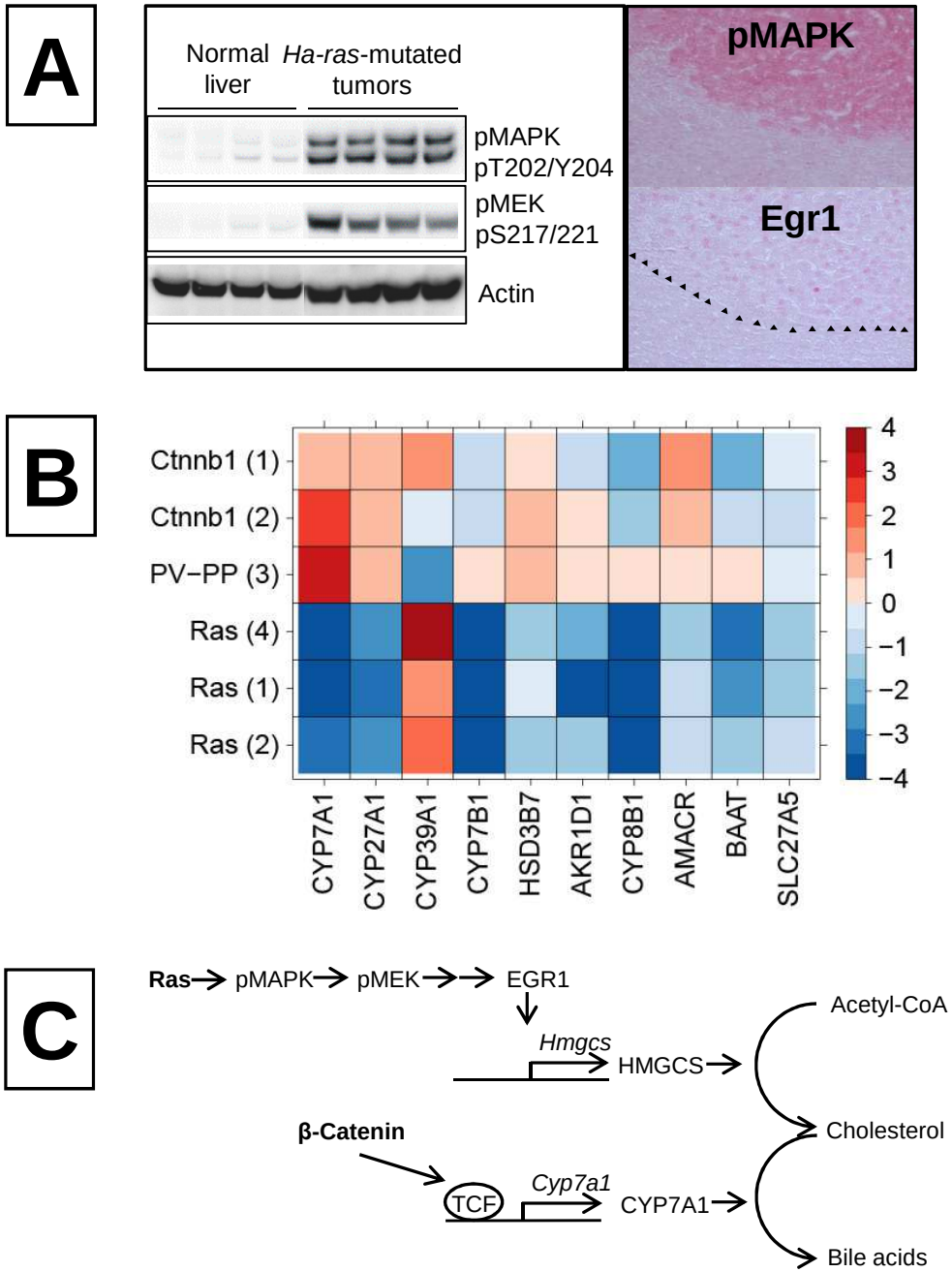
A
Normal liver
Ha-ras-mutated tumors
pMAPK pT202/Y204
pMEK pS217/221
Actin
pMAPK
Egr1
B
Ctnnb1 (1)
Ctnnb1 (2)
PV−PP (3)
Ras (4)
Ras (1)
Ras (2)
CYP7A1
CYP27A1
CYP39A1
CYP7B1
HSD3B7
AKR1D1
CYP8B1
AMACR
BAAT
SLC27A5
4
3
2
1
0
−1
−2
−3
−4
C
Ras
pMAPK
pMEK
EGR1
Hmgcs
HMGCS
Acetyl-CoA
Cholesterol
β-Catenin
TCF
Cyp7a1
CYP7A1
Bile acids

Figure 4