



Figure S3: Genetic map showing the recombinants used for the mapping of 27.89. The red lines represent the original mutagenized 27.89 *sub*¹³¹ chromosome. The blue lines represent a chromosome with several recessive visible markers. The slash marks represent the possible area of crossing over for each recombinant. 13 of these crossed over between *al* and *dp*, and 11 of the 13 were synthetic lethal when crossed back to *sub*¹. There were 10 crossovers in between *dp* and *b*, of which 7 were synthetic lethal and thus had retained 27.89. Two events crossed over between *b* and *pr* and neither of them retained 27.89. Likewise, of the 8 that crossed over between *cn* and *c*, none displayed synthetic lethality. Finally, of the 26 double crossovers that crossed over once between *dp* and *b* and then again between *cn* and *c*, 3 had retained 27.89 and showed synthetic lethality.