

Supplementary Material

Reduced Hepatocyte Bicarbonate Output Accelerates Periductal Inflammation and Fibrosis in *mdr2*^{-/-} Mouse Liver

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Supplementary Table 1: List of Primers

Gene	Forward	Reverse	Company
<i>Actin</i>	AGAGGGAAATCGTGCGTGAC	CAATAGTGATGACCTGGCCGT	Sigma
<i>Cftr</i>	TTCTTCACGCCCTATGTGCGA	GCTCCAATCACAATGAACACCA	Sigma
<i>Ae2</i>	TGCTGGTCATCGGCTTTTCT	AGAAGCCAATCCACACTCGG	Sigma
<i>Nhe3</i>	AGGCCACCAACTATGAAGAG	AGGGGAGAACACGGGATTATC	Sigma
<i>Nhe1</i>	CTTTGAGGAATTTGCCAGCTATG	GAGGTAAATCGGGAGGTGAAAG	Sigma
<i>Car3</i>	GACCCTGGCTCTGCTAAGAC	AATTGGCGAAGTCGGTAGGG	Sigma
<i>Car15</i>	GTGCTACGACTCCCAAGACC	CATCGTTCTCCAGGACCCAA	Sigma
<i>Ntcp</i>	GCCCAACGTACCCCAGAAAG	CCAGTGAACACCACCTCACT	Sigma
<i>Asbt</i>	CTTCTCCCCGAGGATCTCA	TGATGGCCTGGAGTCCATTTT	Sigma
<i>Oatp</i>	TCTTCTCACTCGCAGCCATC	GTAAACAGGTGCCGGAATGC	Sigma
<i>Abcg5</i>	CTATCAGCTTGTGGGTGCCA	GAGGACGTGTAGCACGTAGG	Sigma
<i>Abcg8</i>	GTCCAACACTCTGGAGGTCAG	TAGATTTTCGGATGCCAGCTC	Sigma
<i>Bsep</i>	GGCCACTGACACTACCTGAAA	GCGCCTTCCCCTTTCTTCTTA	Sigma
<i>Car14</i>	ACACGGTCAGGACCATTGG	GATCGGGGTCAAATATCACACTG	Sigma
<i>Mcp1</i>	CTGCTGTTACAGTTGCCG	GCACAGACCTCTCTCTTGAGC	Sigma
<i>Tgfb2</i>	TGGAGTCACAACAGTCCAGC	AGGGCGAAGGCAGCAATTAT	Sigma
<i>Ck19</i>	CGGACCCTCCCGAGATTACA	TCAGACGCAAGGCGTGTTT	Sigma

Gene	Company / Catalog number
<i>Tnfa</i>	Qiagen , Quantitect # QT00104006
<i>Il1β</i>	Qiagen, Quantitect # QT01048355

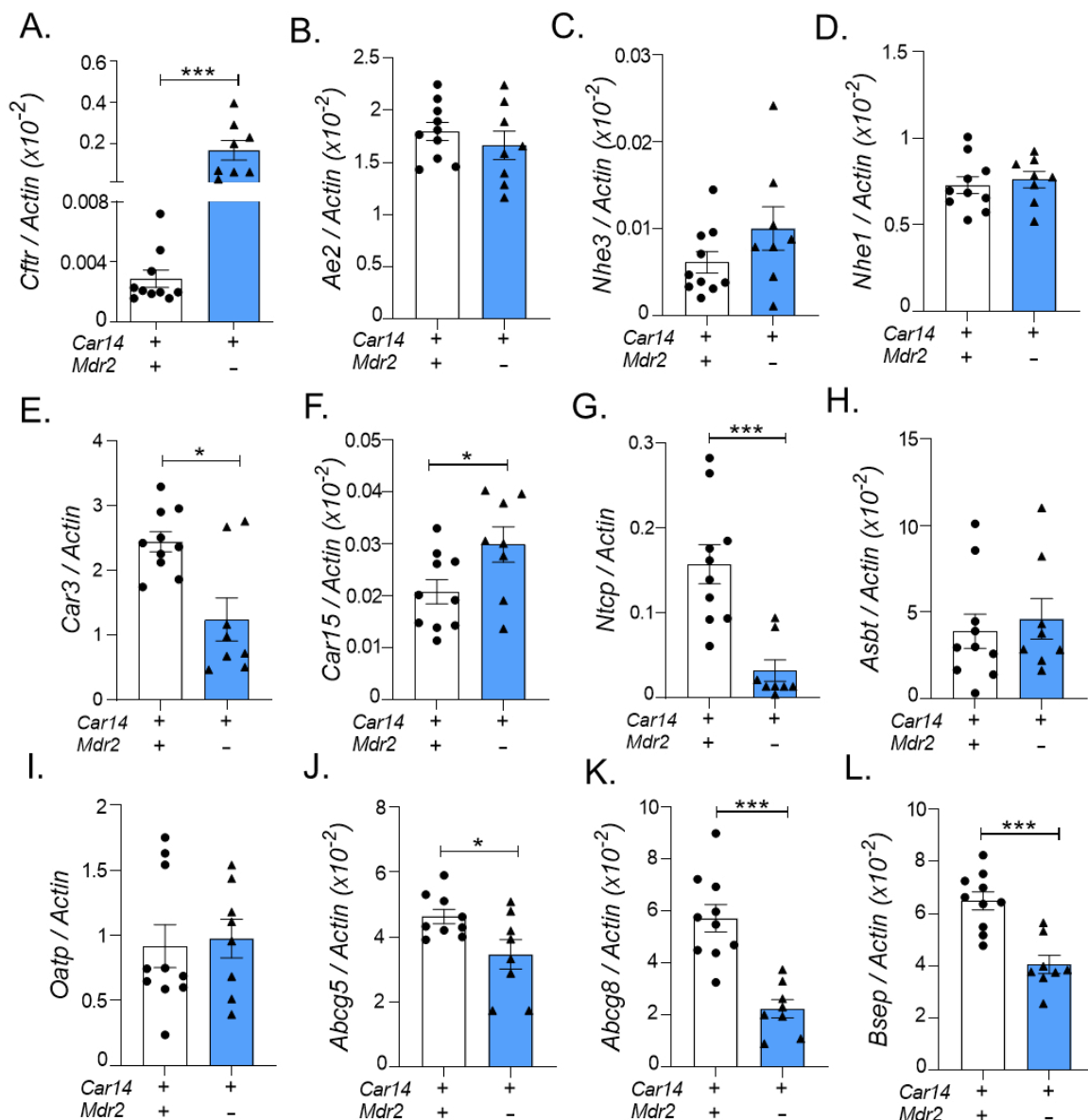
Supplementary Table 2: Average Ct values of *Actin* and *Rps9* under different conditions

<i>Actin</i> Ct values	<i>Car14</i> ^{+/+} <i>Mdr2</i> ^{+/+}	<i>Car14</i> ^{-/-} <i>Mdr2</i> ^{+/+}	<i>Car14</i> ^{+/+} <i>Mdr2</i> ^{-/-}
6 weeks	13.22 ± 0.14	13.27 ± 0.12	13.22 ± 0.10
11 weeks	13.00 ± 0.08	13.32 ± 0.07	13.00 ± 0.15

<i>Actin</i> Ct values	<i>Car14</i> ^{+/+} <i>Mdr2</i> ^{+/+}	<i>Car14</i> ^{-/-} <i>Mdr2</i> ^{+/+}	<i>Car14</i> ^{+/+} <i>Mdr2</i> ^{-/-}	<i>Car14</i> ^{-/-} <i>Mdr2</i> ^{-/-}
3 weeks	13.02 ± 0.12	13.15 ± 0.10	13.06 ± 0.06	12.98 ± 0.28
6 weeks	13.18 ± 0.10	13.19 ± 0.14	13.18 ± 0.14	13.16 ± 0.07
11 weeks	12.98 ± 0.06	13.21 ± 0.06	12.99 ± 0.08	12.45 ± 0.16

<i>Rps9</i> Ct values	<i>Car14</i> ^{+/+} <i>Mdr2</i> ^{+/+}	<i>Car14</i> ^{-/-} <i>Mdr2</i> ^{+/+}	<i>Car14</i> ^{+/+} <i>Mdr2</i> ^{-/-}
6 weeks	13.63 ± 0.09	13.06 ± 0.41	13.63 ± 0.16
11 weeks	13.35 ± 0.08	13.57 ± 0.06	13.35 ± 0.14

Supplementary Figure 1



Supplementary Figure 2: Expression of hepatocyte and/or cholangiocyte acid/base transporters, carbonic anhydrases, and bile salt and cholesterol transporters, in hepatic tissue from *car14*^{+/+}/*mdr2*^{+/+} and *car14*^{+/+}/*mdr2*^{-/-} mice with Actin as a control gene:

Gene expression assessment of (A) *Cfr* (*Abcc7*), (B) *Ae2* (*Slc4a2*), (C) *Nhe3* (*Slc9a3*), (D) *Nhe1* (*Slc9a1*), (E) *Car3*, (F) *Car15*, (G) *Ntcp* (*Slc10a1*), (H) *Asbt* (*Slc10a2*), (I) *Oatp* (*Slco1a1*), (J) *Abcg5* and (K) *Abcg8* (*Sterolin*), and (L) *Bsep* (*Abcb11*) in *car14*^{+/+}/*mdr2*^{+/+} and *car14*^{+/+}/*mdr2*^{-/-} in hepatic tissue of 11 week old mice. In the absence of *Mdr2*, the only significant alteration was an up-regulation of *Cfr* and *Car15* and a downregulation in *Car3*, *Ntcp*, *Abcg5/8* and *Bsep*. Each dot represents the liver tissue of one mouse. *p < 0.05, **p < 0.005, ***p = 0.0001.