

Survival prediction nomogram based on exosome-related lncRNAs

Table S1. MiRNAs Targeted by Underlying lncRNAs

lncRNA	miRNAs targeted by lncRNAs
CTD-2116N20.1	miR-141/200a, miR-148ab-3p/152, miR-18ab/4735-3p
RP11-538D16.2	miR-7/7ab, miR-9/9ab, miR-96/507/1271, miR-135ab/135a-5p, miR-137/137ab, miR138/138ab, miR143/1721/4770, miR-146ac/146b-5p, miR-150/5127, miR-17/17-5p/20ab/20b-5p/93/106ab/427/518a-3p/519d, miR-181abcd/4262, miR-182, miR-18ab/4735-3p, miR-193/193b/193a-3p, miR-205/205ab, miR-219-5p/508/508-3p/4782-3p, miR-233

Table S2. MiRNAs Targeted by Co-Expressed Proteins in Exosomes

mRNA	miRNAs targeted by mRNAs
CCNB1	miR-551a, miR-130ac/301ab/301b/301b-3p/454/721/4295/3666, miR-7/7ab, miR-133abc, miR-135ab/135a-5p, miR-139-5p, miR-140/140-5p/876-3p/1244, miR-144, miR-145, miR-148ab-3p/152, miR-17/17-5p/20ab/20b-5p/93/106ab/427/518a-3p/519d, miR-181abcd/4262, miR-183, miR-199ab-5p, miR-19ab, miR-208ab/208ab-3p, miR-214/761/3619-5p, miR-217, miR-218/218a, miR-223, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-101/101ab, miR-103a/107/107ab, miR-124/124ab/506, miR-338/338-3p, miR-34ac/34bc-5p/449abc/449c-5p, miR-425/425-5p/489, miR-499-5p
CDCA3	miR-93/93a/105/106a/291a-3p/294/295/302abcde/372/373/428/519a/520be/520acd-3p/1378/1420ac, miR-135ab/135a-5p, miR-138/138ab, miR-142-3p, miR-143/1721/4770, miR-145, miR-17/17-5p/20ab/20b-5p/93/106ab/427/518a-3p/519d, miR-18ab/4735-3p, miR-199ab-5p, miR-208ab/208ab-3p, miR-210, miR-217, miR-22/22-3p, miR-223, miR-24/24ab/24-3p, miR-124/124ab/506, miR-33ab/33-5p, miR-125a-5p/125b-5p/351/670/4319, miR-10abc/10a-5p, miR-490-3p, miR-499-3p
CDCA8	miR-132/212/212-3p, miR-133abc, miR-9/9ab, miR-96/507/1271, miR-96/507/1271, miR-93/93a/105/106a/291a-3p/294/295/302abcde/372/373/428/519a/520be/520acd-3p/1378/1420ac, miR-139-5p, miR-141/200a, miR-143/1721/4770, miR-146ac/146b-5p, miR-182, let-7/98/4458/4500, miR-192/215, miR-193/193b/193a-3p, miR-194, miR-1ab/206/613, miR-200bc/429/548a, miR-204/204b/211, miR-21/590-5p, miR-214/761/3619-5p, miR-216a, miR-30abcdef/30abe-5p/384-5p, miR-125a-5p/125b-5p/351/670/4319, miR-455-5p, miR-128/128ab, miR-490-3p
CDKN3	miR-15abc/16/16abc/195/322/424/497/1907, miR-181abcd/4262, miR-196abc, miR-208ab/208ab-3p, miR-216b/216b-5p, miR-219-5p/508/508-3p/4782-3p, miR-25/32/92abc/363/363-3p/367, miR-26ab/1297/4465, miR-26ab/1297/4465, miR-27abc/27a-3p, miR-101/101ab, miR-124/124ab/506, miR-338/338-3p, miR-129-5p/129ab-5p, miR-490-3p, miR-499-5p
E2F2	miR-503, miR-130ac/301ab/301b/301b-3p/454/721/4295/3666, miR-93/93a/105/106a/291a-3p/294/295/302abcde/372/373/428/519a/520be/520acd-3p/1378/1420ac, miR-96/507/1271, miR-99ab/100, miR-138/138ab, miR-141/200a, miR-145, miR-146ac/146b-5p, miR-148ab-3p/152, miR-150/5127, miR-155, miR-17/17-5p/20ab/20b-5p/93/106ab/427/518a-3p/519d, miR-181abcd/4262, miR-182, miR-183, let-7/98/4458/4500, miR-196abc, miR-19ab, miR-204/204b/211, miR-205/205ab, miR-208ab/208ab-3p, miR-214/761/3619-5p, miR-216a, miR-216b/216b-5p, miR-218/218a, miR-22/22-3p, miR-221/222/222ab/1928, miR-223, miR-23abc/23b-3p, miR-26ab/1297/4465, miR-31, miR-103a/107/107ab, miR-124/124ab/506, miR-338/338-3p, miR-33a-3p/365/365-3p, miR-34ac/34bc-5p/449abc/449c-5p, miR-383, miR-125a-5p/125b-5p/351/670/4319, miR-455-5p, miR-128/128ab, miR-129-5p/129ab-5p, miR-490-3p, miR-499-5p
HAUS5	miR-503, miR-130ac/301ab/301b/301b-3p/454/721/4295/3666, miR-7/7ab, miR-93/93a/105/106a/291a-3p/294/295/302abcde/372/373/428/519a/520be/520acd-3p/1378/1420ac, miR-135ab/135a-5p, miR-138/138ab, miR-143/1721/4770, miR-148ab-3p/152, miR-181abcd/4262, miR-184, miR-203, miR-204/204b/211, miR-205/205ab, miR-208ab/208ab-3p, miR-214/761/3619-5p, miR-216a, miR-216b/216b-5p, miR-22/22-3p, miR-24/24ab/24-3p, miR-26ab/1297/4465, miR-103a/107/107ab, miR-103a/107/107ab, miR-34ac/34bc-5p/449abc/449c-5p, miR-375, miR-425/425-5p/489, miR-129-5p/129ab-5p, miR-490-3p, miR-499-5p
LMNB2	miR-503, miR-7/7ab, miR-133abc, miR-9/9ab, miR-143/1721/4770, miR-145, miR-15abc/16/16abc/195/322/424/497/1907, miR-192/215, miR-193/193b/193a-3p, miR-205/205ab, miR-208ab/208ab-3p, miR-216b/216b-5p, miR-217, miR-218/218a, miR-122/122a/1352, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-30abcdef/30abe-5p/384-5p, miR-338/338-3p, miR-34ac/34bc-5p/449abc/449c-5p, miR-125a-5p/125b-5p/351/670/4319, miR-499-5p
MCM4	miR-132/212/212-3p, miR-7/7ab, miR-93/93a/105/106a/291a-3p/294/295/302abcde/372/373/428/519a/520be/520acd-3p/1378/1420ac, miR-96/507/1271, miR-135ab/135a-5p, miR-137/137ab, miR-138/138ab, miR-140/140-5p/876-3p/1244, miR-142-3p, miR-143/1721/4770, miR-145, miR-146ac/146b-5p, miR-150/5127, miR-15abc/16/16abc/195/322/424/497/1907, miR-17/17-5p/20ab/20b-5p/93/106ab/427/518a-3p/519d, miR-181abcd/4262, miR-182, miR-183, miR-190/190ab, miR-191, miR-192/215, miR-193/193b/193a-3p, miR-194, miR-196abc, miR-199ab-5p, miR-1ab/206/613, miR-203, miR-204/204b/211, miR-214/761/3619-5p, miR-216a, miR-216b/216b-5p, miR-217, miR-218/218a, miR-219-5p/508/508-3p/4782-3p, miR-22/22-3p, miR-223, miR-122/122a/1352, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-25/32/92abc/363/363-3p/367, miR-27abc/27a-3p, miR-29abcd, miR-103a/107/107ab, miR-338/338-3p, miR-33a-3p/365/365-3p, miR-425/425-5p/489, miR-125a-5p/125b-5p/351/670/4319, miR-455-5p, miR-128/128ab, miR-129-5p/129ab-5p, miR-490-3p
MYBL2	miR-130ac/301ab/301b/301b-3p/454/721/4295/3666, miR-133abc, miR-9/9ab, miR-138/138ab, miR-143/1721/4770, miR-145, miR-148ab-3p/152, miR-15abc/16/16abc/195/322/424/497/1907, miR-182, miR-192/215, miR-193/193b/193a-3p, miR-199ab-5p, miR-205/205ab, miR-214/761/3619-5p, miR-22/22-3p, miR-122/122a/1352, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-26ab/1297/4465, miR-27abc/27a-3p, miR-29abcd, miR-30abcdef/30abe-5p/384-5p, miR-103a/107/107ab, miR-338/338-3p, miR-34ac/34bc-5p/449abc/449c-5p, miR-375

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PLK1	miR-503, miR-7/7ab, miR-9/9ab, miR-93/93a/105/106a/291a-3p/294/295/302abcde/372/373/428/519a/520be/520acd-3p/1378/1420ac, miR-96/507/1271, miR-138/138ab, miR-141/200a, miR-145, miR-148ab-3p/152, miR-150/5127, miR-15abc/16/16abc/195/322/424/497/1907, miR-181abcd/4262, miR-182, miR-183, let-7/98/4458/4500, miR-193/193b/193a-3p, miR-196abc, miR-1ab/206/613, miR-200bc/429/548a, miR-204/204b/211, miR-205/205ab, miR-214/761/3619-5p, miR-217, miR-218/218a, miR-22/22-3p, miR-122/122a/1352, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-101/101ab, miR-29abcd, miR-31, miR-103a/107/107ab, miR-124/124ab/506, miR-338/338-3p, miR-34ac/34bc-5p/449abc/449c-5p, miR-375, miR-383, miR-455-5p, miR-129-5p/129ab-5p, miR-490-3p
RAD54L	miR-503, miR-551a, miR-130ac/301ab/301b/301b-3p/454/721/4295/3666, miR-7/7ab, miR-133abc, miR-135ab/135a-5p, miR-138/138ab, miR-140/140-5p/876-3p/1244, miR-143/1721/4770, miR-145, miR-146ac/146b-5p, miR-148ab-3p/152, miR-150/5127, miR-15abc/16/16abc/195/322/424/497/1907, miR-182, let-7/98/4458/4500, miR-193/193b/193a-3p, miR-196abc, miR-1ab/206/613, miR-205/205ab, miR-214/761/3619-5p, miR-22/22-3p, miR-221/222/222ab/1928, miR-122/122a/1352, miR-26ab/1297/4465, miR-27abc/27a-3p, miR-101/101ab, miR-30abcdef/30abe-5p/384-5p, miR-31, miR-103a/107/107ab, miR-124/124ab/506, miR-338/338-3p, miR-34ac/34bc-5p/449abc/449c-5p, miR-383
RRM2	miR-503, miR-130ac/301ab/301b/301b-3p/454/721/4295/3666, miR-7/7ab, miR-9/9ab, miR-137/137ab, miR-138/138ab, miR-139-5p, miR-140/140-5p/876-3p/1244, miR-141/200a, miR-143/1721/4770, miR-144, miR-145, miR-150/5127, miR-17/17-5p/20ab/20b-5p/93/106ab/427/518a-3p/519d, let-7/98/4458/4500, miR-196abc, miR-199ab-5p, miR-200bc/429/548a, miR-203, miR-204/204b/211, miR-208ab/208ab-3p, miR-214/761/3619-5p, miR-223, miR-23abc/23b-3p, miR-26ab/1297/4465, miR-27abc/27a-3p, miR-101/101ab, miR-30abcdef/30abe-5p/384-5p, miR-31, miR-103a/107/107ab, miR-338/338-3p, miR-125a-5p/125b-5p/351/670/4319, miR-451, miR-128/128ab, miR-499-5p
TUBA1B	miR-551a, miR-7/7ab, miR-9/9ab, miR-137/137ab, miR-139-5p, miR-142-3p, miR-143/1721/4770, miR-146ac/146b-5p, miR-153, miR-181abcd/4262, miR-182, miR-184, miR-205/205ab, miR-214/761/3619-5p, miR-216a, miR-221/222/222ab/1928, miR-223, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-103a/107/107ab, miR-124/124ab/506, miR-338/338-3p, miR-125a-5p/125b-5p/351/670/4319, miR-128/128ab, miR-129-5p/129ab-5p, miR-490-3p
WHSC1	miR-503, miR-130ac/301ab/301b/301b-3p/454/721/4295/3666, miR-7/7ab, miR-133abc, miR-9/9ab, miR-93/93a/105/106a/291a-3p/294/295/302abcde/372/373/428/519a/520be/520acd-3p/1378/1420ac, miR-96/507/1271, miR-135ab/135a-5p, miR-138/138ab, miR-139-5p, miR-140/140-5p/876-3p/1244, miR-141/200a, miR-142-3p, miR-143/1721/4770, miR-144, miR-145, miR-146ac/146b-5p, miR-148ab-3p/152, miR-150/5127, miR-155, miR-15abc/16/16abc/195/322/424/497/1907, miR-17/17-5p/20ab/20b-5p/93/106ab/427/518a-3p/519d, miR-181abcd/4262, miR-182, miR-18ab/4735-3p, miR-192/215, miR-193/193b/193a-3p, miR-196abc, miR-199ab-5p, miR-19ab, miR-1ab/206/613, miR-200bc/429/548a, miR-203, miR-204/204b/211, miR-205/205ab, miR-208ab/208ab-3p, miR-21/590-5p, miR-210, miR-214/761/3619-5p, miR-216a, miR-216b/216b-5p, miR-217, miR-218/218a, miR-219-5p/508/508-3p/4782-3p, miR-22/22-3p, miR-221/222/222ab/1928, miR-223, miR-122/122a/1352, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-26ab/1297/4465, miR-27abc/27a-3p, miR-27abc/27a-3p, miR-101/101ab, miR-29abcd, miR-30abcdef/30abe-5p/384-5p, miR-31, miR-103a/107/107ab, miR-338/338-3p, miR-33a-3p/365/365-3p, miR-33ab/33-5p, miR-34ac/34bc-5p/449abc/449c-5p, miR-375, miR-383, miR-425/425-5p/489, miR-125a-5p/125b-5p/351/670/4319, miR-10abc/10a-5p, miR-455-5p, miR-128/128ab, miR-129-5p/129ab-5p, miR-490-3p, miR-499-5p
GLUL	miR-132/212/212-3p, miR-7/7ab, miR-9/9ab, miR-93/93a/105/106a/291a-3p/294/295/302abcde/372/373/428/519a/520be/520acd-3p/1378/1420ac, miR-96/507/1271, miR-138/138ab, miR-140/140-5p/876-3p/1244, miR-141/200a, miR-143/1721/4770, miR-145, miR-146ac/146b-5p, miR-150/5127, miR-155, miR-17/17-5p/20ab/20b-5p/93/106ab/427/518a-3p/519d, miR-181abcd/4262, miR-182, miR-183, let-7/98/4458/4500, miR-18ab/4735-3p, miR-194, miR-196abc, miR-199ab-5p, miR-1ab/206/613, miR-203, miR-204/204b/211, miR-205/205ab, miR-21/590-5p, miR-214/761/3619-5p, miR-216a, miR-217, miR-221/222/222ab/1928, miR-223, miR-122/122a/1352, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-25/32/92abc/363/363-3p/367, miR-26ab/1297/4465, miR-27abc/27a-3p, miR-29abcd, miR-30abcdef/30abe-5p/384-5p, miR-31, miR-338/338-3p, miR-34ac/34bc-5p/449abc/449c-5p, miR-375, miR-383, miR-125a-5p/125b-5p/351/670/4319, miR-10abc/10a-5p, miR-129-5p/129ab-5p, miR-490-3p
MYO16	miR-503, miR-551a, miR-130ac/301ab/301b/301b-3p/454/721/4295/3666, miR-7/7ab, miR-9/9ab, miR-96/507/1271, miR-135ab/135a-5p, miR-137/137ab, miR-138/138ab, miR-139-5p, miR-140/140-5p/876-3p/1244, miR-141/200a, miR-143/1721/4770, miR-144, miR-153, miR-15abc/16/16abc/195/322/424/497/1907, miR-181abcd/4262, miR-182, miR-184, miR-187, miR-18ab/4735-3p, miR-192/215, miR-193/193b/193a-3p, miR-194, miR-199ab-5p, miR-1ab/206/613, miR-203, miR-205/205ab, miR-214/761/3619-5p, miR-216a, miR-216b/216b-5p, miR-218/218a, miR-219-5p/508/508-3p/4782-3p, miR-221/222/222ab/1928, miR-223, miR-122/122a/1352, miR-23abc/23b-3p, miR-24/24ab/24-3p, miR-27abc/27a-3p, miR-101/101ab, miR-29abcd, miR-30abcdef/30abe-5p/384-5p, miR-31, miR-103a/107/107ab, miR-124/124ab/506, miR-338/338-3p, miR-33ab/33-5p, miR-375, miR-125a-5p/125b-5p/351/670/4319, miR-451, miR-129-5p/129ab-5p, miR-490-3p

Survival prediction nomogram based on exosome-related lncRNAs

Table S3. Clinical characteristics of 95 pairs of HCC tissues specimen

Clinical factors	HCC specimen group
	(N=95)
Gender	
Male	14
Female	81
Age	
≤50	48
>50	47
TNM stage	
I and II	51
III and IV	44
PVT	
Yes	30
No	65
Hepatitis virus	
Yes	54
No	41
Tumor number	
1	58
>1	37
Tumor size	
≤5 cm	49
>5 cm	46
AFP	
≤400	50
>400	45
AST	
≤50 u	48
>50 u	47
Edmondson-Steiner grade	
I and II	64
III and IV	31

Abbreviation: PVT, portal vein tumor thrombus; AFP, alpha-fetoprotein; AST, aspartate transaminase.