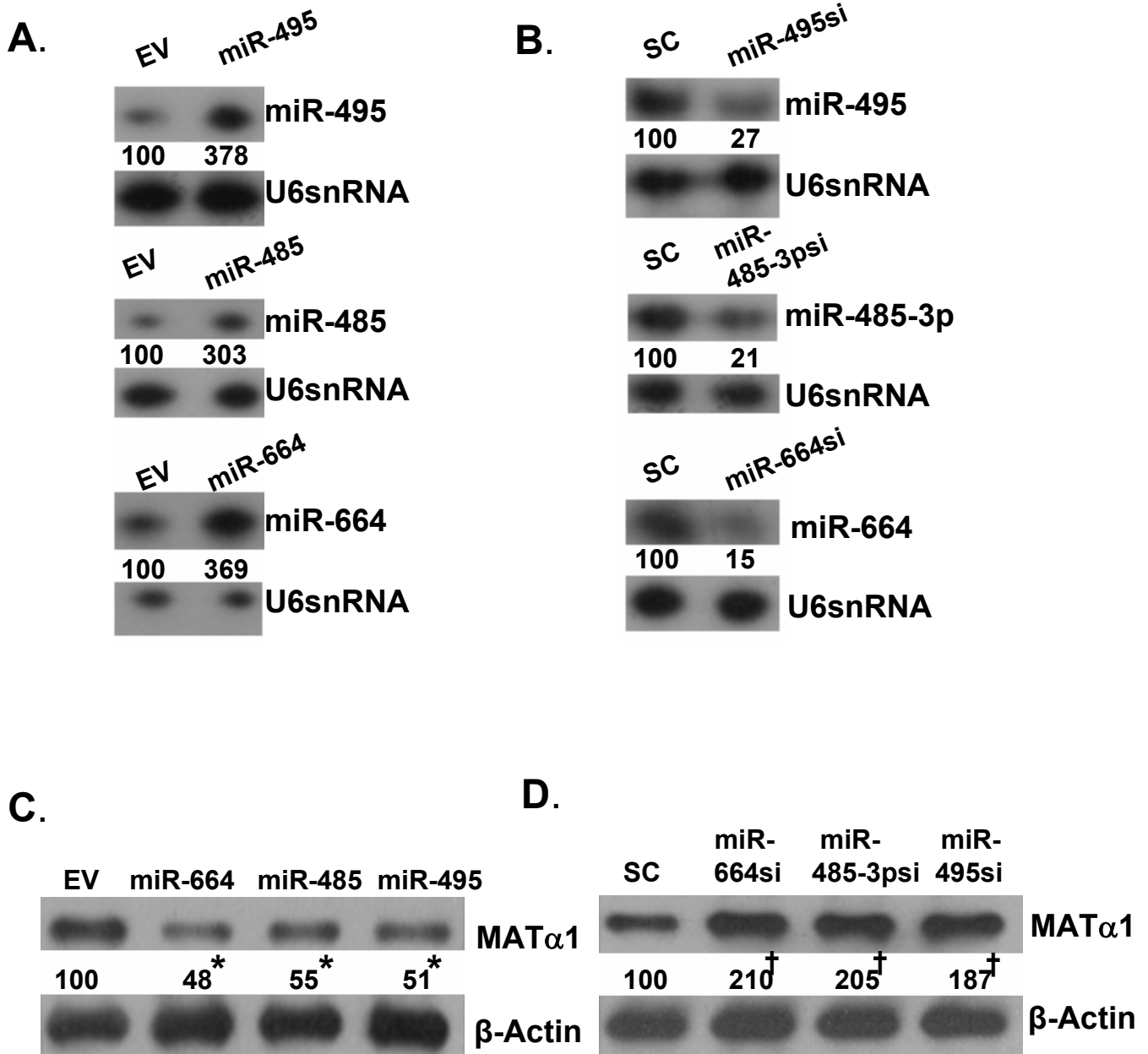


Supplemental Figure 1. The effect of stable transfection with lenti-miR-664/485/495/empty vector (EV) or lenti-siRNAs against these miRNAs on MAT1A expression. A) Northern blot analysis showing the efficiency of stably transfected miR-664/485/495 and **B)** stably transfected siRNAs against miR-664/485-3p/495. Western blot analysis showing the effect of stably transfected **C)** miRNAs and **D)** siRNAs on MAT1A protein levels. Numbers below the blots represent densitometric values expressed as % of respective controls. Representative blots are shown from 3 experiments, *p<0.01 vs. EV, †p<0.01 vs. SC.



Supplemental Table 1. Predicted miRNAs that bind to the *MAT1A* 3' UTR

miRNA	TargetScan score	miRSVR score	miRDB score	HCC status	Reference
miR-7		-1.1385		upregulated	Fang 2012 Hepatology
miR-30d		-0.8205		upregulated	Yao 2010 Hepatology v51:846
miR-214/761	-0.22			downregulated	Gramantieri 2007 Cancer Res v67:6092
miR-374b		-0.9998		upregulated	Wang 2008 JBC v283:13205
miR-485-3p	-0.5	-1.1191		unknown	
miR-486-3p	-0.21			downregulated	Abdalla 2012 J Cancer v3:19
miR-495	-0.46	-0.7461		unknown	
miR-504	-0.21			unknown	
miR-516b	-0.2			unknown	
miR-548l	-0.22			unknown	
miR-552	-0.26			unknown	
miR-574-5p	-0.2			unknown	
miR-576-5p		-0.8885		unknown	
miR-588	-0.39			unknown	
miR-593	-0.21			unknown	
miR-616	-0.32			unknown	
miR-664	-0.41	-0.7993	61	unknown	
miR-665	-0.25			unknown	
miR-744		-0.8107		unknown	
miR-766	-0.38			unknown	
miR-873	-0.3			unknown	
miR-874	-0.3			unknown	
miR-877	-0.34			unknown	
miR-888		-0.9628		unknown	
miR-1264		-0.8144		unknown	
miR-1275	-0.27			unknown	
miR-1283		-0.841		unknown	
miR-3153		-0.9574		unknown	
miR-3156		-0.9216		unknown	
miR-3163		-0.847		unknown	

Only scores lower than -0.2 for TargetScan and/or scores lower than -0.7 for miRSVR are listed. For miRDB, only miR-664 was predicted to bind. MicroRNAs examined are highlighted in yellow. Search was performed on 12/2010. Since then, updates to miRNA database and to search algorithms increased the number of potential miRNA targets for *MAT1A*.

Supplemental Table 2. Effect of lentiviral vector containing miRNA siRNA on HCC invasion

Tumor location (incidence %)	HepG2 +SC	HepG2 +miR-495si	HepG2 +miR-485-3psi	HepG2 +miR-664si
Lung (%)	50	0	25	25
Abdominal wall (%)	100	25	50	50
Pancreas (%)	25	0	0	0
Diaphragm/ribs (%)	25	0	0	0

N=8 mice/group

Supplemental Table 3. Effect of *MAT1A* siRNA on HCC invasion and therapeutic efficacy of miR-495 siRNA

Tumor location (incidence %)	SC +SC	<i>MAT1A</i>si +SC	<i>MAT1A</i>si +miR-495si	SC +miR-495si
Lung (%)	50	87.5	25	0
Abdominal wall (%)	87.5	100	50	12.5
Pancreas (%)	25	75	12.5	0
Diaphragm/ribs (%)	25	50	12.5	0

SC+SC group yielded the same results as control (HepG2 cells alone) group. N=8 mice/group

Table S4. Sequence and structure of miR-485-3p, miR-495, and miR-664 siRNA

siRNA	siRNA sequence	spacer	complementary sequence	stop signal
miR-485-3psi	5' - AGAGGAGAGCCGTGTATGAC 3' - TCTCCTCTCGGCACATACTC	TTCAAGAGA AAGTTCTCT	GTCATACACGGCTCTCCTCT CAGTATGTGCCGAGAGGAGA	TTTTTTT-3' AAAAAAA-5'
miR-495si	5' - AGAAGTGCACCATGTTTGT 3' - TCTTCACGTGGATCAAACAA	TTCAAGAGA AAGTTCTCT	AACAAACATGGTGCACTTCT TTGTTTGTACCACGTGAAGA	TTTTTTT-3' AAAAAAA-5'
miR-664si	5' - AGGCTGGGGATAAATGAAT 3' - TCCGACCCCTATTTACTTA	TTCAAGAGA AAGTTCTCT	ATTCATTTATCCCCAGCCT TAAGTAAATAGGGTCGGA	TTTTTTT-5' AAAAAAA-5'