**Figure 8 – source data 2** - List of genes upregulated in supporting cells in response to transcription factor reprogramming at P15

|  |  |  |  |
| --- | --- | --- | --- |
| **Gene** | **Structural/Functional role** | **Expression** | **Reference** |
| *Cib2* | Binds to TMC1 and TMC2 for normal function of mechanotransduction channels | Hair cells | [(Giese et al., 2017)](https://paperpile.com/c/WgJNfa/Qcte) |
| *Hes6* | ATOH1 target gene which delineates sensory lineage in the inner ear. | Hair cells | [(Qian et al., 2006)](https://paperpile.com/c/WgJNfa/Xry4) |
| *Igfbp6* | Glycoprotein | Hair cells | [(Scheffer et al., 2015)](https://paperpile.com/c/WgJNfa/QqKK) |
| *Krt8* | Epithelial gene induced in response to epigenetic DNA methylation in sensory epithelia derived progenitors | Induced hair cells | [(Zhou and Hu, 2015)](https://paperpile.com/c/WgJNfa/3pr2) |
| *Mfng* | Co-expressed with *Atoh1* in hair cells | Hair cells | [(Basch et al., 2016)](https://paperpile.com/c/WgJNfa/MDyR) |
| *Mgst3* | Catalyzes oxidation of hydroxy-fatty acids. Role in lipid metabolism. | Hair cells | [(Scheffer et al., 2015)](https://paperpile.com/c/WgJNfa/QqKK) |
| *Otoa* | Links hair cells to acellular gels connecting them to the tectorial membrane | Transient- Hair cells | [(Zwaenepoel et al., 2002)](https://paperpile.com/c/WgJNfa/y7hS) |
| *Acbd7* | Protein involved in lipid binding and Fatty-Acyl-CoA biosynthesis pathway | Hair cells | [(Kolla et al., 2020; Scheffer et al., 2015)](https://paperpile.com/c/WgJNfa/sdoj+QqKK) |
| *Calb2* | Calcium binding protein which regulates calcium influx during sound transduction. | Hair cells and SGN | [(Liu et al., 2016)](https://paperpile.com/c/WgJNfa/QqQR) |
| *Calml4* | Calmodulin 4 which functions as a myosin light chain component. Expressed along with *Atoh1* | Hair cells | [(Scheffer et al., 2015; Yoon et al., 2011)](https://paperpile.com/c/WgJNfa/QqKK+l6aG) |
| *Ccer2* | Coiled-Coil Glutamate Rich Protein 2. Unknown significance. | Hair cells | [(Kolla et al., 2020)](https://paperpile.com/c/WgJNfa/sdoj) |
| *Agr3* | ATOH1 target gene. Plays a role in regulation of cilia | Hair cells | [(Yoon et al., 2011)](https://paperpile.com/c/WgJNfa/l6aG) |
| *Dlk2* | DLK2 (Delta Like Non-Canonical Notch Ligand 2) plays a role in the Notch signaling | Hair cells | [(Cai et al., 2015; Scheffer et al., 2015)](https://paperpile.com/c/WgJNfa/QqKK+67A9) |
| *Lmo1* | Transcription factor | Hair cells | [(Deng et al., 2006)](https://paperpile.com/c/WgJNfa/2FyL) |
| *Myl9* | Myosin light chain protein involved in hair cell shape changes | Hair cells | [(Oya et al., 2021)](https://paperpile.com/c/WgJNfa/92dO) |
| *Tmem255b* | Transmembrane protein upregulated with Notch inhibition | Hair cell | Angelika Doetzlhofer lab (Paul Campbell, thesis) |
| *Col2a1* | Pro collagen protein. Mutations in Col2a1 lead to auditory defects (Stickler syndrome) | Hair Cells | [(Khetarpal et al., 1994)](https://paperpile.com/c/WgJNfa/vDrE) |
| *Slc5a3* | Participates in osmoregulation, required to form synaptic terminals | Hair cells (vestibular) | [(Scheffer et al., 2015)](https://paperpile.com/c/WgJNfa/QqKK) |
| *Tubb2b* | Interacts with ATOH1. Tubulin component of microtubules. | Hair cells | [(Cai et al., 2015; Chessum et al., 2018)](https://paperpile.com/c/WgJNfa/jLMU+67A9) |
| *Fstl1* | BMP4 signaling antagonist. BMP signaling inhibition known to increase sensory patch and HC differentiation | Hair cells | [(Cai et al., 2015)](https://paperpile.com/c/WgJNfa/67A9) |
| *Itga6* | CD49F known to increase multipotency of cells through induction of OCT-4 and SOX-2 | Hair cells | [(Cai et al., 2015)](https://paperpile.com/c/WgJNfa/67A9) |
| *Fabp5* | Protein which plays a role in fatty acid uptake, transport, and metabolism | Hair cells | [(Cai et al., 2015; Chessum et al., 2018; Liu et al., 2018)](https://paperpile.com/c/WgJNfa/67A9+jLMU+8UfP) |
| *Gm266* | GTPase activity, GDP binding protein, involved in signal transduction | Hair cells | [(Cai et al., 2015; Chessum et al., 2018; Liu et al., 2018)](https://paperpile.com/c/WgJNfa/67A9+jLMU+8UfP) |
| *Miat* | Non protein coding transcript | Hair cells | [(Kolla et al., 2020; Liu et al., 2018)](https://paperpile.com/c/WgJNfa/sdoj+8UfP) |
| *Ccnd1* | Cyclin D1 expression in supporting cells correlates to its proliferative capacity | Early postnatal HC and proliferative SC | [(Laine et al., 2010)](https://paperpile.com/c/WgJNfa/wcGr) |
| *Mdk* | Neurotrophic factor, activates *Notch2* | SC (Vestibular),  Notch pathway | [(Chessum et al., 2018)](https://paperpile.com/c/WgJNfa/jLMU) |
| *Hes5* | Downregulated in postnatal cochlea and along with Notch is known to accelerate regeneration potential in neonates and vestibular system | SC, Notch pathway | [(Kubota et al., 2021)](https://paperpile.com/c/WgJNfa/DAqE) |
| *Uchl1* | Increases expression of beta-catenin and regulates wnt signaling | SC, Wnt signaling pathway | [(Chessum et al., 2018; Kolla et al., 2020)](https://paperpile.com/c/WgJNfa/jLMU+sdoj) |
| *Igfbp3* | Glycoprotein. Prosensory cell marker whose expression is regulated by *Jag1* during development. | SC (Inner phalangeal/ border, Deiters’ cells),  Notch pathway | [(Chrysostomou et al., 2020; Okano and Kelley, 2013)](https://paperpile.com/c/WgJNfa/w9HV+hea0) |

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