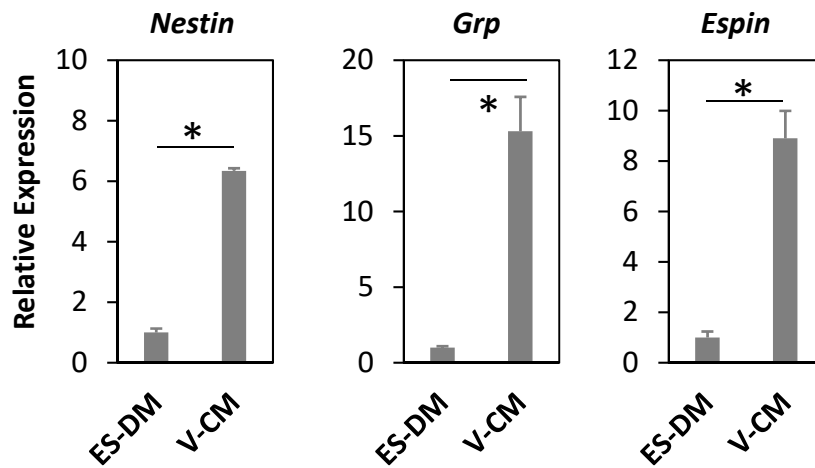


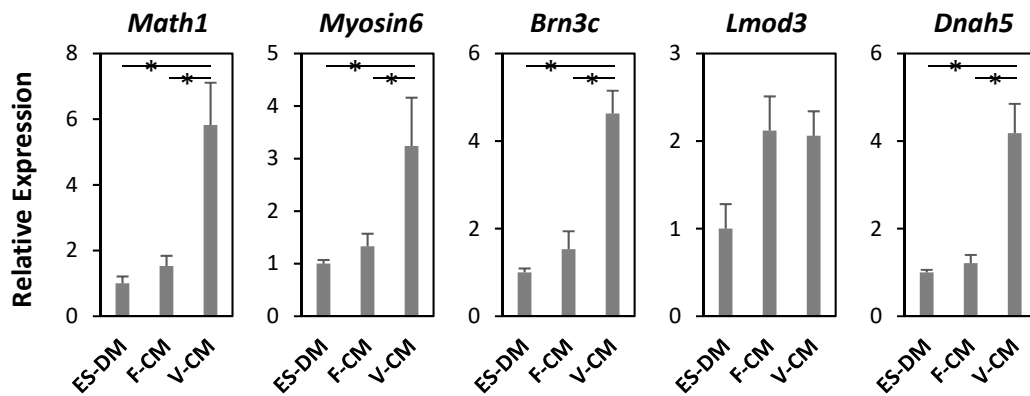
Supplementary Fig. S1.



Gene expression analysis of both immature and mature HC-related markers in *Math1-GFP* ES cells cultured in ES-DM or V-CM.

Gene expressions of *Nestin* (immature HC-related markers), *Grp* and *Espin* (mature HC-related marker) by *Math1-GFP* ES cells cultured in ES-DM or V-CM for 2 weeks were examined using real-time RT-PCR. Data were normalized to *RPLP0* expression, as an endogenous control.

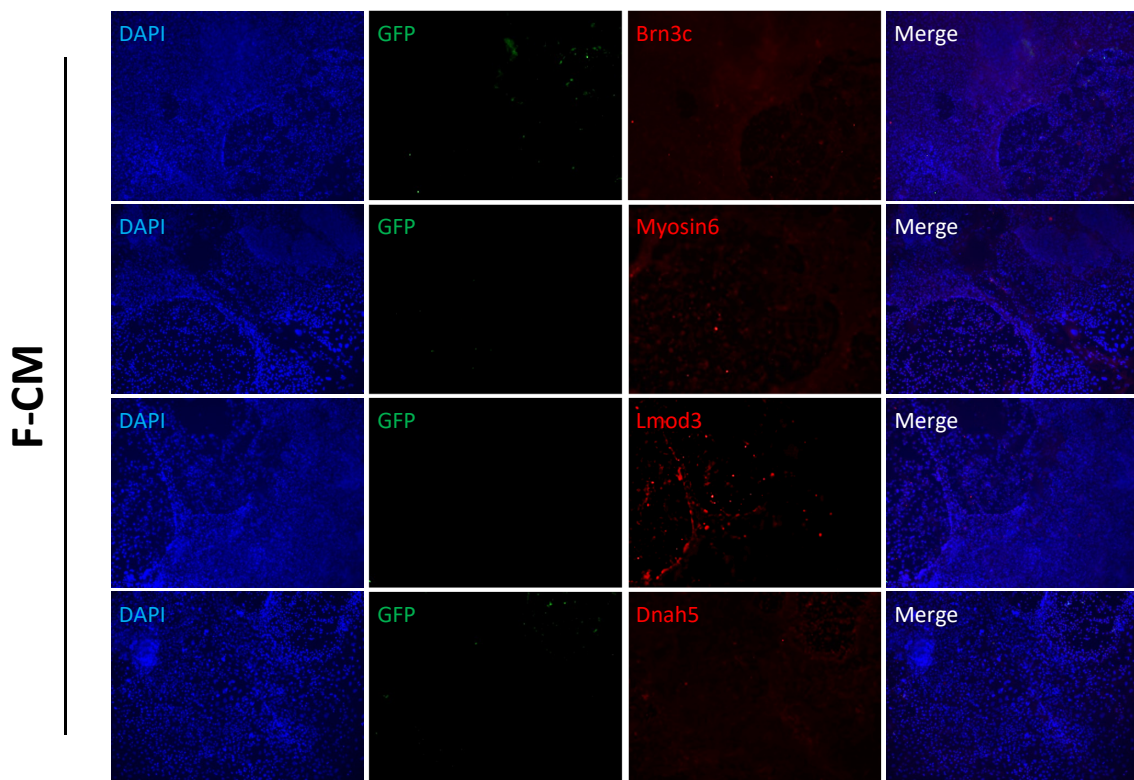
Supplementary Fig. S2.



Gene expression analysis of hair cell-related markers in *Math1-GFP* ES cells cultured in ES-DM, F-CM or V-CM.

Gene expressions of *Math1*, *Myosin6*, and *Brn3c*, (HC-related markers), *Lmod3* (cochlear HC-related marker), and *Dnah5* (vestibular HC-related marker) by *Math1-GFP* ES cells cultured in ES-DM or V-CM for 2 weeks were examined using real-time RT-PCR. Data were normalized to *RPLP0* expression, as an endogenous control.

Supplementary Fig. S3.



Immunocytochemical analysis of hair cell-related markers expressed by *Math1-GFP* ES cells cultured in F-CM.

The expressions of HC-related markers in *Math1-GFP* ES cells cultured in F-CM for 2 weeks were examined with an immunocytochemical method. Scale bar = 100 μ m

Supplementary Table S1

Table S1. List of gene-specific primers using in real time RT-PCR analysis

Genes	Primer sequences	Product size (bp)	GeneBank Accession No.
<i>Math1</i>	Forward: 5'- AAATGTCGTATCTCTGCCTCTGGTC Reverse: 5'- AAGTACCCAATGCGGGTCTCAA	144	NM_007500.4
<i>Myosin6</i>	Forward: 5'- ATGGGCTGTGGGAACAGTGATA Reverse: 5'- CCAAGAGTGTTGGTTGTCGAG	134	NM_001039546.2
<i>Brn3c</i>	Forward: 5'- ATGCGCCGAGTTTGTCTCC Reverse: 5'- AGGCTCTCATCAAAGCTTCAAATA	68	NM_138945.2
<i>Lmod3</i>	Forward: 5'- TGAATGACATCCGACACAGCAA Reverse: 5'- GTTCGTGAAATGGCCTCCAG	123	NM_001081157.1
<i>Dnah5</i>	Forward: 5'- TGTTGTGTGCAATGAATGAGATGAC Reverse: 5'- TTGATGCCACAATTCATTAGGAG	163	NM_133365.3
<i>β-actin</i>	Forward: 5'-CATCCGTAAAGACCTCTATGCCAAC Reverse: 5'-ATGGAGCCACCGATCCACA	171	NM_007393.5
<i>RPLP0</i>	Forward: 5'-GTGTTTGACAACGGCAGCATTTA Reverse: 5'-GACGCGCTTGTACCCATTGA	171	NM_007475.5