

**Supplementary Table 1.** Primers used to introduce point mutations in the MRE of the 3'UTR of PCSK9, IDOL and HMGCR

Genes (human)	miRNA	Point mutations
PCSK9	hsa-miR-224	<p><u>MRE 1:</u>            FW: 5'-GATGTCCGTGGGCAGAATTATTGAGCTCTGTTC-3'            RV: 5'-GAACAAGAGCTCAATAATTCTGCCACGGACATC-3'</p> <p><u>MRE 2:</u>            FW: 5'-GCCGATGTCCGTGGGCAGAAAGTCAATTATTGAGCTCTGTTC-3'            RV: 5'-ACGGAACAAGAGCTCAATAATTGACTTTCTGCCACGGACATCGGC-3'</p>
	hsa-miR-520	<p><u>MRE 1:</u>            FW: 5'-CTGTTTGCCTTGAAGATAATTATCTGGGTGCATTTTTATTAATATG-3'            RV: 5'-CATATTAATAAAAAATGCACCCAGAATAAATATCTTCAAGGCAAAACAGG-3'</p> <p><u>MRE 2:</u>            FW: 5'-CTAGACCTGTTTGTCTAATCAATTGAAGAC            ATATTTATTCTGGGTAAAGATGCATTTTTATTAATATGGTGACTTTTTAAA-3'            RV: 5'-TTTAAAAAGTCACCATATTAATAAAAAATGC            ATCTTACCCAGAATAAATATCTTCAAGTTGATTAGCAAAACAGGTCTAG-3'</p>
IDOL	hsa-miR-224	<p><u>MRE:</u>            FW: 5'-GGAAGGCAAACAGGTTTACAAATCAATTGTCAGACTTTTAAA-3'            RV: 5'-TTTAAAAGTCTGACAATTGATTTGTAAACCTGTTGCCTTCC-3'</p>
	hsa-miR-520	<p><u>MRE 1:</u>            FW: 5'-ACTGGCAGCAGATAATGTTTGAATTACTTTAAGAATTT            CATTCTTTTGTATGGTCATGGAGCTCCAACCATTTT-3'            RV: 5'-AAAATGGTTGGAGCTCCATGACCATACAAAAAGAATGA            AATTCTTAAAAGTAATTCAAACATTATCTGCTGCCAGT -3'</p> <p><u>MRE 2:</u>            FW: 5'-GAGCTCCAACCATTTTAAATAGGAAAGTCTTAAGATAAT            TGTTGTCGTTTTAATGTCATTTCT-3'            RV: 5'-AGAAATGACATTAACGACAACAATTATCTTAAGACTT            TCCTATTA AAAATGGTTGGAGCTC-3'</p>
HMGCR	hsa-miR-224	<p><u>MRE 1/2:</u>            FW: 5'-CGTAAAGCTTAAATTGCTTTTGTCTTCTGAGCTTTTCATGGAAGTGG-3'            RV: 5'-CCACTTCCATGAAAAGCTCAGAAAAACAAAAGCAATTTAAGCTTTACG-3'</p> <p><u>MRE 3:</u>            FW: 5'- CCACTTCCATGAAAAGCTCAGAAAAACAAAAGCAATTTAAGCTTTACG -3'            RV: 5'- CCACTTCCATGAAAAGCTCAGAAAAACAAAAGCAATTTAAGCTTTACG -3'</p>
	hsa-miR-520	<p><u>MRE 1:</u>            FW: 5'-CTTAAAAGACATTTTTATTAGTTGAAAAATCTAGA-3'            RV: 5'-ACTGTATCAAATCTGTATATGTTGTAATAAAAAT-3'</p> <p><u>MRE 2:</u>            FW: 5'-AGTTTTATTACAACATATACAGATTTGATACAGTTC-3'            RV: 5'-TAGATTTTCAACTAAAATAAAAATGTCTTTAAG -3'</p>

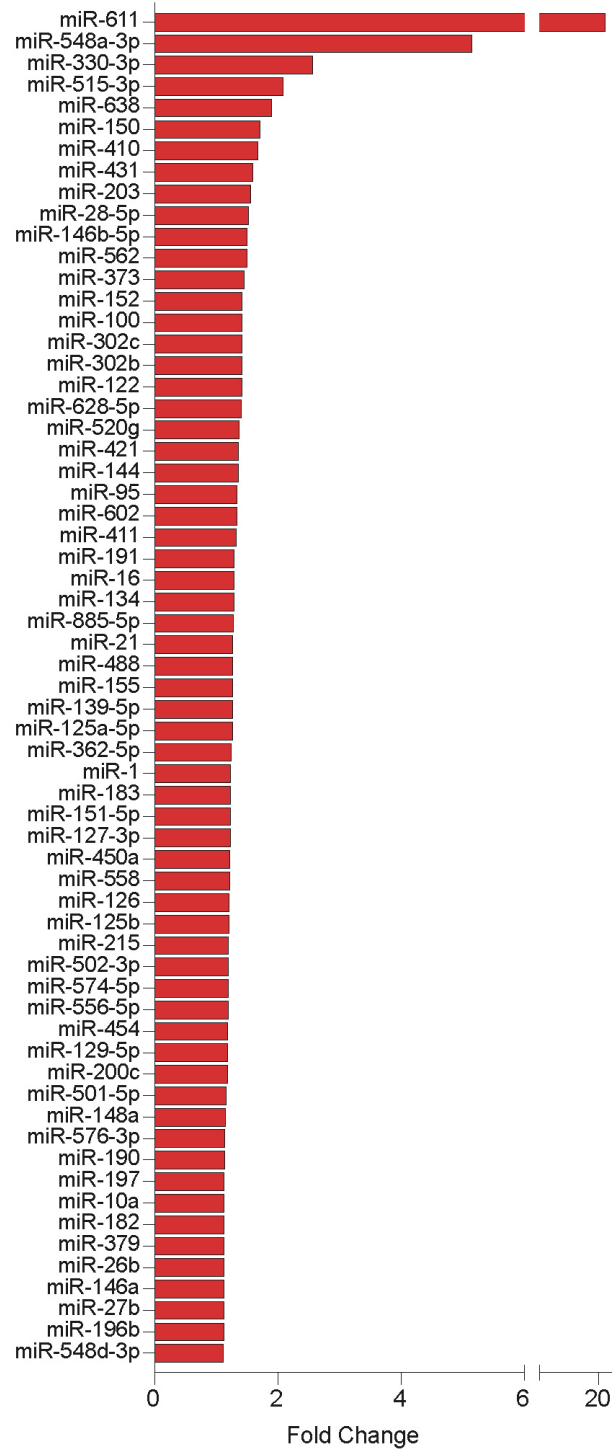
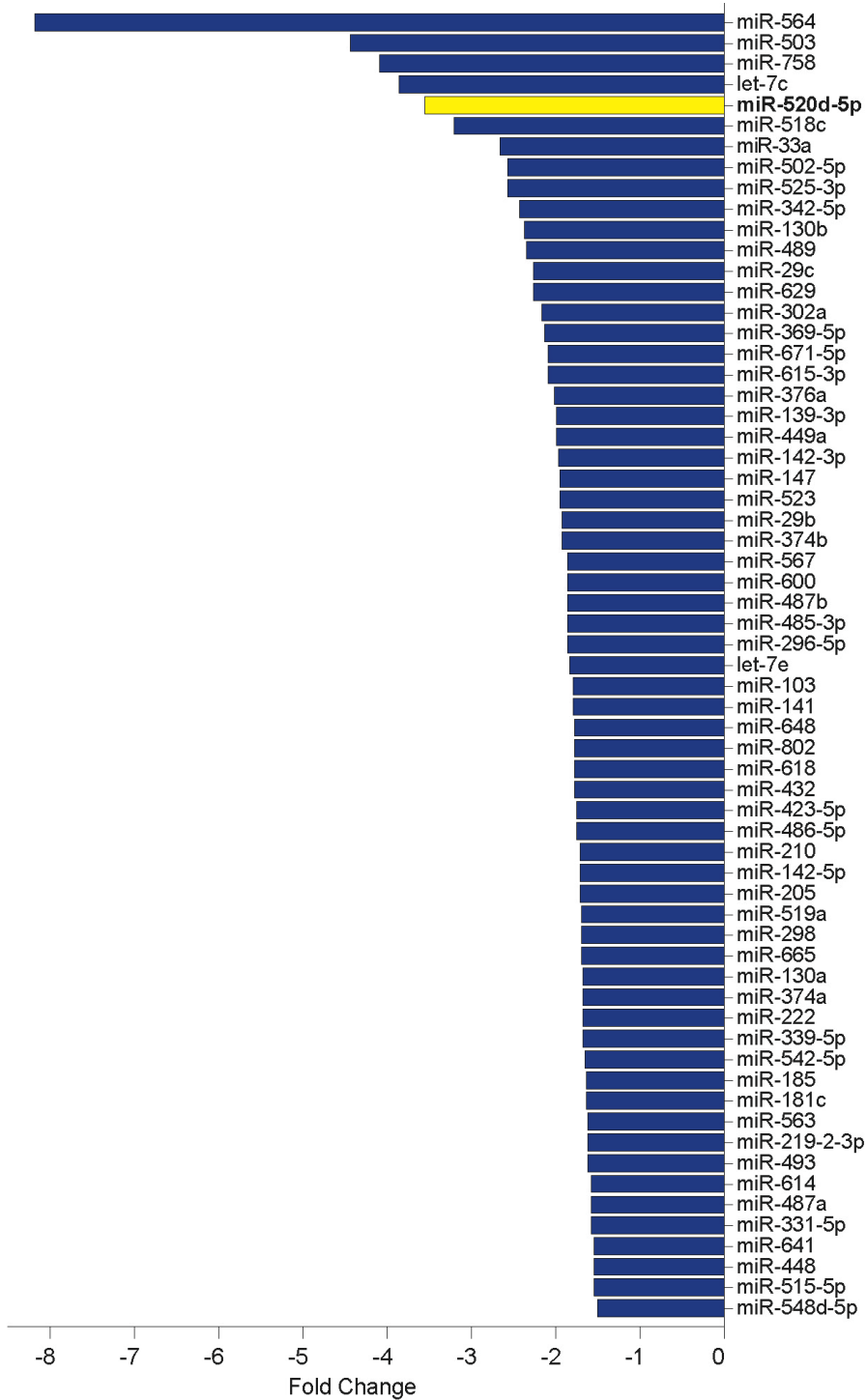
**Supplementary Table 2.** qRT-PCR primers used in this study

<b>Genes (human)</b>	<b>Forward Sequence</b>	<b>Reverse Sequence</b>
<i>PCSK9</i>	5'-AGGGGAGGACATCATTGGTG-3'	5'-CAGGTTGGGGGTCAGTACC-3'
<i>IDOL</i>	5'-CGAGGACTGCCTCAACCA-3'	5'-TGCAGTCCAAAATAGTCAACTTCT-3'
<i>HMGCR</i>	5'-GTCATTCCAGCCAAGGTTGT-3'	5'-GGGACCACTTGCTTCCATTA-3'
<i>LDLR</i>	5'-CTCTCTGCGAAGTCTGGACG-3'	5'-ACTAACCTGTCCGTACACCTTG-3'
<i>GAPDH</i>	5'GAAGGTGAAGGTCGGAGTC-3'	5'-GAAGATGGTGATGGGATTTC-3'

<b>Genes (mouse)</b>	<b>Forward Sequence</b>	<b>Reverse Sequence</b>
<i>Pcsk9</i>	5'-GAGACCCAGAGGCTACAGATT-3'	5'-AATGTACTCCACATGGGGCAA-3'
<i>Idol</i>	5'-AGGAGATCAACTCCACCTTCTG-3'	5'-ATCTGCAGACCGGACAGG-3'
<i>Hmgcr</i>	5'-TTGCAGAGCCGTCCTCTCTA-3'	5'-AGCAAGCTCCCATCACCAAG-3'
<i>Ldlr</i>	5'-CATGGCAGCCGGCAGTGTGA-3'	5'-TTGGGTCCCTCGCAGAGTGT-3'
<i>Gapdh</i>	5'TGTGAGGGAGATGCTCAGTG-3'	5'-TGTTCTACCCCAATGTGT-3'

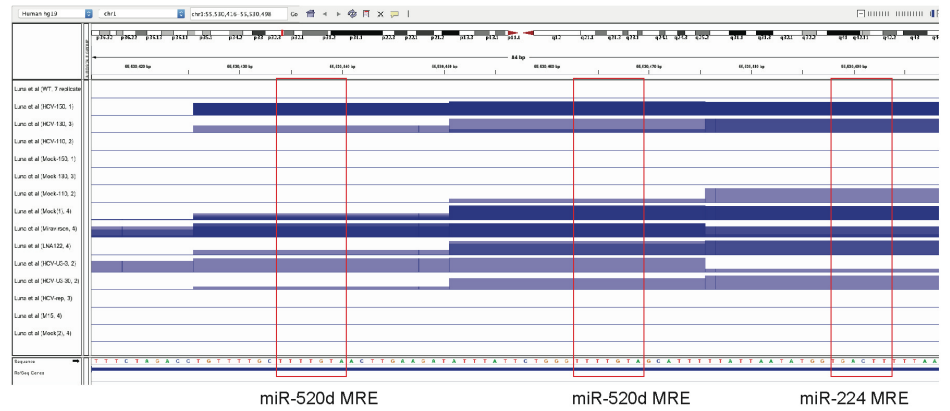
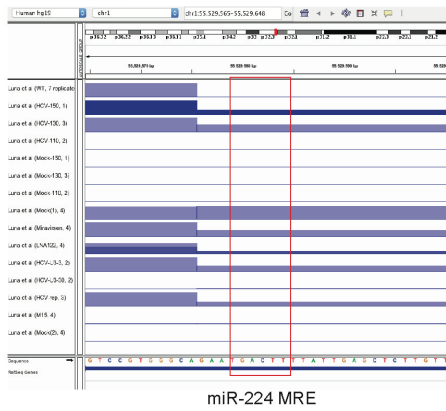
<u>Qiagen miScript Primer Assays</u>	
hsa_miR-27b (MS00031668)	sequence not disclosed
hsa_miR-128 (MS00045850)	sequence not disclosed
hsa_miR-224 (MS00003878)	sequence not disclosed
hsa_miR-520d (MS00033866)	sequence not disclosed
RNU6 (MS00033740)	sequence not disclosed

# Supplemental Figure 1



## Supplemental Figure 2

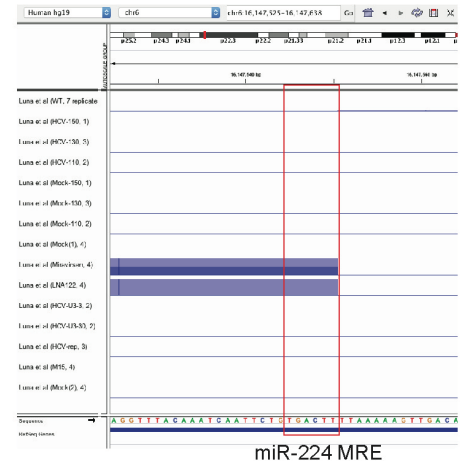
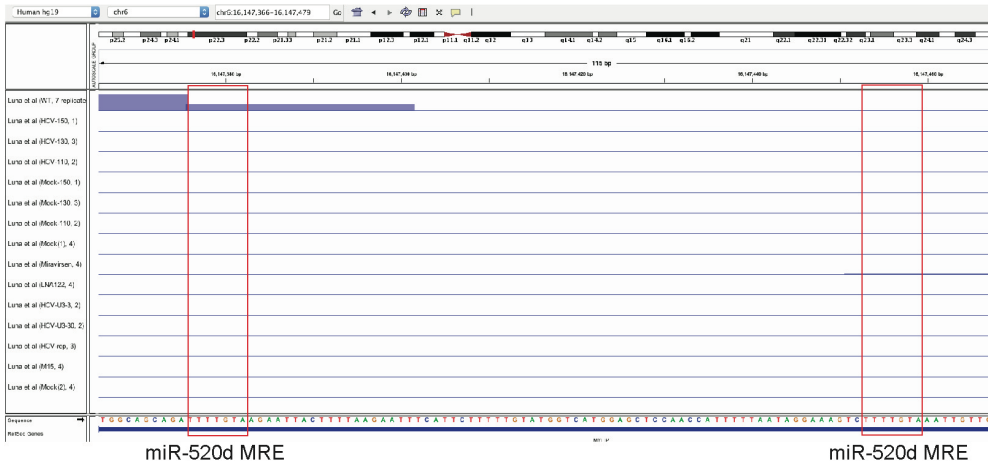
### PCSK9 3' UTR





# Supplemental Figure 3

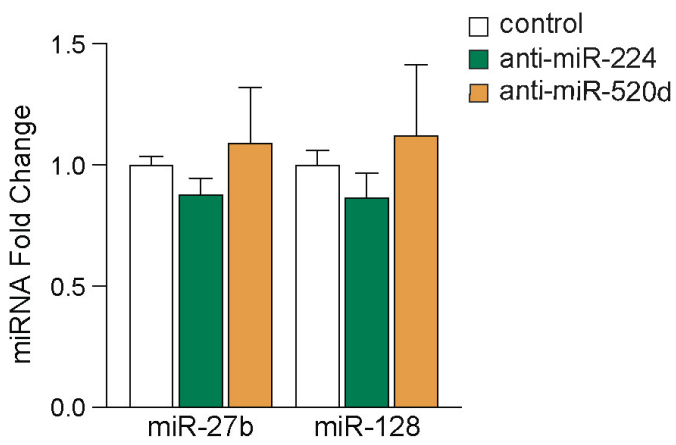
## IDOL 3' UTR



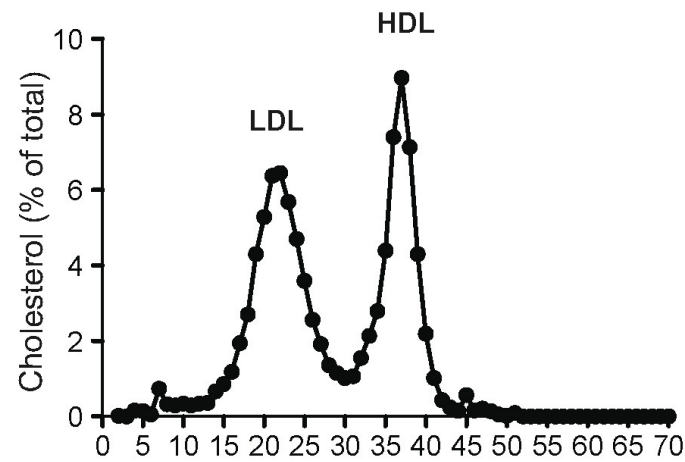


## Supplemental Figure 5

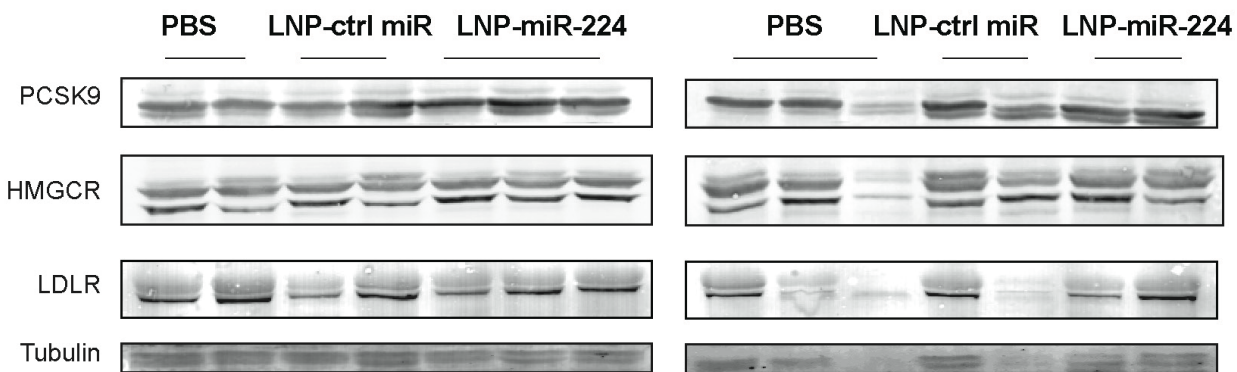
**A**



**B**

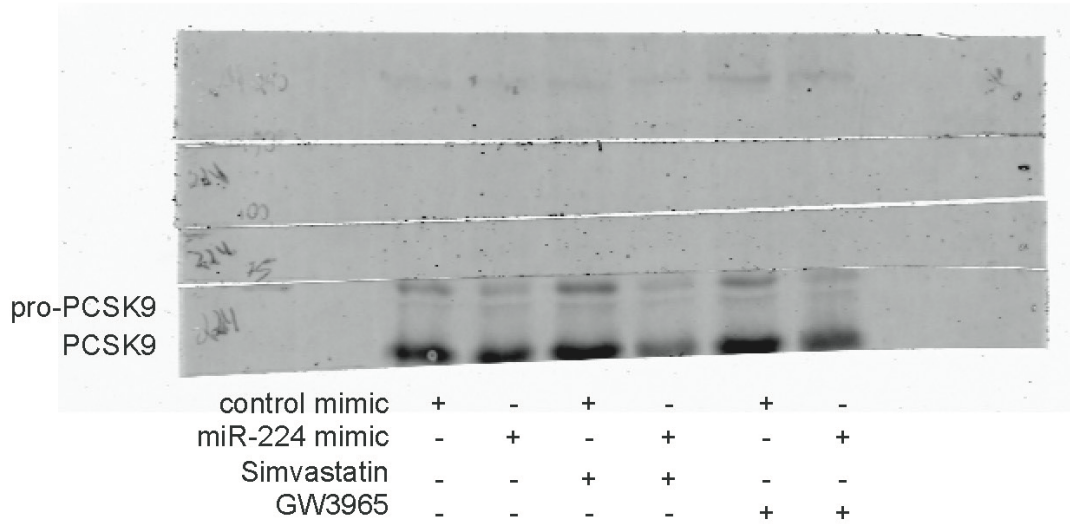


**C**

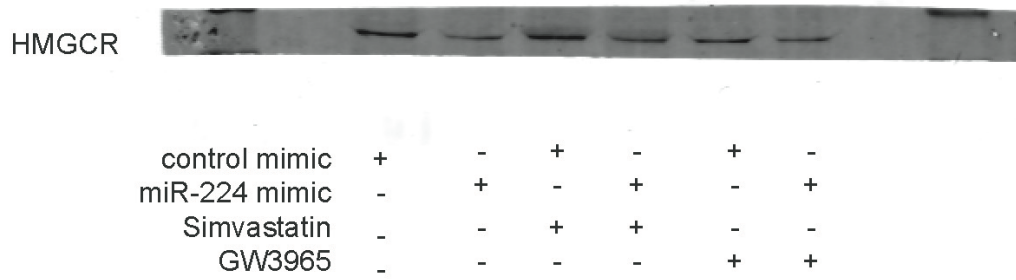


# Supplemental Figure 6

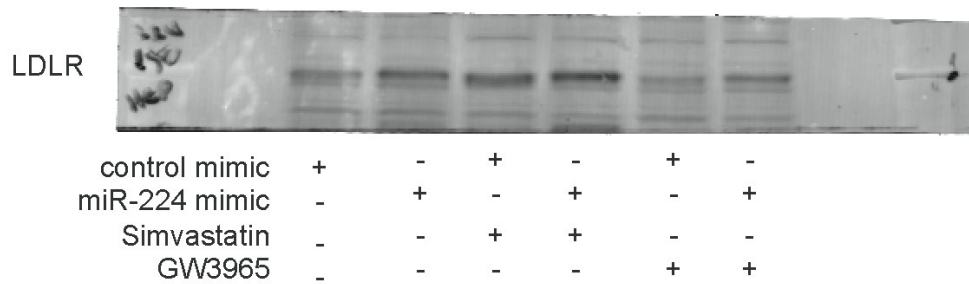
**A**



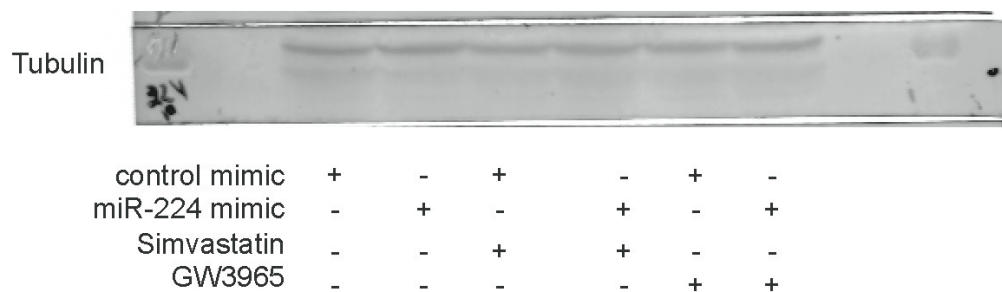
**B**



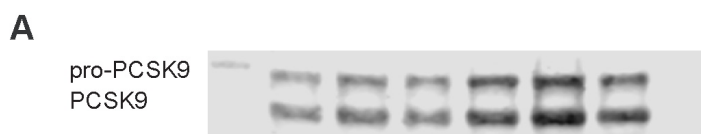
**C**



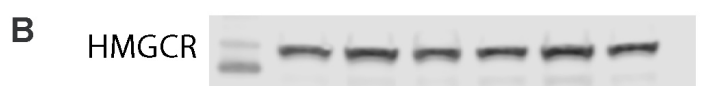
**D**



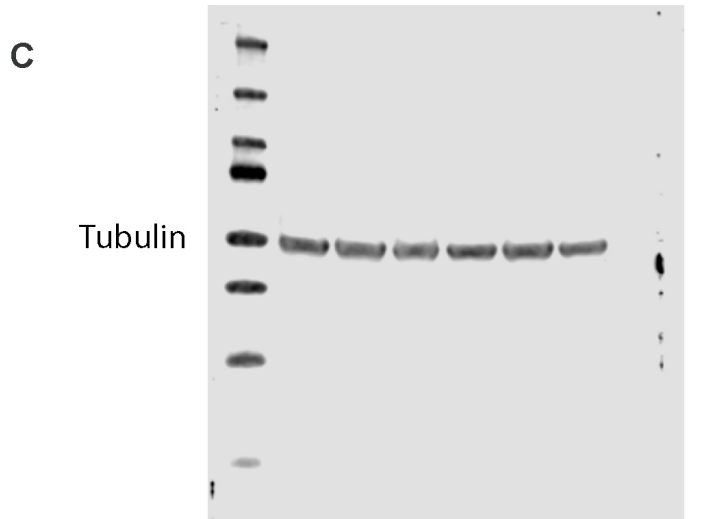
# Supplemental Figure 7



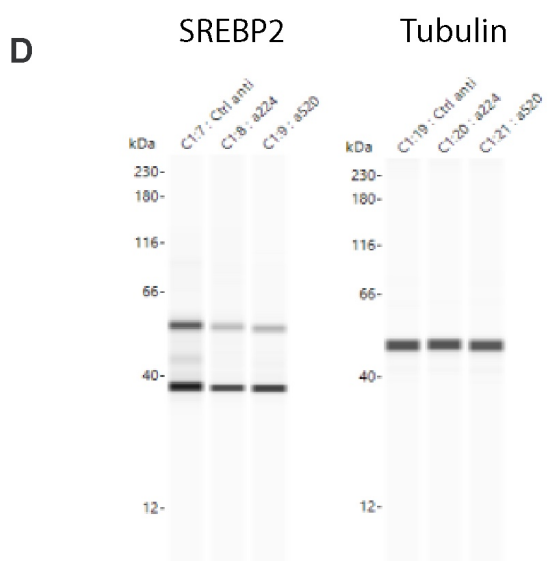
control anti-miR	+	-	-	+	-	-
anti-miR-224	-	+	-	-	+	-
anti-miR-520d	-	-	+	-	-	+
simvastatin	-	-	-	+	+	+



control anti-miR	+	-	-	+	-	-
anti-miR-224	-	+	-	-	+	-
anti-miR-520d	-	-	+	-	-	+
simvastatin	-	-	-	+	+	+



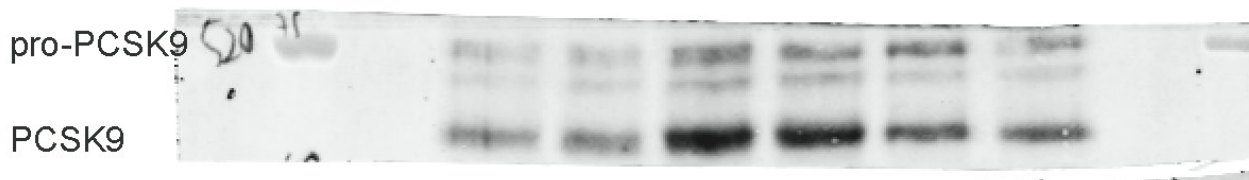
control anti-miR	+	-	-	+	-	-
anti-miR-224	-	+	-	-	+	-
anti-miR-520d	-	-	+	-	-	+
simvastatin	-	-	-	+	+	+



control anti-miR	+	-	-	+	-	-
anti-miR-224	-	+	-	-	+	-
anti-miR-520d	-	-	+	-	-	+

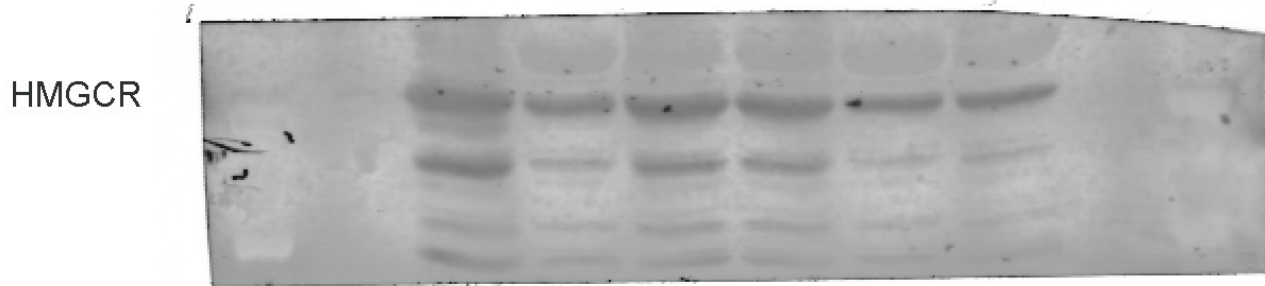
# Supplemental Figure 8

**A**



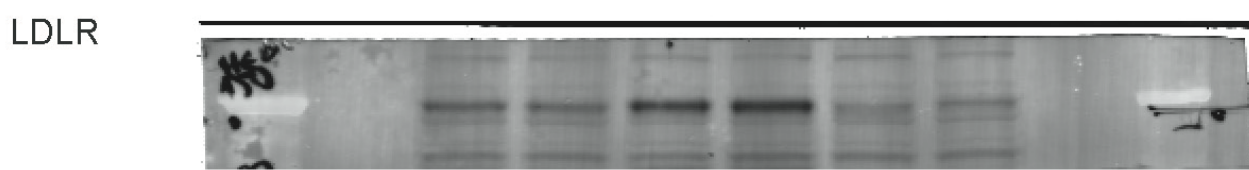
control mimic	+	-	+	-	+	-
miR-520d mimic	-	+	-	+	-	+
Simvastatin	-	-	+	+	-	-
GW3965	-	-	-	-	+	+

**B**



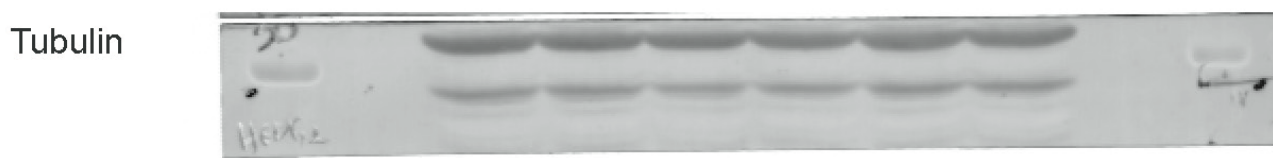
control mimic	+	-	+	-	+	-
miR-520d mimic	-	+	-	+	-	+
Simvastatin	-	-	+	+	-	-
GW3965	-	-	-	-	+	+

**C**



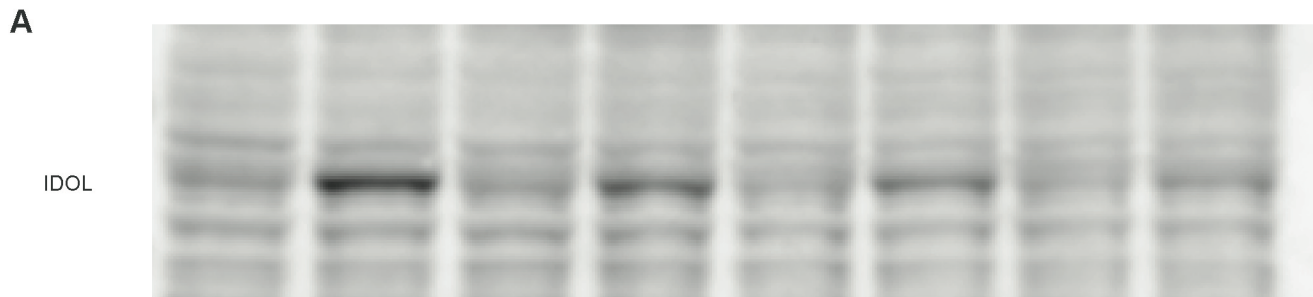
control mimic	+	-	+	-	+	-
miR-520d mimic	-	+	-	+	-	+
Simvastatin	-	-	+	+	-	-
GW3965	-	-	-	-	+	+

**D**



control mimic	+	-	+	-	+	-
miR-520d mimic	-	+	-	+	-	+
Simvastatin	-	-	+	+	-	-
GW3965	-	-	-	-	+	+

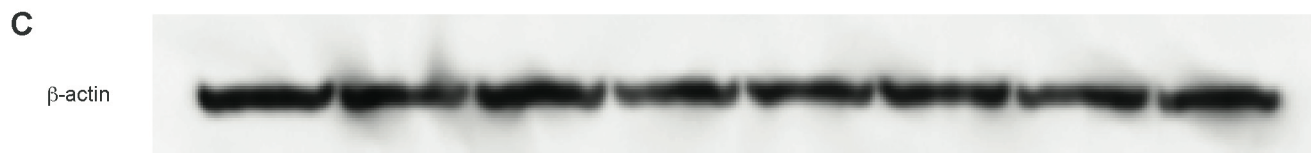
## Supplemental Figure 9



control mimic	+	+	-	-	-	-	-	-
miR-224 mimic	-	-	+	+	-	-	-	-
miR-520d mimic	-	-	-	-	+	+	-	-
siRNA IDOL	-	-	-	-	-	-	+	+
GW3965	-	+	-	+	-	+	-	+



control mimic	+	+	-	-	-	-	-	-
miR-224 mimic	-	-	+	+	-	-	-	-
miR-520d mimic	-	-	-	-	+	+	-	-
siRNA IDOL	-	-	-	-	-	-	+	+
GW3965	-	+	-	+	-	+	-	+



control mimic	+	+	-	-	-	-	-	-
miR-224 mimic	-	-	+	+	-	-	-	-
miR-520d mimic	-	-	-	-	+	+	+	-
siRNA IDOL	-	-	-	-	-	-	-	+
GW3965	-	+	-	+	-	+	-	+

