}	Df(2R)SM206/+; Hop ^{Tum}	Lymph gland phenotype	-	Same as Hop ^{Tum}
GATA	Df(2R)SM206/+	Df(2R)SM206/+; srp ³ /+	Lymph gland size increase	-	2.0 (0.4)
	Df(2R)SM206/+	Df(2R)SM206/+; srp ⁰¹⁵⁴⁹ /+	Lymph gland size increase	-	2.2 (0.5)
	Df(2R)SM206/+	Df(2R)SM206/+; pnr ^{MD237} /+	Lymph gland size increase	Su	1.2 (0.3)
	Df(2R)SM206/+	Df(2R)SM206/+; pnr ^{VX6} /+	Lymph gland size increase	Su	0.9 (0.3)
	Df(2R)SM206	Df(2R)SM206; pnr ^{MD237} /+	Lymph gland over-growth	Su	3.3 (1.6)
Notch	Df(2R)SM206/+	Df(2R)SM206/+; Ser ¹ /+	Lymph gland size increase	-	2.1 (0.6)
Other genes causing blood-related phenotypes	Df(2R)SM206/+	Df(2R)SM206/+; Su(var)205 ⁰⁴ /+	Lymph gland size increase	-	2.0 (0.3)
	Df(2R)SM206/+	Df(2R)SM206/dom ^{k08108}	Lymph gland size increase	-	2.2 (0.4)
	Df(2R)SM206/+	Df(2R)SM206/ytr ^{k13108}	Lymph gland size increase	-	2.3 (0.6)
	l(3)mbrn/+	Df(2R)SM206/+; l(3)mbrn/+	Melanotic masses	-	Same as l(3)mbrn/+
	Df(2R)SM206/+	Df(2R)SM206/+; l(3)mbrn/+	Lymph gland size increase	-	Same as l(3)mbrn/+
	Df(2R)SM206/+	skpA ^{G0389} /+; Df(2R)SM206/+	Lymph gland size increase	-	2.0 (0.7)
	Df(2R)SM206/+	PrSet7 ²⁰ /+; Df(2R)SM206/+	Lymph gland size increase	-	1.8 (0.1)
	Df(2R)SM206	Bc ¹ /Df(2R)SM206	Lymph gland size increase	-	2.1 (0.7)
	Bc ¹ /+	Bc ¹ /Df(2R)SM206	'Black' crystal cells phenotype	-	-
	Cell cycle	Df(2R)SM206/+	Df(2R)SM206/+; cdc27 ^{L7123} /+	Lymph gland size increase	E
Df(2R)SM206/+		Df(2R)SM206/cdc2 ^{E1-23}	Lymph gland size increase	-	2.3 (0.8)
Df(2R)SM206/+		Df(2R)SM206/cycB ^{KG08886}	Lymph gland size increase	-	1.9 (0.5)
Df(2R)SM206/+		Df(2R)SM206/+; polo ⁰¹⁶⁷³ /+	Lymph gland size increase	-	2.1 (0.5)
Df(2R)SM206/+		Df(2R)SM206/+; aur ¹ /+	Lymph gland size increase	-	2.2 (0.5)
Df(2R)SM206/+		Df(2R)SM206/cnn ^{HK2}	Lymph gland size increase	-	2.0 (0.5)
Df(2R)SM206/+		l(1)dd4 ⁴ /+; Df(2R)SM206/+	Lymph gland size increase	E	4.7 (1.3)
Programmed cell death		Df(2R)SM206/+	Df(2R)SM206/Ark ^{k11502}	Lymph gland size increase	-
	Df(2R)SM206/+	Df(2R)SM206/Ark ^{Df(2R)PB03-Delta15}	Lymph gland size increase	-	2.4 (0.5)
	Df(2R)SM206/+	Df(2R)SM206/dcp-1 ^{K05606}	Lymph gland size increase	-	2.1 (0.5)
	Df(2R)SM206/+	Df(2R)SM206/+; th ⁴ /+	Lymph gland size increase	-	2.1 (0.7)
	Df(2R)SM206/+	Df(2R)SM206/+; dronc ¹ /+	Lymph gland size increase	-	2.3 (0.7)
	Df(2R)SM206/+	Df(2R)SM206/+; dronc ⁵¹ /+	Lymph gland size increase	-	2.3 (0.4)
	Df(2R)SM206/+	Df(2R)SM206/+; dronc ⁵¹ / dronc ²	Lymph gland size increase	-	Same as dronc
	Df(2R)SM206/+	Df(2R)SM206/+; dronc ⁵¹ / dronc ²	Lethality, lymph gland increase	-	Same as dronc
	Zfrp8 ^{M-1-1} /Df(2R)SM206	Zfrp8 ^{M-1-1} /Df(2R)SM206; dronc ¹ /+	Lymph gland overgrowth	-	2.2 (0.7)
	GMR-grim/+	Df(2R)SM206/GMR-grim	Small eye	-	-
	GMR-grim/+	Zfrp8 ^{M-1-1} /GMR-grim	Small eye	-	-
	GMR-hid/+	Df(2R)SM206/GMR-hid	Small eye	-	-
	GMR-hid/+	Zfrp8 ^{M-1-1} /GMR-hid	Small eye	-	-
	GMR-rpr/+	Df(2R)SM206/+; GMR-rpr/+	Small eye	-	-
	GMR-rpr/+	Zfrp8 ^{M-1-1} /+; GMR-rpr/+	Small eye	-	-
GMR-rpr/+	ey-FLP; FRT G13 Zfrp8 ^{M-1-1} ; GMR-rpr/+	Small eye	-	-	
hs-rpr/+	Df(2R)SM206/+; hs-rpr/+	Temperature induced lethality	-	-	

Lymph gland size the area of 2D lymph gland images were measured (in pixels) and normalized to the area of wild-type lymph gland. The average lymph gland size for wild-type was 1 (s.d. 0.3) and for Df(2R)SM206/+ was 2.2 (s.d. 0.5).

-, no change in phenotype.

Su, phenotype suppression.

E, phenotype enhanced.