

Table S1. Quantitative analysis of the cyst phenotype

| Genotype | TC/LT diameter (μm) | Number of cysts per GB* | GB diameter (μm) |
|--|----------------------------------|-------------------------|-------------------------------|
| <i>ptp4E^{KG2328} ptp10D^{1/+}</i> | 2.8 \pm 0.1 (n=39) | 0 | 1.5 \pm 0.1 (n=24) |
| <i>ptp4E¹ ptp10D¹</i> | 8.4 \pm 0.5 (n=31) | 4.4 \pm 0.2 (n=31) | 3.8 \pm 0.1 (n=167) |
| <i>ptp4E¹ ptp10D^{EP1172}</i> | 4.1 \pm 0.3 (n=24) | 3.9 \pm 0.4 (n=23) | 3.2 \pm 0.1 (n=89) |
| <i>ptp4E^{KG2328} ptp10D¹</i> | 4.4 \pm 0.4 (n=36) | 4.9 \pm 0.3 (n=35) | 3.3 \pm 0.1 (n=173) |
| <i>ptp4E^{Df(1)ovo4} ptp10D^{Δ59}</i> | 12.2 \pm 0.5 (n=68) | 3.0 \pm 0.2 (n=60) | 3.2 \pm 0.1 (n=77) |
| <i>ptp4E¹ ptp10D^{EP1172}; Btl-GAL4</i> | 2.8 \pm 0.1 (n=35) | 0 | 1.5 \pm 0.1 (n=24) |
| <i>ptp4E¹ ptp10D¹; Btl-GAL4>UAS-4E-GFP</i> | 2.8 \pm 0.1 (n=39) | 0 | 1.4 \pm 0.1 (n=24) |
| <i>Btl-GAL4>λBtl</i> | 3.1 \pm 0.2 (n=20) | 0 | – |
| <i>ptp4E¹ ptp10D¹; Btl-GAL4>λBtl</i> | 11.5 \pm 0.7 (n=32) | 4.8 \pm 0.2 (n=31) | 4.0 \pm 0.1 (n=150) |
| <i>ptp4E¹ ptp10D¹; btl^{1187/+}</i> | 6.3 \pm 0.5 (n=30) | 3.6 \pm 0.4 (n=25) | 2.7 \pm 0.1 (n=89) |
| <i>Btl-GAL4>UAS-EGFR-Elp</i> | 3.0 \pm 0.2 (n=32) | 0.2 \pm 0.1 (n=32) | 1.8 \pm 0.1 (n=64) |
| <i>ptp4E¹ ptp10D¹; Btl-GAL4>UAS-EGFR-Elp</i> | 14.2 \pm 0.7 (n=31) | 6.0 \pm 0.3 (n=31) | 5.1 \pm 0.1 (n=185) |
| <i>Btl-GAL4>UAS-EGFR-wt</i> | 2.9 \pm 0.1 (n=36) | 0 | – |
| <i>ptp4E¹ ptp10D¹; Btl-GAL4>UAS-EGFR-wt</i> | 11.1 \pm 0.8 (n=20) | 5.4 \pm 0.3 (n=20) | 4.3 \pm 0.1 (n=109) |
| <i>ptp4E¹ ptp10D¹; Btl-GAL4>UAS-dsRNA-EGFR</i> | 4.1 \pm 0.3 (n=45) | 3.4 \pm 0.2 (n=42) | 3.0 \pm 0.1 (n=143) |
| <i>ptp4E¹ ptp10D¹; Btl-GAL4>UAS-EGFR-DN</i> | 4.1 \pm 0.3 (n=72) | 4.0 \pm 0.2 (n=58) | 2.9 \pm 0.1 (n=233) |
| <i>ptp4E¹ ptp10D¹; Btl-GAL4>UAS-phl (GOF)</i> | 12.2 \pm 0.4 (n=51) | 6.9 \pm 0.4 (n=32) | 3.7 \pm 0.1 (n=220) |
| <i>ptp4E¹ ptp10D¹; egfr(k05115)/+</i> | 5.1 \pm 0.5 (n=36) | 3.9 \pm 0.3 (n=36) | 2.7 \pm 0.1 (n=141) |

Tr4-7 were scored.

n is number of hemisegments scored.

*Number represents average number of cysts per full-length GB.