

Supplementary Material

Liver Sinusoidal Endothelial Cell Expressed Vascular Cell Adhesion Molecule 1 (VCAM1) Promotes Liver Fibrosis

Qianqian Guo^{1†}, Kunimaro Furuta^{2†}, Shahidul Islam¹, Nunzia Caporarello³, Enis Kostallari¹, Kobe Dielis¹, Daniel J. Tschumperlin³, Petra Hirsova¹, Samar H. Ibrahim^{1, 4*}

¹Division of Gastroenterology & Hepatology, Mayo Clinic, Rochester, Minnesota, USA

² Department of Gastroenterology and Hepatology, Osaka University Graduate School of Medicine, Osaka, Japan

³Department of Physiology and Biomedical Engineering, Mayo Clinic, Rochester, Minnesota, USA

⁴ Division of Pediatric Gastroenterology, Mayo Clinic, Rochester, Minnesota, USA

Table 1

PCR primers

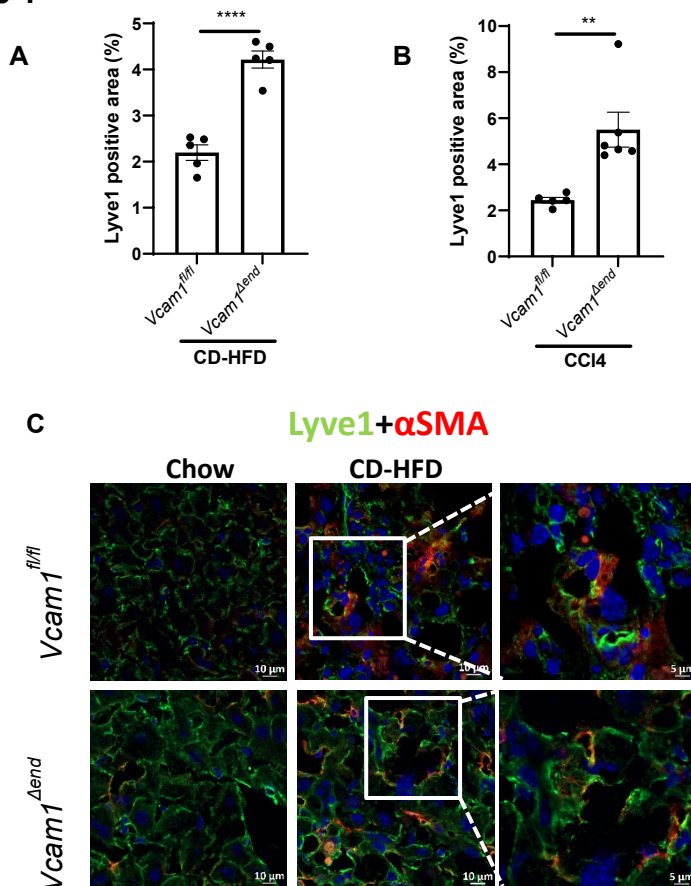
Name	Sequence
Mouse <i>Cd68</i> Forward Primer	TGTCTGATCTTGCTAGGACCG
Mouse <i>Cd68</i> Reverse Primer	GAGAGTAACGGCCTTTTTGTGA
Mouse <i>Ccr2</i> Forward Primer	ATCCACGGCATACTATCAACATC
Mouse <i>Ccr2</i> Reverse Primer	CAAGGCTCACCATCATCGTAG
Mouse <i>Coll1a1</i> Forward Primer	GCTCCTCTTAGGGGCCACT
Mouse <i>Coll1a1</i> Reverse Primer	CCACGTCTCACCATTGGGG
<i>18S</i> Forward Primer	CGCTTCCTTACCTGGTTGAT
<i>18S</i> Reverse Primer	GAGCGACCAAAGGAACCATA

Mouse <i>Cd34</i> Forward Primer	AAGGCTGGGTGAAGACCCTTA
Mouse <i>Cd34</i> Reverse Primer	TGAATGGCCGTTTCTGGAAGT
Mouse <i>Timp1</i> Forward Primer	AGGTGGTCTCGTTGATTTCT
Mouse <i>Timp1</i> Reverse Primer	GTAAGGCCTGTAGCTGTGCC
Mouse <i>Coll1a1</i> Forward Primer	GCTCCTCTTAGGGGCCACT
Mouse <i>Coll1a1</i> Reverse Primer	CCACGTCTCACCATTGGGG
Mouse <i>Acta2</i> (α SMA) Forward Primer	GTCCCAGACATCAGGGAGTAA
Mouse <i>Acta2</i> (α SMA) Reverse Primer	TCGGATACTTCAGCGTCAGGA
Mouse <i>Pdgfrb</i> Forward Primer	ACTACATCTCCAAAGGCACCT
Mouse <i>Pdgfrb</i> Reverse Primer	TGTAGAACTGGTCGTTTCATGGGCA
Human <i>YAP1</i> Forward Primer	CCCTCGTTTTGCCATGAACC
Human <i>YAP1</i> Reverse Primer	TGCCGAAGCAGTTCTTGCTG
Human <i>CTGF</i> Forward Primer	GCAGCGGAGAGTCCTTCCAG
Human <i>CTGF</i> Reverse Primer	GGGCCAAACGTGTCTTCCAG
Human <i>ANKRD1</i> Forward Primer	TGATTATGTATGGCGCGGATCT
Human <i>ANKRD1</i> Reverse Primer	GCGAGAGGTCTTGTAGGAGTTC
Human <i>COL1A1</i> Forward Primer	TGTGAGGCCACGCATGAG
Human <i>COL1A1</i> Reverse Primer	CAGATCACGTCATCGCACAA
Human <i>TIMP1</i> Forward Primer	CTTCTGGCATCCTGTTGTTG
Human <i>TIMP1</i> Reverse Primer	GGTATAAGGTGGTCTGGTTG

Human <i>PDGFRA</i> Forward Primer	TGGCAGTACCCCATGTCTGAA
Human <i>PDGFRA</i> Reverse Primer	CCAAGACCGTCACAAAAAGGC
Human <i>PDGFRB</i> Forward Primer	AGCACCTTCGTTCTGACCTG
Human <i>PDGFRB</i> Reverse Primer	TATTCTCCCGTGTCTAGCCCA

Supplementary Figure 1. Liver sinusoidal endothelial cells *Lyve1* expression is reduced in liver injury. Quantification of immunostaining of *Lyve1* on liver sections from (A) CD-HFD induced NASH mouse model and (B) CCl₄ induced liver fibrosis mouse model. Scale bar: 50µm, n=5-6. (C) Representative images of co-immuno staining of *Lyve1* and α SMA in liver sections from CD-HFD or chow fed mice. Scale bar: 10 µm, left & middle panels. 5 µm, right panel, n=3.

Supplementary Figure 1



Supplementary Figure 2: (A) hHSCs were treated with vehicle or 5 ng/ml of human recombinant TGF β for 16 hours. Protein expressions of fibronectin and α -SMA were examined by Western blot. Heat shock cognate 70 (HSC70) was used as a loading control.

