

**Deletions**

4696

|  
ACC TAT AGC TAC TAC ACG AAT GGC GTG GGA GTC ACT wt  
ACC TAT AGC TAC TAC ACG AA- GGC GTG GGA GTC ACT (2)  
ACC TAT AGC TAC TAC ACG A-T GGC GTG GGA GTC ACT  
ACC TAT AGC TAC TAC --G AAT GGC GTG GGA GTC ACT (2)  
ACC TAT AGC TAC TAC A-- AAT GGC GTG GGA GTC ACT (2)  
ACC TAT AGC TAC TAC ACG --T GGC GTG GGA GTC ACT  
ACC TAT AGC TAC TAC A-- -AT GGC GTG GGA GTC ACT (2)  
ACC TAT AGC TAC TAC A-- --T GGC GTG GGA GTC ACT  
ACC TAT AGC TAC TAC A-- --- GGC GTG GGA GTC ACT  
ACC TAT AGC TAC TAC --- --T GGC GTG GGA GTC ACT  
ACC TAT AGC TAC TAC ACG AA- --- --G GGA GTC ACT (2)  
ACC TAT AGC TAC T-- --- --T GGC GTG GGA GTC ACT  
ACC TAT AGC TAC TA- --- --- GGC GTG GGA GTC ACT  
ACC TAT AGC TAC TAC --- --- -GC GTG GGA GTC ACT  
ACC TAT AGC TAC T-- --- --- GGC GTG GGA GTC ACT (2)  
ACC TAT AGC TAC TAC --- --- --- GTG GGA GTC ACT (7) \*  
ACC TAT AGC TAC TAC A-- --- --- -TG GGA GTC ACT  
ACC TAT AGC TA- --- --- --T GGC GTG GGA GTC ACT  
ACC TAT AGC TAC TA- --- --- --C GTG GGA GTC ACT  
ACC TAT AGC TAC TAC AC- --- --- --- -GA GTC ACT  
ACC TAT AGC --- --- --- --- GTG GGA GTC ACT

**Insertions**

4696

|  
ACC TAT AGC TAC TAC ACG AAT GGC GTG GGA GTC ACT wt

|A  
ACC TAT AGC TAC TAC ACG AAT GGC GTG GGA GTC ACT (2)

|TA  
ACC TAT AGC TAC TAC ACG AAT GGC GTG GGA GTC ACT

|CGAA  
ACC TAT AGC TAC TAC ACG AAT GGC GTG GGA GTC ACT (2) †

|CAGTATGCC  
ACC TAT AGC TAC TAC ACG --T GGC GTG GGA GTC ACT

|GCTAT  
ACC TAT AGC TAC TAC A-- -AT GGC GTG GGA GTC ACT

|TACGA  
ACC TAT AGC TAC TAC A-- -AT GGC GTG GGA GTC ACT

|CT  
ACC TAT AGC TAC TAC --- -AT GGC GTG GGA GTC ACT

|T  
ACC TAT AGC TAC TAC --- -AT GGC GTG GGA GTC ACT

|ATAGCTACTAC  
ACC TAT AGC TAC TAC A-- --T GGC GTG GGA GTC ACT

|G  
ACC TAT AGC TAC TAC --- --T GGC GTG GGA GTC ACT (2)

|GTAGCTACTCCTAC  
ACC TAT AGC TAC TAC --- --T GGC GTG GGA GTC ACT

|GTGGTAGTACG  
ACC TAT AGC TAC TAC --- --T GGC GTG GGA GTC ACT

|GTAGCGTGGGAG  
ACC TAT AGC TAC TAC --- --T GGC GTG GGA GTC ACT

|GTCACT

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ACC TAT AGC TAC TAC ACG A-- --- GTG GGA GTC ACT
                |TATAGTTAC
ACC TAT AGC TAC TAC --- --- GGC GTG GGA GTC ACT
                |GTG
ACC TAT AGC TAC TAC --- --- GGC GTG GGA GTC ACT
                |GGTAGCG
ACC TAT AGC TAC TA- --- --T GGC GTG GGA GTC ACT
                |ATACC
ACC TAT AGC TAC --- --- -AT GGC GTG GGA GTC ACT
                | (39 bp)
ACC TAT AGC TAC TA- --- --- GGC GTG GGA GTC ACT
                |G
ACC TAT AGC TAC T-- --- --- GGC GTG GGA GTC ACT
                |CACTACTAC
ACC TAT AGC --- --- --- -AT GGC GTG GGA GTC ACT
                |GTATCACTGTGGGA
ACC TAT AGC TAC TA- --- --- --- GTG GGA GTC ACT
                | (31 bp)
ACC TAT AGC TAC TAC --- --- --- --G GGA GTC ACT
                |GTGG
ACC TAT AGC TAC TAC --- --- --- --G GGA GTC ACT
                | (720 bp) †
ACC TAT AGC --- --- --- --- -GC GTG GGA GTC ACT
                |AG
ACC --- --- --- --- --- --T GGC GTG GGA GTC ACT
                | (64 bp) **
ACC TAT AGC TAC TAC A-- --- -- (71 bp Δ) -- ---

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\*A 9-bp deletion found more commonly from *lig4* parents.

†The 4-base fill-in and blunt join of the overlap created by ZFN cleavage.

‡This insertion corresponds to *gish* mRNA (see Fig. 5 in main text).

\*\* This insertion matches sequences downstream of the *ry* gene.

FIGURE S2.—NHEJ mutations at from *lig4* flies. Other features as in Figure S1.