





Supplemental Figure 2. Real time qPCR of mRNA expression levels of glycosyltransferase proteins in the FKR mutant zebrafish.

Supplemental Figure 3

<b>Gene</b>	<b>Primer Sequence (5' to 3') (Forward)</b>	<b>Primer Sequence (5' to 3') (Reverse)</b>
atf4a	CCGGGAATCATGGCAGTGTA	GAGAAGCTGCGGTATTTGCG
atf4b	TGACCCTCTGCGGTCAATTC	ACGAATGATCTTCACCACTGTCT
atf6	TGTGCCCAAGGTTTCCATT	GAGATGGGTCTGTCCTGTGC
atf6b	GATCCTGCAGAGCGTACCTG	CATGCTGGGAGATAACGGCT
hspa5	CAAAGTTTATGAGGGCGAGCG	CCGGTTCCTGGTCGTTGGTAA
ern1	TGGTGGAGTCACAGTGGTCT	TTGGGATCCGGGAGAAATGC
eif2ak3	GGGCTCAGGCTGTTTGGTAT	TACGTGGTGAGGGATTTGCC
xbp1	GAAAACAGAGCGCTTCGACC	ACTTGCTGTTCCAACCTCCCC
fkrp	ATTATGTCTCGCGGGCTCAG	CAACCATGCTTCCACCAACG
fktn	ACAGGCCTGACATCATTCCG	ATCCTCCGTCTCACAGGGAA
dag1	CGATCTATTTCTCCGAGGTCTT	ACCACAAGAGTCCTGTCCCA
large	GCTGGACGCTCAGGAGTATG	TCATTGTTTTGCAGTCCGA
b3gnt1	ATCAGCCAGGCTTGTGAGCTT	AGAGGATTCGGTTC TTGCGG
ispd	GCTTAAGGAGCGTCATGGGA	TCCAAGGGCCTTTGCGTCTC
pomt1	CTAAAAGACCGCGCATGTGG	CATCAAACACTACAGCTTTGGGA
pomgnt1	TACTCTAGCCGCTCCAAGGT	ATGACATGACCTGTGGCCTG
pomt2	CCAAATGGGGATGGGAGCAA	AGTTAATGGGCCAGTGCCAG
pomgnt2	TGGTAGAATACGCGCGACTG	GCTCCACCTGTGGGAAAGG
pomk	CATGCAACCTGGTTAAGATGTCA	AAGTGCGGAGGAGGACATTG
$\beta$ -actin	CCCAGACATCAGGGAGTGAT	CACCGATCCAGACGGAGTAT

## Supplemental Figure 4

Antibody Name	Source	Species and Type	Dilution
fkp (zebrafish)	Kunkel Lab (Kawahara et al., HMG, 2010)	rabbit polyclonal	1:500
FKRP E4 (human)	Santa Cruz Biotechnology	mouse monoclonal	1:1000
glycosylated $\alpha$ -dag1 (IH6C4)	Developmental Studies Hybridoma Bank	mouse monoclonal	1:1000
$\beta$ -dag1 (7D11)	Developmental Studies Hybridoma Bank	mouse monoclonal	1:1000
laminin (L9393)	Sigma-Aldrich	rabbit polyclonal	1:2500
$\beta$ -actin (AC-15)	Sigma-Aldrich	mouse monoclonal	1:5000
anti-mouse IgG HRP-conjugated	Cell Signaling Technology	secondary antibody	1:2500
anti-rabbit IgG HRP-conjugated	Cell Signaling Technology	secondary antibody	1:2500
goat anti-mouse IgM HRP-conjugated	Santa Cruz Biotechnology	secondary antibody	1:5000