Supplemental Figures S1 to S4

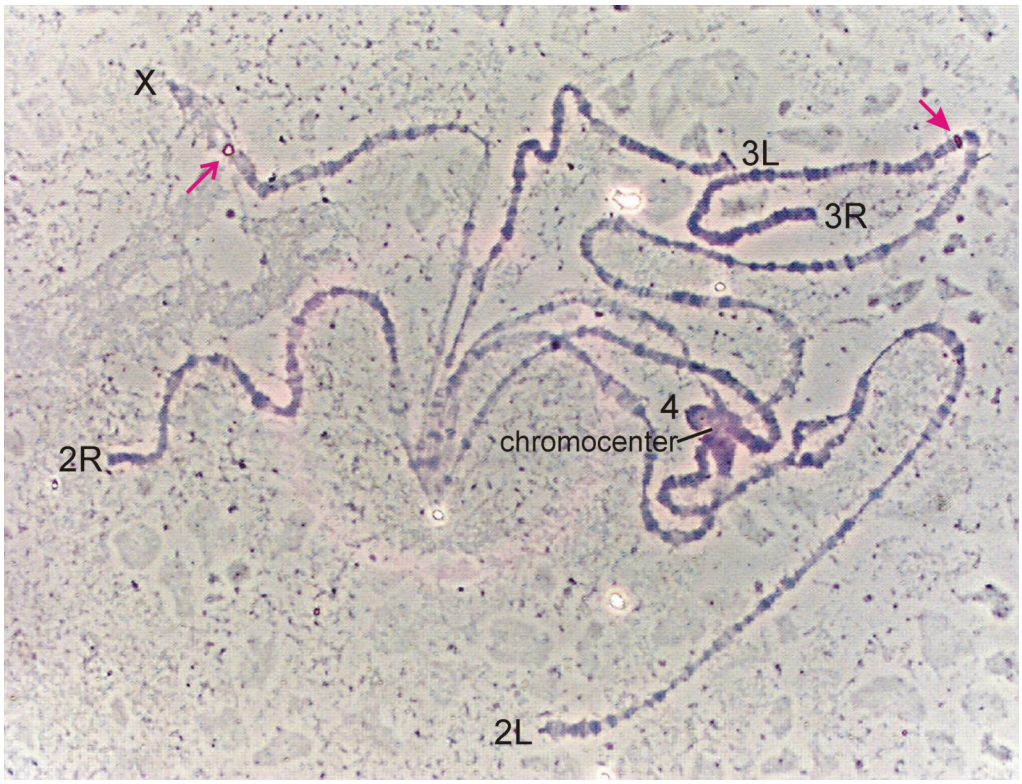

Figure S1

Whole chromosomal spread; details are shown in Figure 1D

Spread of salivary gland chromosomes derived from *PKD*^{26} mutant animals. The chromosome arms are marked; position of the chromocenter is indicated (see Figure 1D for details). The chromosomes were hybridized with a probe specific for the *white* gene. Accordingly, one signal is detected at the *white* locus at position 3C of the X-chromosome (open arrow). A second signal is detected at position 91A on the right arm of the third chromosome (3R) (arrow): this is the position of the PKD locus. The signal confirms the integration of *pW25* vector including the *white* gene within the *PKD* locus by homologous recombination.

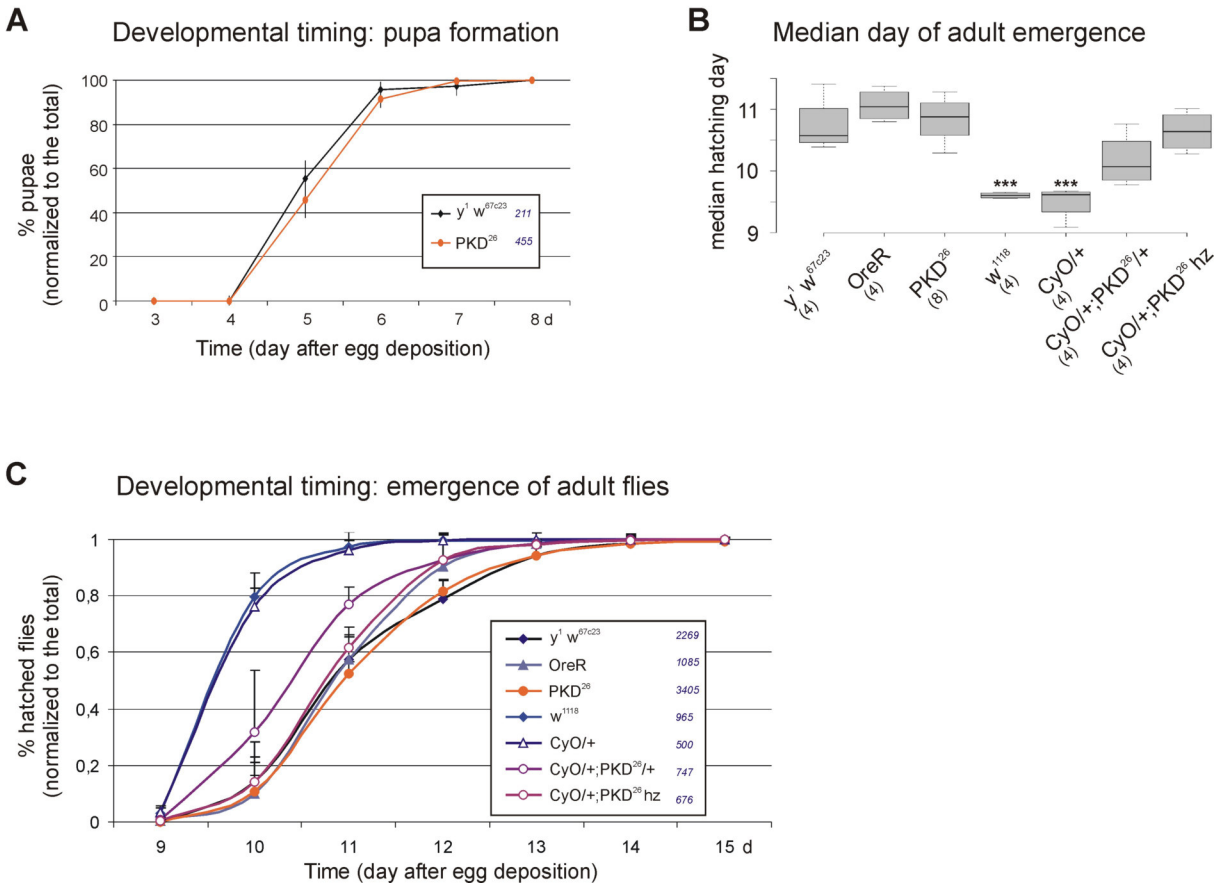

Figure S2

Developmental timing of *PKD*^{26} mutant animals compared to several control strains

(A) Fraction of animals that underwent pupariation over time is depicted in % of the total for *PKD*^{26} and *y*^{1} *w*^{67c23} as control. Animals were raised in parallel under identical conditions at 25°C. Eight experiments were sampled, standard deviation is indicated as bars; the total number of animals assayed is given in the legend. Note that there is little difference between the two genotypes.

(B) Median day of adult eclosure is presented: for most strains including *PKD*^{26} it is close to 11 days. The controls *w*^{1118} and heterozygous CyO / + flies emerge significantly earlier. Center lines show medians, 25th and 75th percentiles are shown by box limits; whiskers extend 1.5 times the interquartile range. Four to eight independent experiments were sampled in this analysis as given in parentheses (for total number, see inset in C). Statistical analysis was performed with a two-tailed ANOVA test relative to *y*^{1} *w*^{67c23} using Dunnet's approach with ***, $p<0.001$.

(C) Emergence of adult offspring was recorded over time from animals reared in batches of about thirty under identical conditions at 25°C. Several control strains as indicated in the legend were compared with *PKD*^{26} mutants. Four independent experiments were sampled,

standard deviation is indicated as bars; the total number of animals assayed is given in the legend.

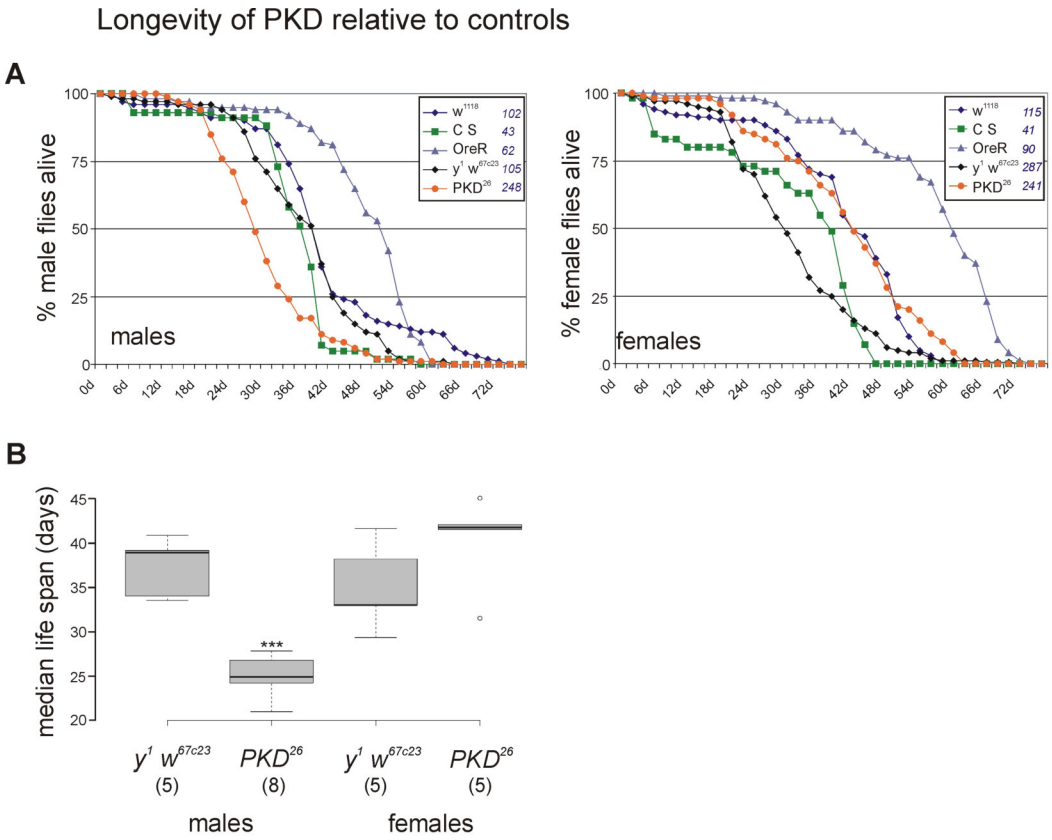

Figure S3 Life span of *PKD*^{26} mutant flies compared to several control strains

(A) Lifespan of several wild type control stains and *PKD*^{26} mutant males and females, respectively. OreR has the longest lifespan in both sexes, whereas the wild type Canton S strain has a life expectancy similar to *y*^{1} *w*^{67c23} and *w*^{1118} controls. Whereas *PKD*^{26} mutant males appear to be slightly shorter lived, the females are within control range. Number of flies tested for each genotype is given in the respective legend.

(B) BoxPlot representation of the median life span, determined in five to eight independent experiments with >20 flies each, as given in parentheses. Center lines show medians, 25th and 75th percentiles are depicted by box limits; whiskers extend 1.5 times the interquartile range, outliers are represented by dots. Statistical analysis was performed with a two-tailed ANOVA test relative to *y*^{1} *w*^{67c23} using Dunnet's approach with ***, $p<0.001$.

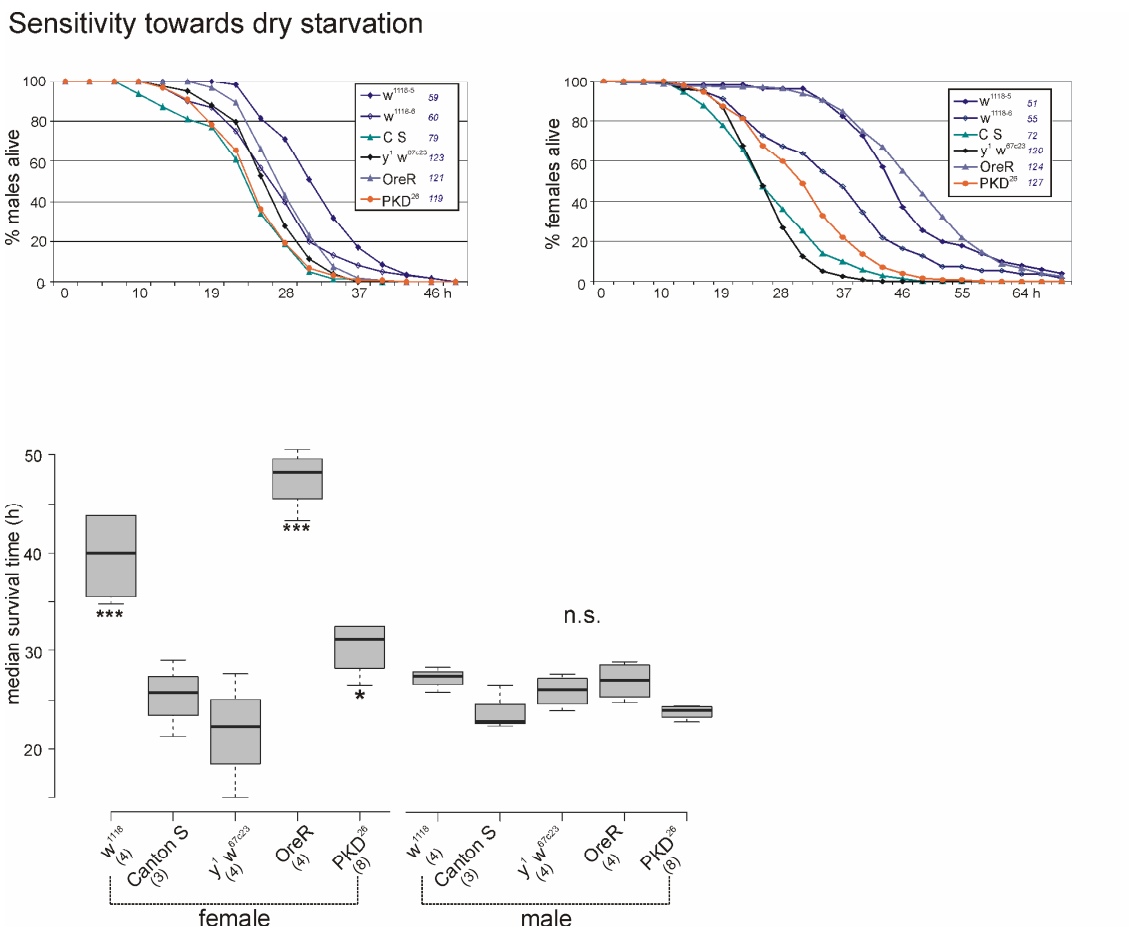

Figure S4 Sensitivity of the *PKD*^{26} mutant to dry starvation stress compared to several control strains

Survival of male and female flies with neither food nor water was monitored over time; dead flies were counted regularly. Several control strains were included in the comparison with the *PKD*^{26} mutants. Note the high resistance of *w*^{1118} flies (isogenic line BL5905) of either sex, and of OreR females. The second isogenic *w*^{1118} line (BL6326) was more sensitive, with males matching OreR and females *PKD*^{26}. Canton S (CS) wild type flies as well as flies of *y*^{1} *w*^{67c23} genotype were most sensitive towards dry starvation stress, as were *PKD*^{26} males. Overall, variations are large. Number of animals assayed is given in the legend for each genotype. BoxPlot representation of median survival time in hours of females and males, respectively, with the given genotype. Center lines show the medians; box limits indicate the 25th and 75th percentiles; whiskers extend 1.5 times the interquartile range. The number of experiments, comprising about 30 animals each, is indicated (n = 3-8). Statistical analysis was performed with a two-tailed ANOVA test relative to *y*^{1} *w*^{67c23} using Dunnet's approach with $p>0.05$, ns (not significant), $p<0.05$, * and $p<0.001$, ***. No significant differences were observed amongst males.