

## Supplemental Figure Legends

### **Figure 1. NKT-deficient mice develop less fibrosing-NASH after methionine-choline deficient (MCD) diet**

Wild-type and  $J\alpha 18^{-/-}$  mice were fed control chow (n=10 per strain) or MCD diet (n=10 per strain) for 8 weeks, and then sacrificed. Representative hematoxylin & eosin and Sirius red stainings from control chow-fed mice.

### **Figure 2. NKT-deficient mice exhibit reduced fibrogenic response and attenuated Hedgehog signaling after diet-induced NASH.**

Mice were fed control chow and MCD diets as described in Figure legend 1.

Whole liver tissue was harvested for RNA analysis by QRT-PCR. (A)  $TGF\beta$ , (B) Indian Hedgehog (Inh), (C) Gli2 mRNA. Results are expressed as fold change relative to WT control chow-fed mice and graphed as mean  $\pm$  SEM. \* $P < 0.05$  vs. WT control chow-fed mice

### **Figure 3. Livers from NKT-deficient mice contain less OPN than WT mice after MCD diet.**

Mice were fed control chow or MCD diets as described in Figure legend 1. (A)

Representative OPN immunostaining after control chow or MCD diets in CD1d deficient mice (final magnification 200X). Whole liver RNA was analyzed by

QRT-PCR. (B) OPN mRNA. Results are expressed as fold change relative to WT

control chow-fed mice and graphed as mean  $\pm$  SEM. \*P<0.05 vs. WT control chow-fed mice

**Figure 4. Hepatic NKT cell express the Hedgehog ligand, Sonic Hedgehog**

Mouse primary liver mononuclear cells (LMNC) were isolated from whole livers of WT mice (n=3), and used for FACS analysis. (A) CD3/CD1d-tetramer double staining. (B) CD3/CD1d-tetramer double-positive cells express intracellular Sonic Hedgehog ligand.

**Figure 5. NASH progression in humans is associated with Hedgehog pathway activation**

(A-C) Coded liver sections from 10 patients with early and advanced NASH fibrosis were stained for Sirius Red (SR), Indian Hedgehog, and Sonic Hedgehog (both Hh ligands). (A) Representative SR staining, (B) Representative Ihh staining, and (C) Representative Shh staining

**Figure 6. NASH progression in humans is associated with Gli2 overexpression and accumulation of Hedgehog and OPN expressing CD57-positive cells**

(A-C) Coded liver sections from 10 patients with early and advanced NASH fibrosis were stained for Gli2. Liver sections with fibrosing NASH were also double immunostained for CD57 / Inh and CD57 / OPN. (D-E) Liver mononuclear cells from a non-diseased liver were stained for CD3, CD56, OPN, and analyzed

by FACS analysis. (A) Representative Gli2 staining, (B) CD57 (blue) - Inh (brown), (C) CD57 (brown) – OPN (blue). (D) CD3-CD56 double positive NKT cells, (E) Proportion of CD3-CD56 NKT cells which expressed intracellular OPN