

Table S1A. Mann–Whitney U test were performed to assess differences in DPOAE thresholds between *Coch^{+/+}* and *Coch^{-/-}* mice. *p*-values are reported. significant values ($p \leq 0.05$) are shown in bold.

DPOAE frequency	6 months	12 months	15 months	24 months
5 kHz	0.97	0.01	<0.0001	>0.99
6 kHz	0.18	<0.0001	<0.0001	0.2867
7 kHz	0.15	0.01	0.015	0.6417
8 kHz	0.45	0.003	0.28	0.2554
9 kHz	0.28	0.002	0.067	0.2085
10.5 kHz	0.64	<0.0001	0.19	0.3607
12 kHz	0.15	0.60	0.84	0.5392
14 kHz	0.59	0.002	0.19	0.3007
16 kHz	0.33	0.049	0.52	0.0782
18 kHz	>0.99	0.028	>0.99	0.0165
21 kHz	0.71	0.008	0.055	0.1696
24 kHz	0.18	<0.0001	0.047	0.1932
28 kHz	0.59	<0.0001	0.0022	0.1821
32 kHz	0.64	0.017	0.057	0.7098

Table S1B. Mann–Whitney U test were performed to assess differences in ABR thresholds between *Coch^{+/+}* and *Coch^{-/-}* mice. *p*-values are reported. significant values ($p \leq 0.05$) are shown in bold.

ABR frequency	6 months	12 months	15 months	24 months
2000Hz	0.0032	<0.0001	0.22	>0.9999
4000Hz	0.88	0.05	0.39	0.87
8000Hz	0.74	0.0048	0.86	0.056
16000Hz	0.0015	0.0006	0.81	0.016
32000Hz	0.47	<0.0001	0.0008	0.0079

Table S2A. Linear mixed models (LMMs) were fitted for each DPOAE frequency separately to test for significant time x genotype interactions. Also main effects of time*KO and time*WT were calculated. Significant values ($p \leq 0.05$) are shown in bold.

DPOAE frequency	Time*genotype interaction	Main effect Time*WT	Main effect Time*KO
5 kHz	0.057	0.0005	0.013
6 kHz	0.175	0.064	0.24
7 kHz	0.739	0.002	0.16
8 kHz	0.326	0.0001	0.019
9 kHz	0.537	4.01*10⁻⁵	0.002
10.5 kHz	0.690	0.0067	0.031
12 kHz	0.403	0.38	0.088
14 kHz	0.711	3.01*10⁻⁶	0.0009
16 kHz	0.765	5.15*10⁻⁶	0.01
18 kHz	0.339	5.21*10⁻⁶	0.01
21 kHz	0.028	3.07*10⁻⁸	0.04
24 kHz	1.36*10⁵	1.56*10⁻¹¹	0.005
28 kHz	0.0003	2.36*10⁻¹⁰	0.007
32 kHz	0.020	2.32*10⁻⁸	4.82*10⁻⁵

Table S2B. Post-hoc tests to assess the difference in DPOAE thresholds between the different time points were performed if the main effect of time*WT and time*KO were significant (Table S1A). Significant values ($p \leq 0.05$) are shown in bold.

DPOAE frequency	Coch-wildtype		Coch- knockout	
	Baseline VS 48u post-noise	Baseline VS one-week post-noise	Baseline VS 48u post-noise	Baseline VS one-week post-noise
5 kHz	3.71*10⁻⁵	0.006	0.029	0.008
6 kHz	NA	NA	NA	NA
7 kHz	0.0006	0.007	NA	NA
8 kHz	6.24*10⁻⁶	0.0003	0.012	0.049
9 kHz	2.58*10⁻⁶	3.87*10⁻⁵	0.0012	0.0067
10.5 kHz	0.0016	0.16	0.022	0.068
12 kHz	NA	NA	NA	NA
14 kHz	1.44*10⁻⁷	0.405	7.31*10⁻⁵	0.14
16 kHz	5.39*10⁻⁸	9.04*10⁻⁵	0.0037	0.16
18 kHz	1.10*10⁻⁸	1.64*10⁻⁵	0.0031	0.31
21 kHz	<1*10⁻¹⁰	9.29*10⁻¹⁰	0.026	0.10
24 kHz	<1*10⁻¹⁰	<1*10⁻¹⁰	0.0031	0.01
28 kHz	<1*10⁻¹⁰	<1*10⁻¹⁰	0.0063	0.02
32 kHz	<1*10⁻¹⁰	2.02*10⁻⁷	1.32*10⁻⁵	1.49*10⁻⁵

Table S3A. Linear mixed models (LMMs) were fitted for each ABR frequency separately to test for significant time x genotype interactions. Also main effects of time*KO and time*WT were calculated. Significant values ($p \leq 0.05$) are shown in bold.

ABR frequency	Time*genotype interaction	Main effect Time*WT	Main effect Time*KO
2000Hz	0.013	3.62*10⁻¹⁰	0.0043
4000Hz	0.003	2.43*10⁻⁷	0.13
8000Hz	2.4*10⁻⁵	1.41*10⁻⁹	0.019
16000Hz	0.01	1.31*10⁻¹⁴	1.36*10⁻⁷
32000Hz	7.28*10⁻⁵	2.39*10⁻¹⁰	6.88*10⁻⁷

Table S3B. Post-hoc tests to assess the difference in ABR thresholds between the different time points were performed if the main effect of time*WT and time*KO were significant (Table S3A). Significant values ($p \leq 0.05$) are shown in bold.

ABR frequency	Coch-wildtype		Coch- knockout	
	Baseline VS 48u post-noise	Baseline VS one week post-noise	Baseline VS 48u post-noise	Baseline VS one week post-noise
2000Hz	<1*10⁻¹⁰	1.17*10⁻⁸	0.0011	0.13
4000Hz	1.79*10⁻⁹	3.94*10⁻⁷	NA	NA
8000Hz	<1*10⁻¹⁰	<1*10⁻¹⁰	0.008	0.54
16000Hz	<1*10⁻¹⁰	<1*10⁻¹⁰	<1*10⁻¹⁰	9.9*10⁻⁶
32000Hz	<1*10⁻¹⁰	<1*10⁻¹⁰	4.02*10⁻⁹	0.068

Table S4A. Linear mixed models (LMMs) were fitted for wave I amplitudes at 8000 Hz and 16000 Hz separately to test for significant time x genotype interactions. Also main effects of time*KO and time*WT were calculated. Significant values ($p \leq 0.05$) are shown in bold.

Wave I amplitude	Time*genotype interaction	Main effect Time*WT	Main effect Time*KO
8000Hz	0.574247	5.03*10⁻⁵	0.007
16000Hz	0.964111	0.001	0.0001

Table S4B. Post-hoc tests to assess the difference in wave I amplitudes between the different time points were performed if the main effect of time*WT and time*KO were significant (Table S4A). Significant values ($p \leq 0.05$) are shown in bold.

Wave I amplitude	Coch-wildtype		Coch- knockout	
	Baseline VS 48u post-noise	Baseline VS one week post- noise	Baseline VS 48u post- noise	Baseline VS one week post- noise
8000Hz	0.0034	0.036	6.66*10⁻⁶	2.97*10⁻⁵
16000Hz	1.25*10⁻⁵	0.0017	0.00025	0.016