

SUPPLEMENTAL MATERIAL

Squalene epoxidase/SQLE is a candidate target for treatment of colorectal cancers with *p53* mutation and elevated *c-MYC* expression

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Supplemental Figure 2: Cell number of human normal intestinal fibroblasts after suppression of *SQLE*

Supplemental Figure 3: *SQLE* is repressed by *p53* and represents a potential target of the *p53*-induced microRNA-205

Supplementary Figure 4: *SQLE* expression is induced by *c-MYC*

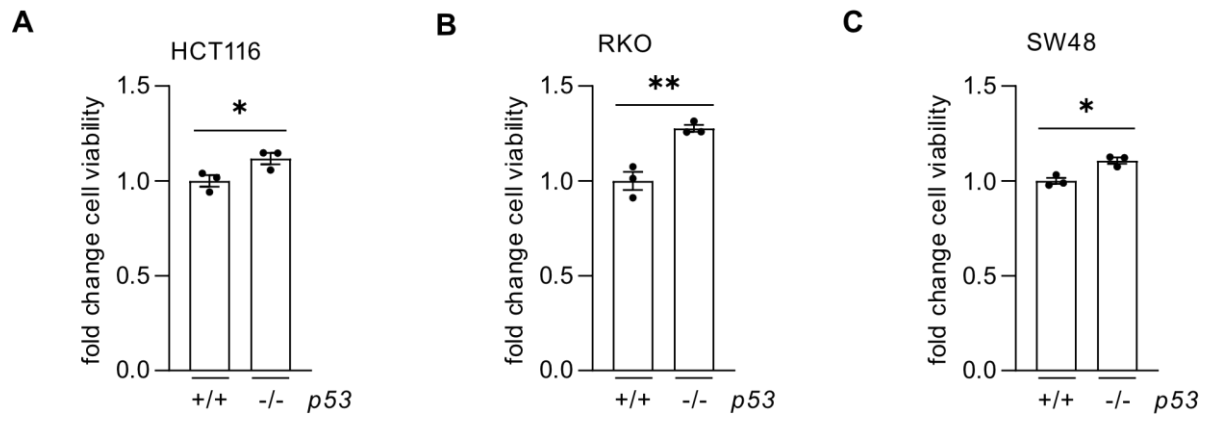
Supplemental Table 1: Sequence information for miR-205-5p mimics and antagomirs

Supplemental Table 2: List of antibodies

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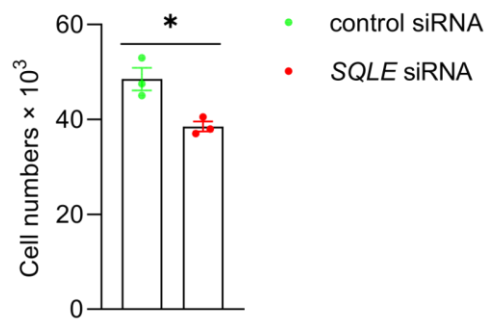
Supplemental Table 4: Oligonucleotides used for cloning and mutagenesis of *SQLE* 3'UTR

Supplemental Table 5: Oligonucleotides used for qChIP

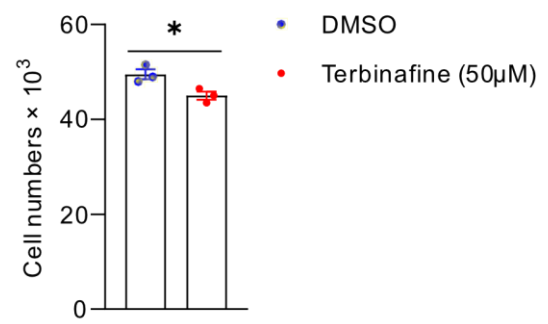


Supplemental Figure 1: Cell viability of HCT116 (A), RKO (B) and SW48 (C) $p53^{+/+}$ and $p53^{-/-}$ cells in the absence of Terbinafine.

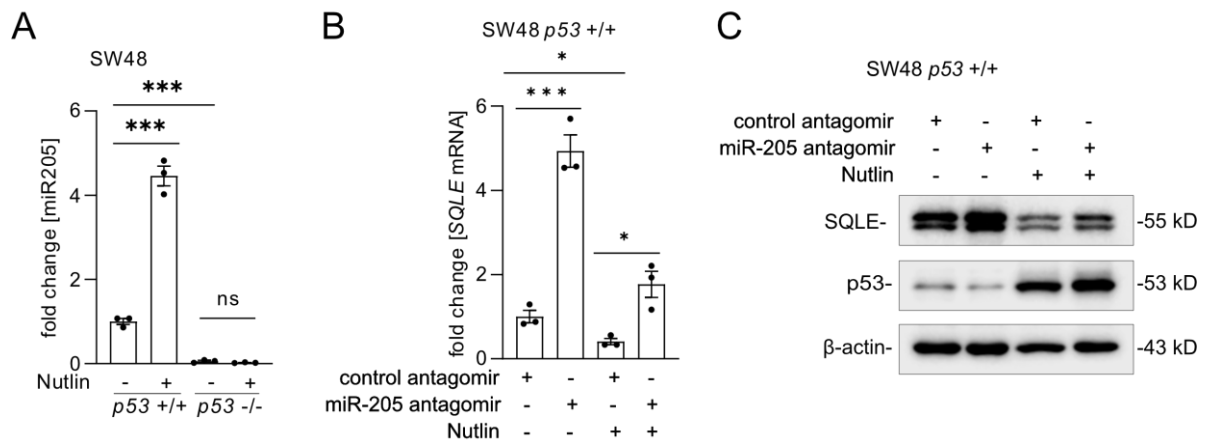
A human intestinal fibroblasts



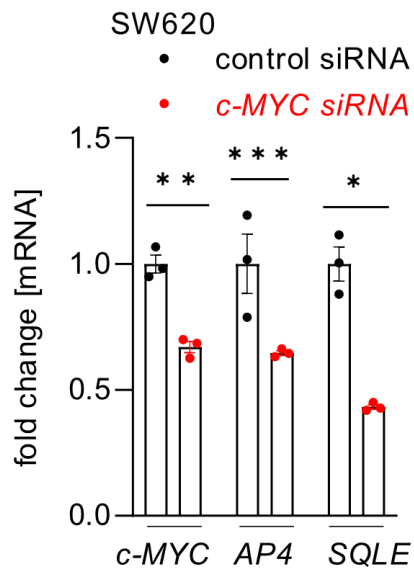
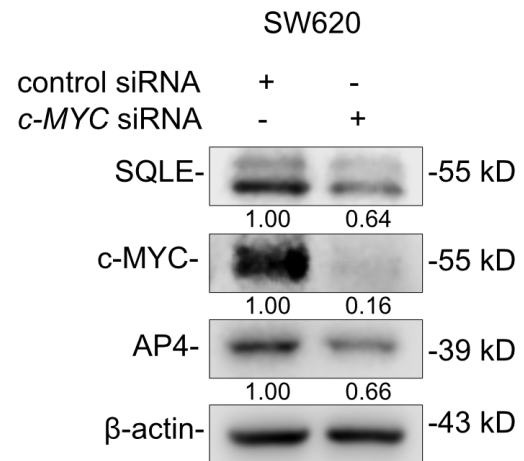
B human intestinal fibroblasts



Supplementary Figure 2: Cell proliferation/number of human intestinal fibroblasts after knockdown of *SQLE* or treatment with the *SQLE*-inhibitor Terbinafine for 96 hours.



Supplemental Figure 3: *SQLE* is repressed by *p53* and represents a potential target of the *p53*-induced microRNA-205. **(A)** The expression of *SQLE* mRNA after the activation of *p53* by Nutlin-3a in SW48 cells. **(B)** qPCR analysis after transfection of miR-205 antagomir for 60 hours and Nutlin-3a treatment for 48 hours in SW48 cells. **(C)** Western blot analysis after transfection of miR-205 antagomir for 60h and Nutlin-3a treatment for 48h in SW48 cells.

A**B**

Supplemental Figure 4: *SQLE* expression is induced by *c-MYC*. **(A)** qPCR analysis after transfection of transfected with the indicated oligonucleotides in SW620 cells. **(B)** Western blot analysis after transfection of transfected with the indicated oligonucleotides in SW620 cells.

Supplemental Table 1: Sequence information for miR-205-5p mimics and antagomirs

Oligo	Sequence information (5'-3')
hsa-miR-205-5p mimic	UCCUUCAUCCACCGGAGUCUG
Control mimic	UCACCGGGUGUAAAUCAGCUUG
hsa-miR-205-5p antagomir	AGACTCCGGTGAATGAAGG
Antagomir control	TAACACGTCTATACGCCCA

Supplemental Table 2: List of antibodies

Epitope	Species	Catalog No.	Company	Use	Dilution	Source
Primary antibodies						
SQLE	Human	#sc-271651	SANTA CRUZ	WB	1:1000	mouse
c-Myc	Human	#sc-764	SANTA CRUZ	WB	1:1000	rabbit
c-Myc AP-4 (A-8)	Human	#10828-1-AP	Proteintech	qCHIP	1:50	rabbit
	Human	#sc-377042	SANTA CRUZ	WB	1:1000	mouse
AP-4 (C-18)	Human	#sc-18595	SANTA CRUZ	qCHIP	1:50	goat
p53 (DO-1)	Human	#sc-126	SANTA CRUZ	WB	1:1000	mouse
β -actin	Human	# A2066	Sigma-Aldrich	WB	1:1000	rabbit
VSV	Human	# V4888	Sigma-Aldrich	WB	1:7500	rabbit
Second antibodies						
Anti-mouse HRP	N.A.	# W4021	Promega	WB	1:10000	goat
Anti-rabbit HRP	N.A.	# A0545	Sigma-Aldrich	WB	1:10000	goat

Supplemental Table 3: Oligonucleotides used for qPCR

gene	forward (5'-3')	reverse (5'-3')
GAPDH	TGTTGCCATCAATGACCCCTT	CTCCACGACGTA CT CAGCG
β -actin	TGACATTAAGGAGAAGCTGTGCTAC	GAGTTGAAGGTAGTTTTCGTGATG
SQLE	GGCATTGCCACTTTACCTAT	GGCCTGAGAGAATATCCGAGAAG
c-MYC	GGTGCTCCATGAGGAGACAC	GCCTGCCTCTTTTCCACAG
AP4	GCAGGCAATCCAGCACAT	GGAGGCGGTGTCAGAGGT

Supplemental Table 4: Oligonucleotides used for cloning and mutagenesis of *SQLE* 3'UTR

Oligo	Forward (5'-3')	Reverse (5'-3')
<i>SQLE</i> 3'UTR	GAAGTTTTTTGTATATAAATATG TAAATACATGC	CTGTAGTTCTCCTCAGCATTAG CACT
<i>SQLE</i> 3'UTR mutant 1	TTAAACCGTCCTTGGTTAAATAA GTTAGACATTTAAAAGAAATGA	TAACCAAGGACGGTTTAAATTG CAAATTAAGCATGTATTT
<i>SQLE</i> 3'UTR mutant 2	GAGACTTTtGGAAGAGGATATAT ATAGCATAGTACCATACC	CCTCTTCCaAAAGTCTCTTAGG ACTTGGTAAGTTCC

Supplemental Table 5: Oligonucleotides used for qChIP

Gene	Forward (5'-3')	Reverse (5'-3')
<i>SQLE</i> (c-MYC bind site)	GCTATGCCGCGTTTGGCCAATC	CCTGAGCCCCGCCCCCGGTCCC
<i>SQLE</i> (AP4 bind site)	ATGGGCGGACTCGCGCCT	CTCACCAGCATCCCTCGCG
<i>AP4</i> intron 1	GAGGTGGGCGTTCTACGG	GGTTGGGCAGGAGTGTCTAC
<i>SNAIL</i>	TTAAAATGCTGATGCCAGAGG	GCACATTAGATCCCCACAGG
<i>16q22</i>	CTACTCACTTATCCATCCAGGCTAC	ATTCACACACTCAGACATCACAG