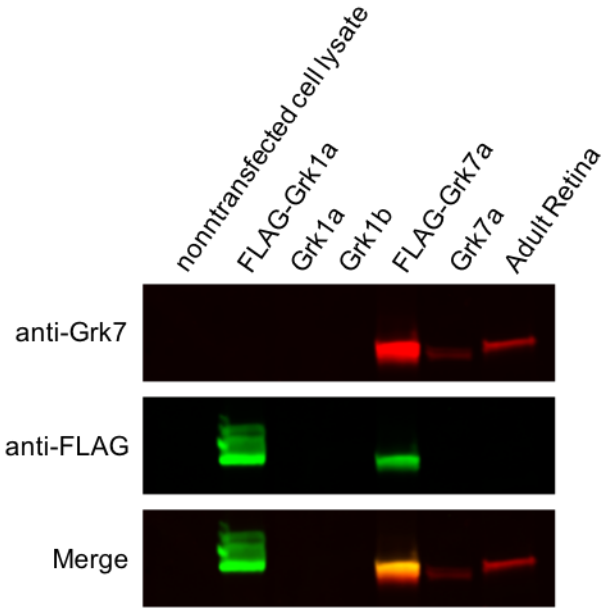
A


nonntransfected cell lysate
FLAG-Grk1a
Grk1a
Grk1b
FLAG-Grk7a
Grk7a
Adult Retina
anti-Grk7
anti-FLAG
Merge

B

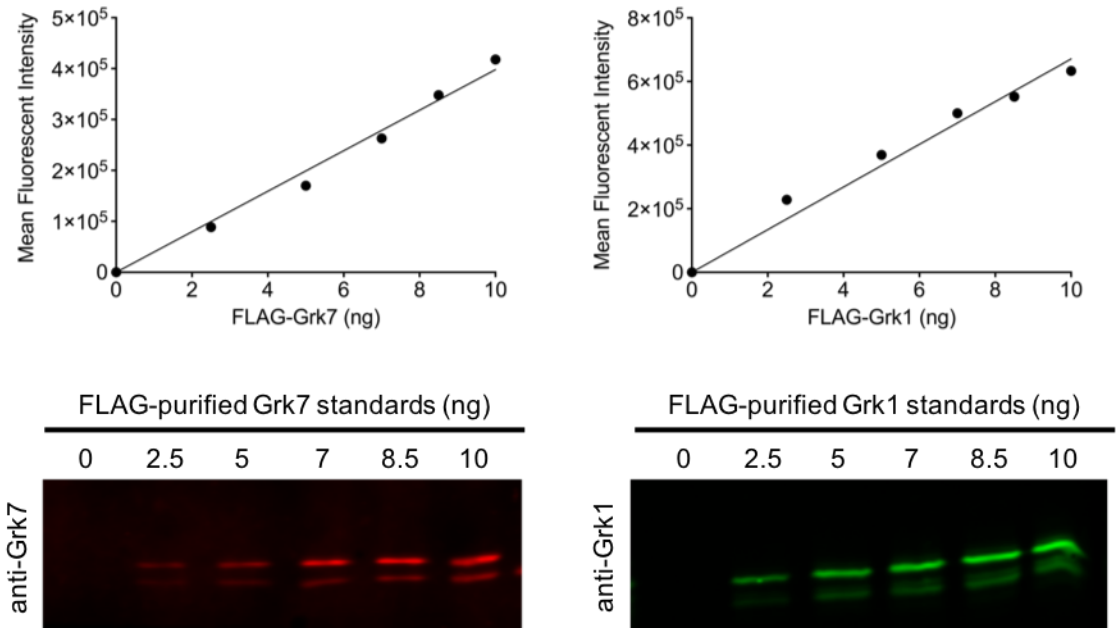

Mean Fluorescent Intensity
5×10^5
4×10^5
3×10^5
2×10^5
1×10^5
0
0 2 4 6 8 10
FLAG-Grk7 (ng)
Mean Fluorescent Intensity
8×10^5
6×10^5
4×10^5
2×10^5
0
0 2 4 6 8 10
FLAG-Grk1 (ng)
FLAG-purified Grk7 standards (ng)
0 2.5 5 7 8.5 10
anti-Grk7
FLAG-purified Grk1 standards (ng)
0 2.5 5 7 8.5 10
anti-Grk1

Figure S1. Specificity of a novel anti-Grk7 antibody and standard curves for quantifying Grk7/Grk1 ratios. A, Immunodetection of 25 μg each of recombinant cell lysates prepared from HEK293 cells as described in the Methods. For immunodetection, the immunoblot was incubated with anti-Grk7 (red) and anti-FLAG (green) antibodies at dilutions of 1:10,000 followed by incubation with secondary antibodies at a dilution of 1:15,000. B, Representative standard curves and accompanying immunoblots of FLAG-purified recombinant zebrafish Grk1b and Grk7a used for quantifying ratios of endogenous Grk7/Grk1. Standards were run on the same blots as samples each time to account for variabilities in immunoblotting and visualization.

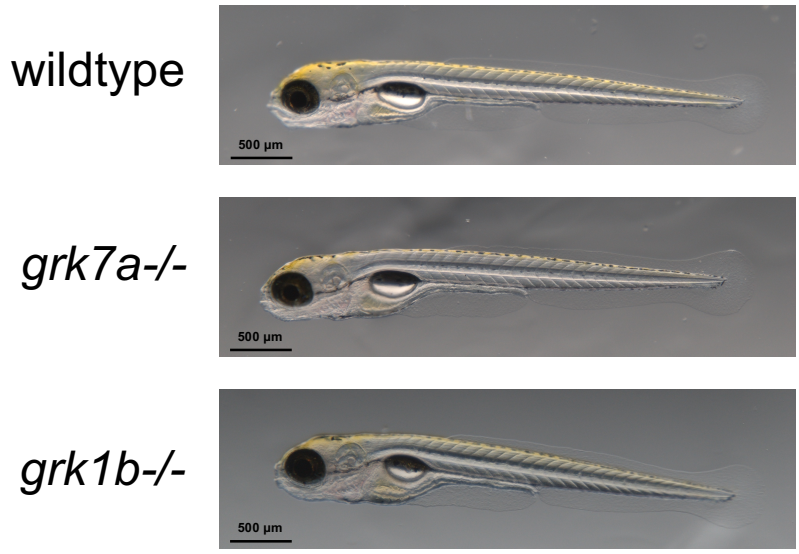


Figure S2. Morphology of whole zebrafish larvae at 5 dpf is qualitatively unchanged in both *grk1b-/-* and *grk7a-/-* larvae compared to wildtype. Larvae were anesthetized with 0.02% Tricaine and immobilized in 3% methylcellulose. Brightfield images of larvae were captured with a Zeiss Axio Zoom.V16 stereo zoom microscope with accompanying camera and software (Zeiss, Oberkochen, Germany).