

NFATc1 Facilitates Hepatocellular Carcinoma Progression by Regulating the Senescence-Associated Secretory Phenotype

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Table S1. Target Sequence for Knockdown/Overexpression Virus Construction

NO.	Accession	Target Seq
NFATC1-RNAi (129449)	NM_001278669.2	CGTCAGTTTCTACGTCTGCAA
NFATC1-RNAi (129450)	NM_001278669.2	CGGAATCCTGAAACTCAGAAA
NFATC1-RNAi (129451)	NM_001278669.2	CAGGGAAGACCGTGTCCACCA
LV-NFATc1 (23019)	NM_172390.3	ATGCCAAGCACCAGCTTTCCAGTCCCTTCCAAGT TTCCACTTGGCCCTGCGGCTGCGGTCTTCGGGAG AGGAGAACTTTGGGGCCCGCGCCGCGCGCCGG CGGCACCATGAAGTCAGCGGAGGAAGAACAATA TGGCTATGCATCCTCCAACGTGAGCCCCGCCCTG CCGCTCCCCACGGCGCACTCCACCCTGCCGGCCC CGTGCCACAACCTTCAGACCTCCACACCGGGCAT CATCCCGCCGGCGGATCACCCCTCGGGGTACGGA GCAGCTTTGGACGGTGGGCCCCGCGGGCTACTTCC TCTCCTCCGGCCACACCAGGCCTGATGGGGCCCC TGCCCTGGAGAGTCCTCGCATCGAGATAACCTCG TGCTTGGGCCTGTACCACAACAATAACCAGTTTT TCCACGATGTGGAGGTGGAAGACGTCCTCCCTAG CTCCAAACGGTCCCCCTCCACGGCCACGCTGAGT CTGCCCAGCCTGGAGGCCTACAGAGACCCCTCG TGCCTGAGCCCGGCCAGCAGCCTGTCCTCCCGG AGCTGCAACTCAGAGGCCTCCTCCTACGAGTCCA ACTACTCGTACCCGTACGCGTCCCCCAGACGTC GCCATGGCAGTCTCCCTGCGTGTCTCCCAAGACC ACGGACCCCGAGGAGGGCTTTCCCCGCGGGCTG GGGGCCTGCACACTGCTGGGTTCGCCGCGGCAC TCCCCCTCCACCTCGCCCCGCGCCAGCGTCACTG AGGAGAGCTGGCTGGGTGCCCCGCTCCTCCAGAC CCGCGTCCCCGTGCAACAAGAGGAAGTACAGCC TCAACGGCCGGCAGCCGCCCTACTCACCCACC ACTCGCCACGCCGTCCCCGCACGGCTCCCCGCG GGTCAGCGTGACCGACGACTCGTGGTTGGGCAA CACCACCCAGTACACCAGCTCGGCCATCGTGGCC GCCATCAACGCGCTGACCACCGACAGCAGCCTG GACCTGGGAGATGGCGTCCCTGTCAAGTCCCGC AAGACCACCCTGGAGCAGCCGCCCTCAGTGGCG CTCAAGGTGGAGCCCGTCGGGGAGGACCTGGGC AGCCCCCGCCCCGGCCGACTTCGCGCCCGAA GACTACTCCTCTTTCCAGCACATCAGGAAGGGCG GCTTCTGCGACCAGTACCTGGCGGTGCCGAGC

		ACCCCTACCAGTGGGCGAAGCCCAAGCCCCTGT CCCCTACGTCCTACATGAGCCCGACCCTGCCCCG CCTGGACTGGCAGCTGCCGTCCCACTCAGGCCC GTATGAGCTTCGGATTGAGGTGCAGCCCAAGTCC CACCACCGAGCCCACTACGAGACGGAGGGCAGC CGGGGGGCGGTGAAGGCGTCGGCCGGAGGACAC CCCATCGTGCAGCTGCATGGCTACTTGGAGAATG AGCCGCTGATGCTGCAGCTTTTCATTGGGACGGC GGACGACCGCCTGCTGCGCCCGCACGCCTTCTAC CAGGTGCACCGCATCACAGGAAGACCGTGTCC ACCACCAGCCACGAGGCCATCCTCTCCAACACC AAAGTCCTGGAGATCCCACTCCTGCCGGAGAAC AGCATGCGAGCCGTCATTGACTGTGCCGGAATCC TGAAACTCAGAACTCCGACATTGAACTTCGGA AAGGAGAGACGGACATCGGGAGGAAGAACA CGGGTACGGCTGGTGTTCGCGTTCACGTCCCGC AACCCAGCGGCCGCACGCTGTCCCTGCAGGTGG CCTCCAACCCCATCGAATGCTCCAGCGCTCAGC TCAGGAGCTGCCTCTGGTGGAGAAGCAGAGCAC GGACAGCTATCCGGTCGTGGGCGGGAAGAAGAT GGTCCTGTCTGGCCACAACCTCCTGCAGGACTCC AAGGTCATTTTCGTGGAGAAAGCCCCAGATGGCC ACCATGTCTGGGAGATGGAAGCGAAAACCTGACC GGGACCTGTGCAAGCCGAATTCTCTGGTGGTTGA GATCCCGCCGTTTCGGAATCAGAGGATAACCAGC CCCGTTACGTCAGTTTCTACGTCTGCAACGGGA AGAGAAAGCGAAGCCAGTACCAGCGTTTCACCT ACCTTCCCGCCAACGGTAACGCCATCTTTCTAAC CGTAAGCCGTGAACATGAGCGCGTGGGGTGCTTT TTC
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Table S2. The primers utilized in qRT-PCR

Gene Name		Forward Primer		Reverse Primer	
NFATc1	F	5'-GATGGAAGCGAAAACTGACC- 3'	R	5'-TCCTCTGATTCCGAAATGGC-3'	
NF-κB	F	5'-ACTCGCCACCCGGCTTC- 3'	R	5'-GGATGCATTGGGGGCTTTAC-3'	
p53	F	5'-GAGGGATGTTTGGGAGATGTAA- 3'	R	5'-CCCTGGTTAGTACGGTGAAGTG-3'	
p21	F	5'-TGGAGACTCTCAGGGTCGAAA- 3'	R	5'-GGCGTTGGAGTGGTAGAAATC-3'	
p16	F	5'-CAGTAACCATGCCCCGCATAGA- 3'	R	5'-AAGTTTCCCGAGGTTTCTCAGA-3'	
TNF-α	F	5'-CCTCTCTCTAATCAGCCCTCTG- 3'	R	5'-GAGGACCTGGGAGTAGATGAG-3'	
IL-6	F	5'-ATGCAATAACCACCCCTGAC- 3'	R	5'-AAAGCTGCGCAGAATGAGAT-3'	
IL-8	F	5'-CATACTCCAAACCTTTCCAC- 3'	R	5'-TCAAAAATTCTCCACAACC-3'	
IL-1β	F	5'-AAACCTCTTCGAGGCACAAG- 3'	R	5'-GGCCATCAGCTTCAAAGAAC-3'	
β-actin	F	5'- GGCGGCACCACCATGTACCCCT- 3'	R	5'-AGGGGCCGGACTCGTCATACT-3'	
GAPDH	F	5'-GGAGCGAGATCCCTCCAAAAT- 3'	R	5'-GGCTGTTGTCATACTTCTCATGG-3'	

Table S3. Key Resources

REAGENT or RESOURCE	SOURCE	Catalog#
ANTIBODIES		
NFATc1 Antibody	Affinity	DF6446
NF- κ B p65 Antibody	Affinity	AF5006
p53 (DO-1)	Santa Cruz	SC-126
p21 Waf1/Cip1/(F-5)	Santa Cruz	SC-6246
p16 INK4A (F-12)	Santa Cruz	SC-1661
Anti-TMP21 Antibody [PSH01-41]	HUABIO	HA721679
GAPDH (D16H11)XP® Rabbit mAb	Cell Signaling Technology	5174
Histone H3 Monoclonal Antibody	Proteintech	68345-1-Ig
Goat Anti-Rabbit IgG (H+L) HRP	Affinity	S0001
Goat Anti-Mouse IgG (H+L) HRP	Affinity	S0002
MaxVisionT TM HRP-Polymer anti-Mouse/Rabbit IHC Kit	Maixi_Bio	KIT-5010
CRITICAL COMMERCIAL ASSAYS		
Dulbecco's Modified Eagle Medium (DMEM)	Gibco	C11995500BT
Fetal Bovine Serum	ExCell	FSD500
Penicillin-Streptomycin	Gibco	15140-122
DMEM added with 1.5 g/L sodium bicarbonate	iCell	1280001
Opti-MEM	Gibco	31985-070
HitransG P	Genechem	REVG003
Puromycin	Genechem	REVG1001
Cell Counting Kit-8 (CCK-8)	TargetMol	C0005-30
Crystal Violet Staining	Biosharp	BL802A
Polycarbonate Filter Chambers	Corning	3422
Matrigel	Corning	356234
Cell Cycle Analysis Kit	Biosharp	BL114A
APC Annexin V Apoptosis Detection Kit with 7-AAD	BioLegend	640930
Senescent Cell Histochemical Staining Kit	Beyotime	C0602
RNA-Quick Purification Kit	Feijie	fast200
5× All-In-One RT MasterMix	ABM	G490
UltraSYBR Mixture	Kangwei Century	CW0957
Cytosolic and Nuclear Extraction Kit	INVENT	NT-032
BCA Protein Assay Kit	Beyotime	P0010
SDS-PAGE	Epizyme	PG112
PVDF membranes	Millipore	ISEQ00010
PageRuler TM Prestained Protein Ladder	Thermo	26616
Albumin Bovine	Biosharp	BS114
Enhanced Chemiluminescence Substrate	Millipore	WBKLS0100
Sodium Citrate Antigen Retrieval Solution (50X)	Biosharp	BL619A

3% Hydrogen Peroxide	Boster	AR1108
Goat Serum	Boster	AR0009
Diaminobenzidine	Maixi_Bio	DAB-0031
CELL LINES		
HCCLM3	ATCC	CRL-3430
Huh7	ATCC	HTB-96™
ANIMALS		
male BALB/c nude mice	Jinan PengYue Laboratory Animal Breeding Co., Ltd	N/A

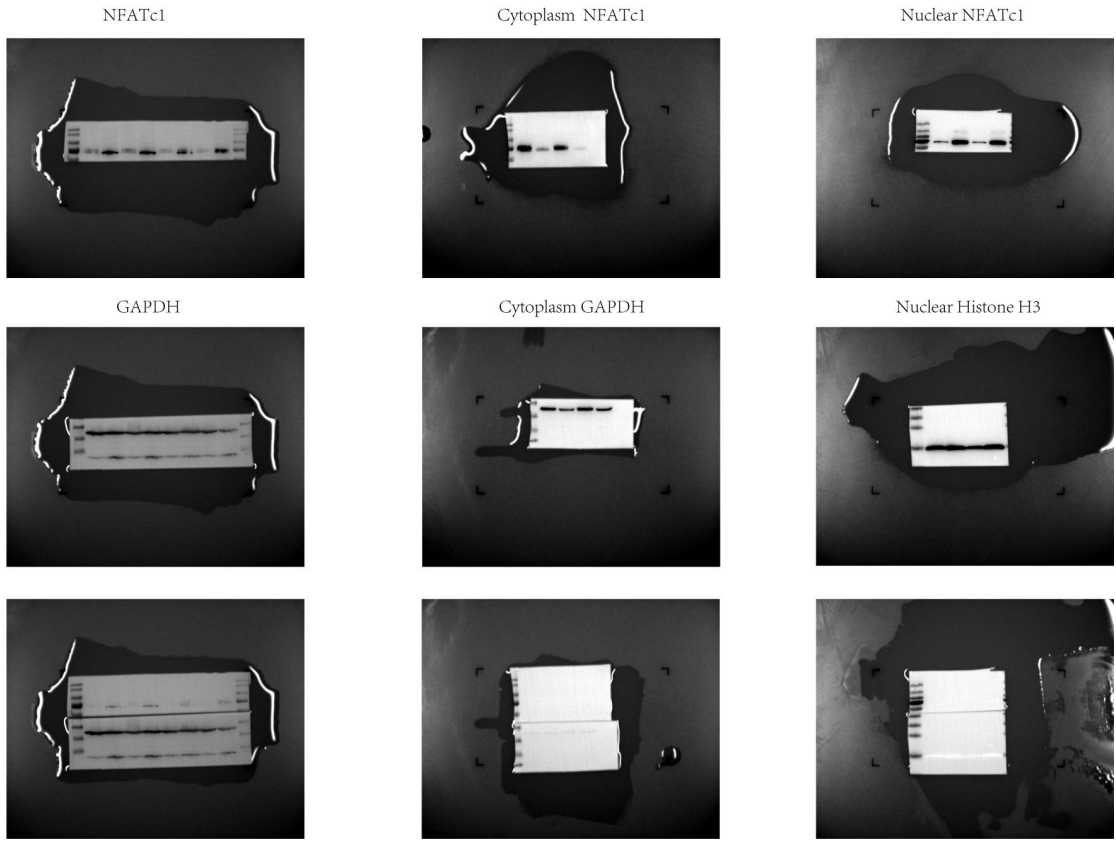


Fig.S1 Full-length Western blot images corresponding to Figure 1 in the manuscript.

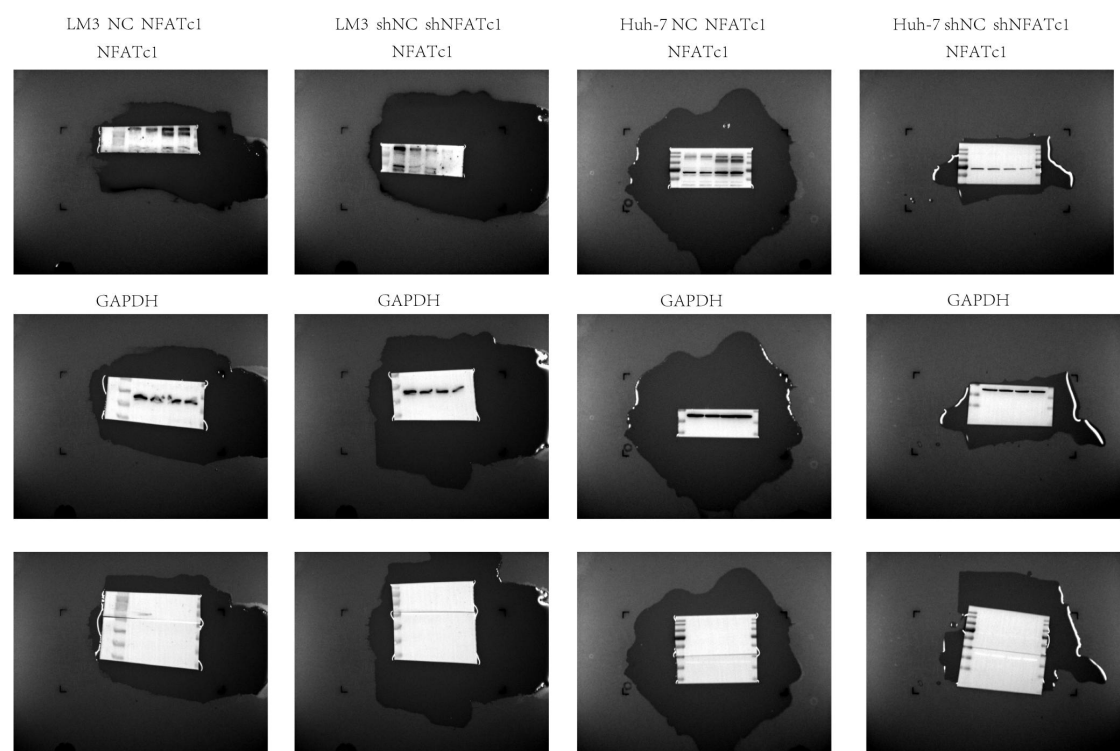


Fig.S2 Full-length Western blot images corresponding to Figure 2 in the manuscript.



Fig.S3 Full-length Western blot images corresponding to Figure 3 in the manuscript.

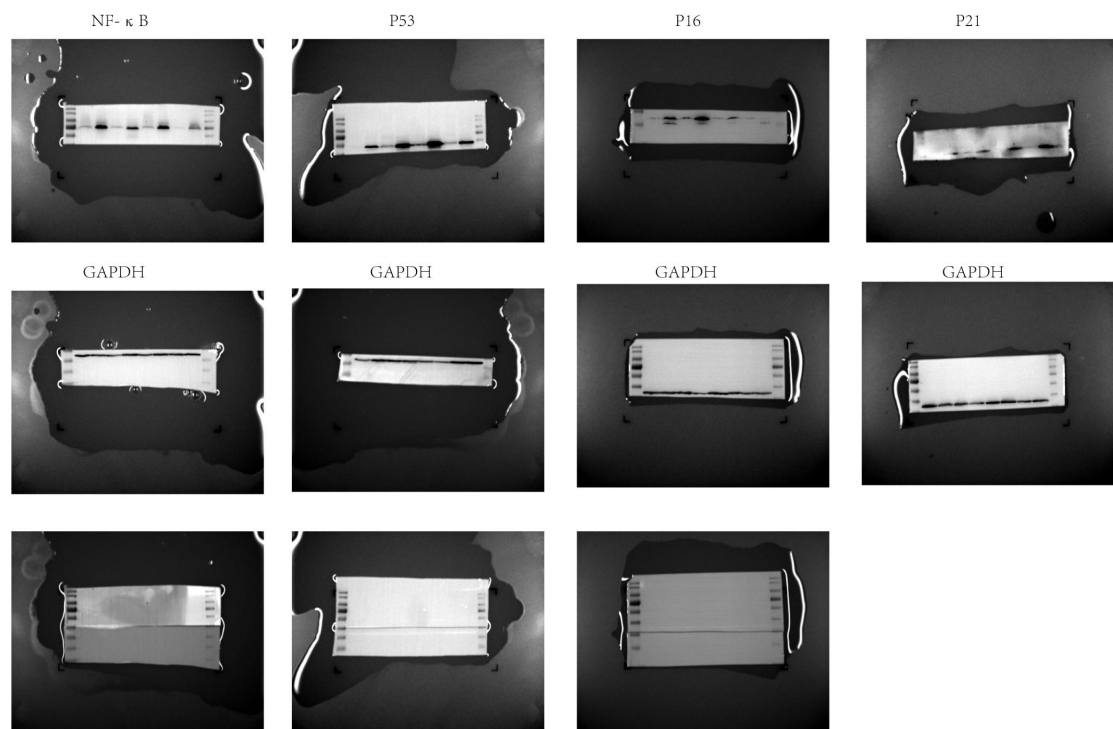


Fig.S4 Full-length Western blot images corresponding to Figure 5 in the manuscript.