THE INTERNATIONAL JOURNAL OF DEVELOPMENTAL BIOLOGY
www.intjdevbiol.com

SUPPLEMENTARY MATERIAL

corresponding to:

Developmental delay during eye morphogenesis underlies optic cup and neurogenesis defects in *mab21l2*^{u517} zebrafish mutants

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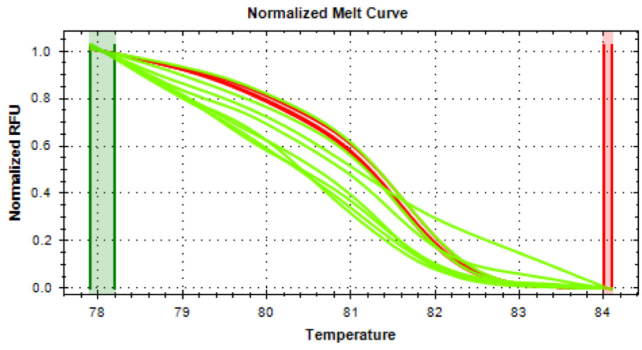
Full Text for this paper is available at: https://doi.org/10.1387/ijdb.200173lv

A



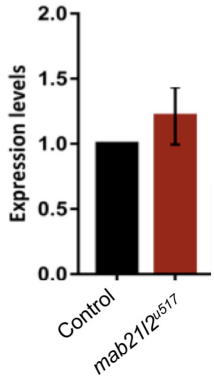
B

AGAGGTGTGTAAGGTGGTGTCGGATGTGCTGAAGGAGGTGGAGGTCCAAG WT

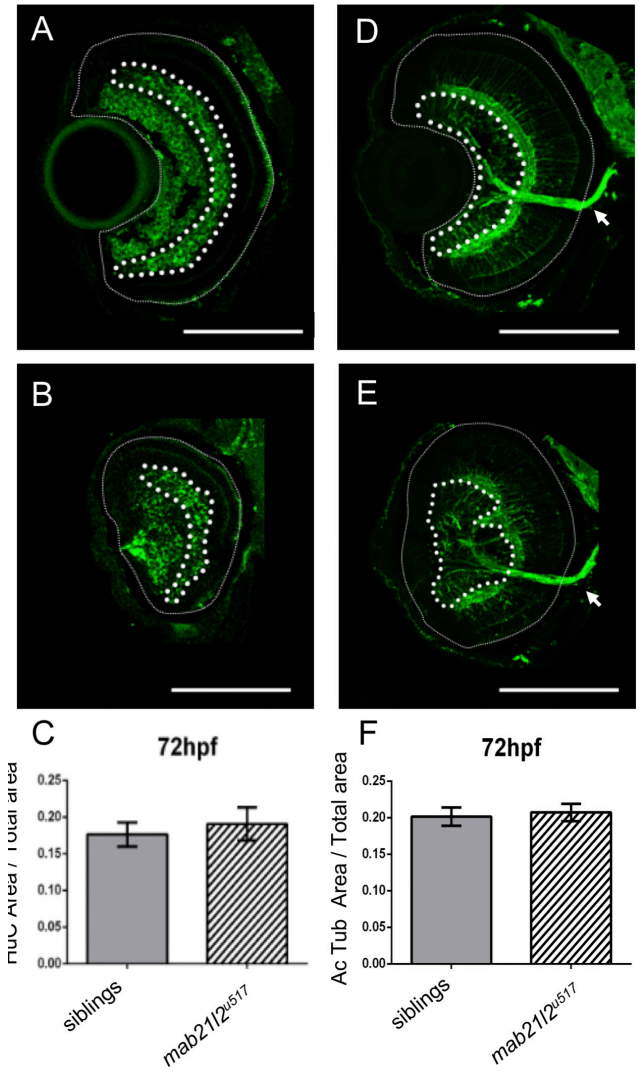
AGAGGTGTGTAAGGTGGTGTCGGATGTGCTGA - - - - GGTGGAGGTCCAAG Δ4

mab21l2 mutant: Lys43Argfs*13 (c.128_131delAGGA)

C



Supplementary Figure S1. CRISPR/Cas9 induced mutagenesis of zebrafish *mab21l2* locus. (a) *HRMA shows that co-injection of a gRNA targeting the single exon of* mab21l2 *and* cas9 *mRNA results in somatic mutagenesis in zebrafish embryos at 24 hours post fertilization (F0 generation). Normalized melt curves show differences between uninjected wildtype (red) and injected embryos (green). Green and red boxes at left and right of the graph, respectively, indicate stable pre- and post-melt fluorescence intensity used for normalisation of the data. RFU, relative fluorescence units.* **(b)** *The CRISPR/Cas9 induced deletion that was used for characterizing the mutant phenotype. Wildtype (wt) sequence is shown in the top row. gRNA target sequence is highlighted in orange; -, single nucleotide deletion; Δ, number of deleted base-pairs.* **(C)** *Quantitative real time PCR for gauging the* mab21l2 *mutant transcript levels in 14-somite stages homozygous embryos. Mutants do not display signs of nonsense mediated decay.*



Supplementary Figure S2. Cell differentiation does take place in *mab21l2*^{u517}. *Images obtained with a confocal microscope of a 72 hpf.* **(A, C)** *Immunodetection of HuC/D to identify retinal ganglion cells and amacrine neurons in siblings (A; n=7) and* mab21l2^{u517} *(B; n=7) (labelled in green). (C) The area occupied by amacrine cells over the total area of each section does not change in mutants.* **(D-F)** *Immunodetection of Acetylated Tubulin labels neurons and retinal ganglion cells exiting axons (arrows in D and E) within the sibling (n=7) and mutant (n=13) retina. (F) The area occupied by retinal ganglion cells over the total area of each section does not change in mutants. The positive areas from the immunostainings that were used for the graphs in C and F were depicted with dotted line in sibling and mutant retinae in A, B, D and E. (95% confidence limits; Student's t-test; HuC/D p=0.3357; Acetylated tubulin p=0.9048). Scale bar = 100 μm.*