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Neuropeptide Y receptor Y8b (*npy8br*) regulates feeding and digestion in Japanese medaka (*Oryzias latipes*) larvae: evidence from gene knockout

Key words: *npy8br*; Japanese medaka; knockout; feeding; digestion

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Research article

In this study, we used the CRISPR/Cas9 technology to knockout the *npy8br* gene in Japanese medaka to further explore the physiological function of the *npy8br* gene.

- **Generating *npy8br* $^{-/-}$ mutants by CRISPR/Cas9 technology**
- **Functional exploration of *npy8br***

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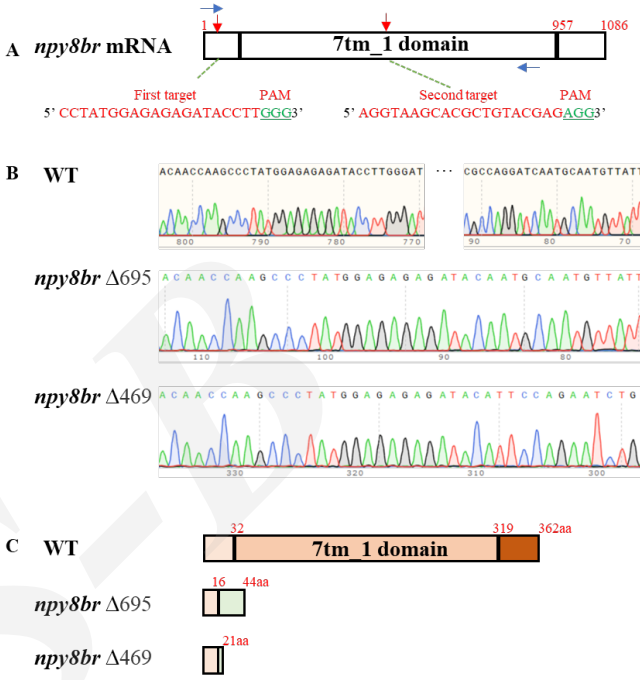
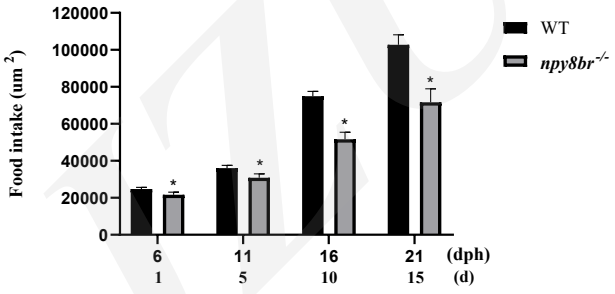
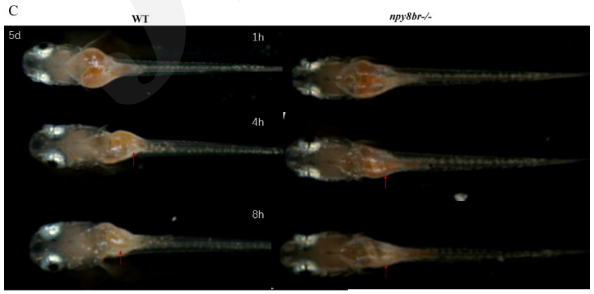
Results

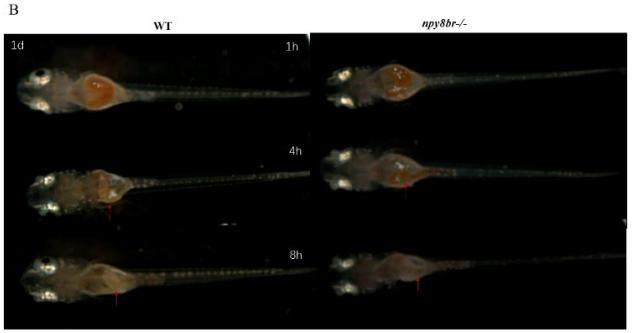
- Generation of the *npy8br* mutants medaka

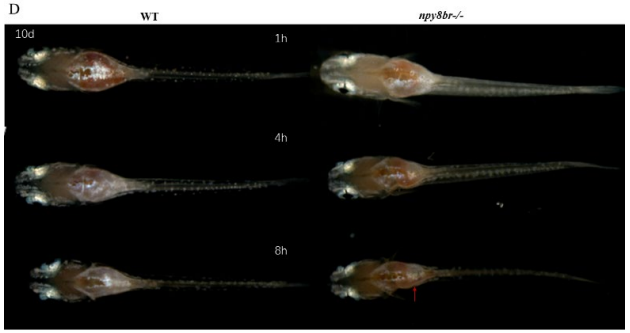
- Effects of *npy8br* knockout on feed intake and digestion of medaka larvae









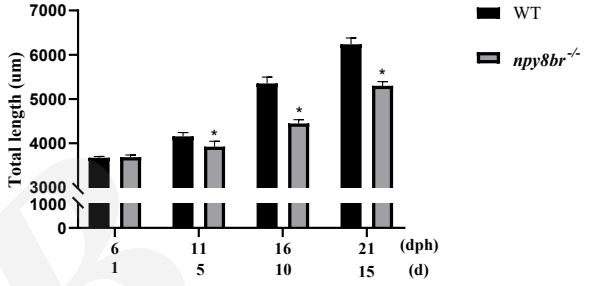


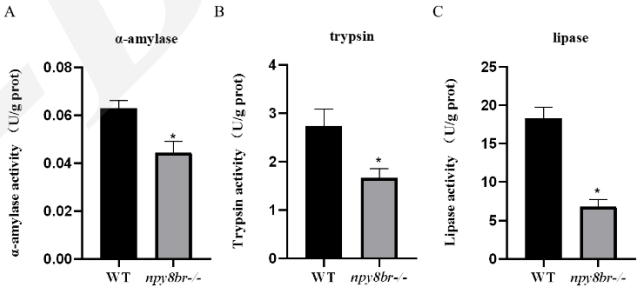
Results

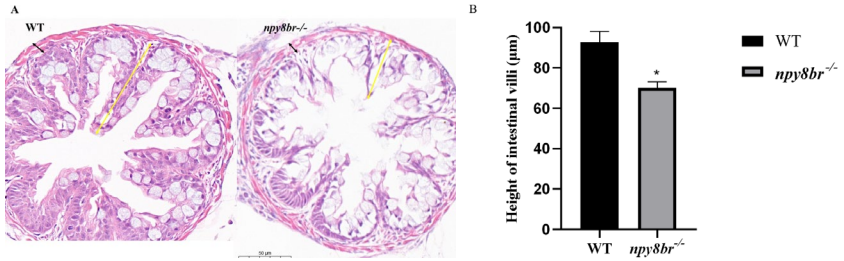
- **Effects of *npy8br* knockout on the growth of medaka larvae**

- **Effects of *npy8br* knockout on digestive enzyme activity of medaka larvae**

- **Effects of *npy8br* knockout on digestive enzyme activity of medaka larvae**







Conclousion: This is the first *npy8br* gene knockout model established in fish and the first demonstration that *npy8br* plays an important role in digestion.