

## **Supplementary Information for**

# **Loss of IDH2 Accelerates Age-related Hearing Loss in Male Mice**

**Karessa White,<sup>1</sup> Mi-Jung Kim,<sup>1</sup> Chul Han,<sup>1</sup> Hyo-Jin Park,<sup>1</sup> Dalian Ding,<sup>2</sup> Kevin Boyd,<sup>1</sup> Logan Walker,<sup>1</sup> Paul Linser,<sup>3</sup> Zaimary Meneses,<sup>1</sup> Cole Slade,<sup>1</sup> Jonathan Hirst,<sup>1</sup> Katherine Santostefano,<sup>4</sup> Naohiro Terada,<sup>4</sup> Takuya Miyakawa,<sup>5</sup> Masaru Tanokura,<sup>4</sup> Richard Salvi,<sup>2</sup> Shinichi Someya<sup>1</sup>**

### **Affiliations:**

<sup>1</sup>Department of Aging and Geriatric Research, University of Florida, Gainesville, Florida 32610.

<sup>2</sup>Center for Hearing and Deafness, State University of New York at Buffalo, New York 14214.

<sup>3</sup>Whitney Laboratory, University of Florida, St Augustine, Florida 32080. <sup>4</sup>Department of Pathology, Immunology and Laboratory Medicine, University of Florida, Gainesville, FL 32610.

<sup>5</sup>Department of Applied Biological Chemistry, University of Tokyo, Yayoi, Tokyo, 113.

Correspondence and requests for materials should be addressed to S.S. (someya@ufl.edu)

## Consents

**Supplementary Figure 1.** Full-length gel image.

**Supplementary Figure 2:** Body weight.

**Supplementary Figure 3.** Full-length blot image.

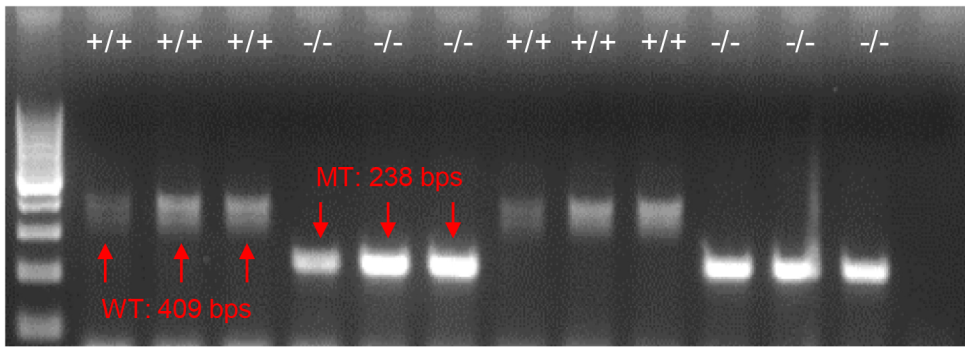
**Supplementary Figure 4:** Assessment of stria vascularis thickness in the cochlea of young and old WT and *Idh2*<sup>-/-</sup> mice.

**Supplementary Figure 5.** Full-length blot image.

**Supplementary Figure 6.** Full-length blot image.

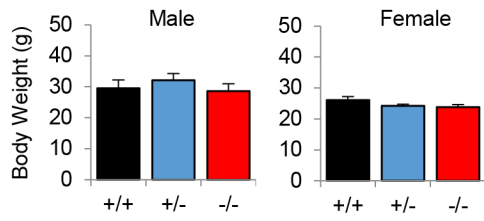
**Supplementary Figure 7.** Full-length blot image.

**Supplementary Figure 8.** Full-length blot image.



**Supplementary Figure 1.** Full-length gel image.

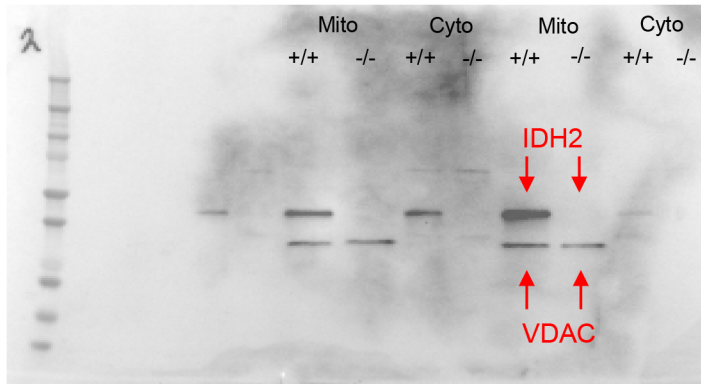
The full-length gel image of Figure 1a. Arrow indicate the cropped image region of Figure 1a.



**Supplementary Figure 2. Body weight.**

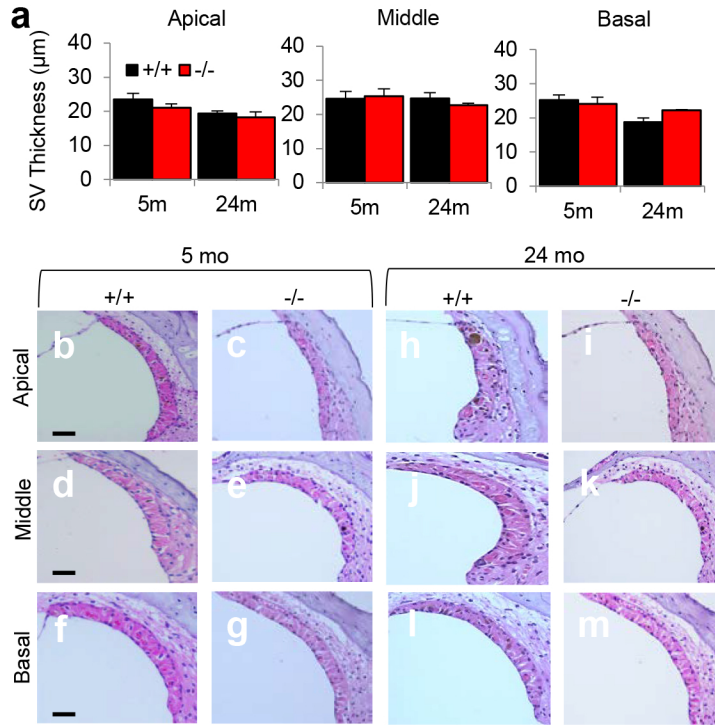
Body weight was measured in young WT and *Idh2*<sup>-/-</sup> male (left) and female (right) mice at 5 months of age (n = 10). Data are shown as means ± SEM.





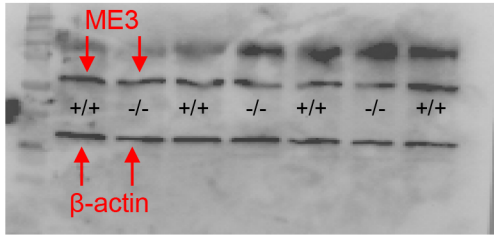
**Supplementary Figure 3.** Full-length blot image.

The full-length blot image of Figure 1c. Arrows indicate the cropped image regions of Figure 1c.



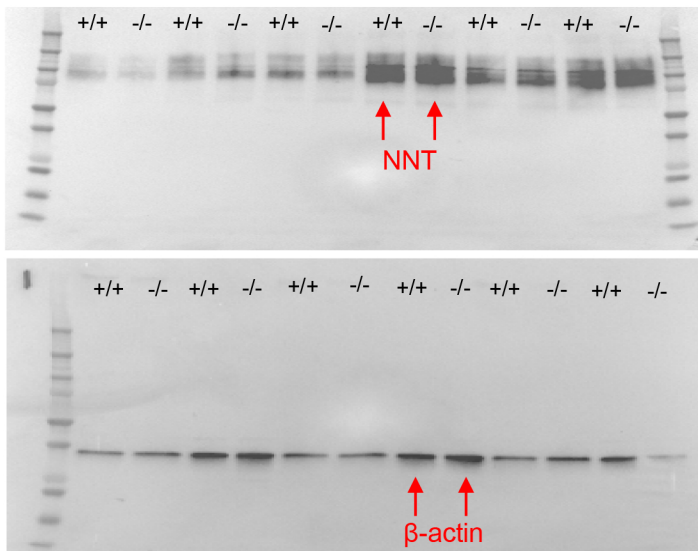
**Supplementary Figure 4.** Assessment of stria vascularis thickness in the cochlea of young and old WT and *Idh2*<sup>-/-</sup> mice.

(a) The thickness of SVs was measured in the apical, middle and basal regions in the cochlea of WT and *Idh2*<sup>-/-</sup> mice at 5 and 24 months of age (n = 4). (b-m) SV regions in the apical, middle and basal regions of cochlear tissues from WT and *Idh2*<sup>-/-</sup> male mice at 5 (b-g) and 24 (h-m) months of age (n = 4). Data are shown as means ±SEM. SV=stria vascularis. Scale bar = 20 μm.



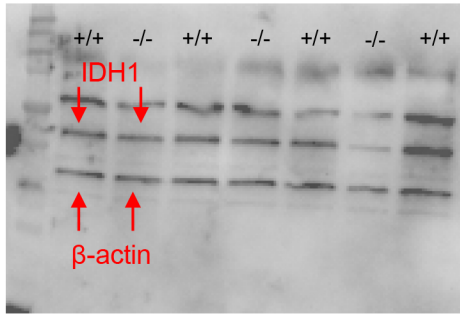
**Supplementary Figure 5.** Full-length blot image.

The full-length blot image of Figure 7a. Arrows indicate the cropped image regions of Figure 7a.



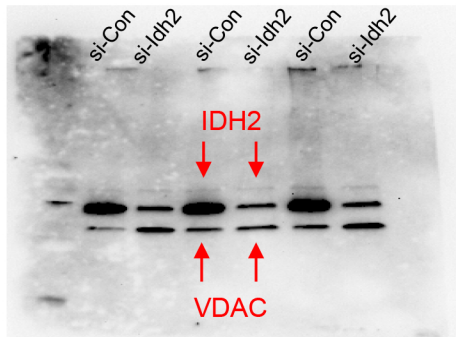
**Supplementary Figure 6. Full-length blot image.**

The full-length blot images of Figure 7c. Arrows indicate the cropped image regions of Figure 7c.



**Supplementary Figure 7.** Full-length blot image.

The full-length blot image of Figure 7e. Arrows indicate the cropped image regions of Figure 7e.



**Supplementary Figure 8.** Full-length blot image.

The full-length blot image of Figure 8a. Arrows indicate the cropped image regions of Figure 8a.