

## SUPPLEMENTAL TABLES

**Table S2. Characteristics of Patients Analyzed for Exosome RN7SL1 Shielding, Related to Figure 7F.**

ID	Sex	Status	Age	Cancer Type	Resection
H1	Female	Healthy	42	None	N/A
H2	Female	Healthy	77	None	N/A
H3	Female	Healthy	24	None	N/A
H4	Female	Healthy	52	None	N/A
H5	Female	Healthy	27	None	N/A
H6	Male	Healthy	27	None	N/A
H7	Male	Healthy	27	None	N/A
H8	Male	Healthy	44	None	N/A
H9	Male	Healthy	49	None	N/A
H10	Male	Healthy	57	None	N/A
C1	Female	Cancer	52	Breast	Yes
C2	Female	Cancer	49	Breast	Yes
C3	Female	Cancer	49	Breast	Yes
C4	Female	Cancer	72	Breast	Yes
C5	Female	Cancer	55	Breast	Yes
C6	Female	Cancer	49	Breast	Yes
C7	Male	Cancer	82	Pleomorphic undifferentiated sarcoma	No
C8	Female	Cancer	33	Cervical squamous cell carcinoma	No

**Table S3. Characteristics of Breast Cancer Patients Analyzed for Exosome RN7SL1 Shielding, Related to Figure 7G.**

ID	Sex	Age	Subtype	Stage	Resection
TN1	Female	30	Triple negative	2A	Post
TN2	Female	54	Triple negative	2B	Post
TN3	Female	77	Triple negative	3C	Post
TN4	Female	68	Triple negative	3A	Pre
TN5	Female	30	Triple negative	2A	Pre
TN6	Female	52	Triple negative	2B	Pre
TN7	Female	45	Triple negative	2B	Post
TN8	Female	41	Triple negative	2A	Pre
TN9	Female	58	Triple negative	2A	Pre
TN10	Female	66	Triple negative	2B	Pre
ERPR1	Female	61	ER/PR positive	2A	Post
ERPR2	Female	60	ER/PR positive	2A	Pre
ERPR3	Female	47	ER/PR positive	2B	Post
ERPR4	Female	74	ER/PR positive	2A	Post
ERPR5	Female	85	ER/PR positive	3B	Post
ERPR6	Female	39	ER/PR positive	2A	Pre
ERPR7	Female	46	ER/PR positive	2A	Pre
ERPR8	Female	57	ER/PR positive	3C	Pre

**Table S4. Breast Cancer and Stromal Fibroblast Cell Lines, Related to STAR Methods.**

Human			Mouse	
ISG-R	ISG-NR	Fibroblast	ISG-R	Fibroblast
MDA-MB-231 (1833)	MCF7	MRC5	KB1P	ALF
MDA-MB-231 (4175)	MDA-MB-468	BJ		
MDA-MB-436				
HCC1937				

**Table S5. Primers Used for qRT-PCR, Related to STAR Methods**

## Human

	Forward	Reverse
GAPDH	GCTCAGACACCATGGGGAAGG	TTCCCGTTCTCAGCCTTGAC
18S	GTTTCAGCCACCCGAGATTGA	CCCATCACGAATGGGGTTCA
ACTB	GCCCTGAGGCACTCTTCCA	CGGATGTCCACGTCACACTTC
IFIT1	GGCTGCCTAATTTACAGCAACC	GGCATTTCATCGTCATCAATGG
MX1	CGACACGAGTTCCACAAATG	AAGCCTGGCAGCTCTCTACC
ISG15	GAGAGGCAGCGAACTCATCT	CTTCAGCTCTGACACCGACA
RIG-I	CACCTCAGTTGCTGATGAAGGC	GTCAGAAGGAAGCACTTGCTACC
POLR3G	GATGACGATGATGCCGCAGA	GGTTGCCTCATCCATGTTGT
POLR3F	AGGCTCCACCAGTCACAGAC	TGCCATTAACAGAAATCAACAAA
STAT1	TACTCCAGGCCAAAGGAAG	TTCAGCTGTGATGGCGATAG
7SK	GGGTTGATTTCGGCTGATCT	GGGGATGGTCGTCCTCTT
RN7SL1	GTGTCCGCACTAAGTTCGG	TATTCACAGGCGCGATCC
hsRN7SL1	GCTACTCGGGAGGCTGAGGCT	TATTCACAGGCGCGATCC
RMRP	AAAGTCCGCCAAGAAGCGTA	CTGCCTGCGTAACTAGAGGG
RPPH1	AGCTTGGAACAGACTCACGG	AATGGGCGGAGGAGAGTAGT
RNU2	CGTCCTCTATCCGAGGACAAT	CGGAGCAAGCTCCTATTCCA
TSG101	AGAAGGGGCGTGATAGACCT	CACTGAGACCGGCAGTCTTT
MMP1	TGTGGTGTCTCACAGCTTCC	TTTTCAACTTGCCTCCCATC

## Mouse

	Forward	Reverse
GAPDH	AGGTCCGGTGTGAACGGATTTG	TGTAGACCATGTAGTTGAGGTCA
18S	CCCCATGAACGAGGGAATT	GGGACTTAATCAACGCAAGCTT
STAT1	ACAACATGCTGGTGACAGAGCC	TGAAAAGTCCAACTCAACACCTC
ISG15	CCAGTCTCTGACTGTGAGAGC	GCATCACTGTGCTGCTGGGAC
MX1	GACCATAGGGGTCTTGACCAA	AGACTTGCTCTTTCTGAAAAGCC
mmRN7SL1	GCTACTCGGGAGGCTGAGACA	TATTCACAGGCGCGATCC

## Spike-In Controls

	Forward	Reverse
DVG396	ACTGGGTCATTCCCTGACCA	CCCTCAGGTTCCCTGATCTCAC
ERCC04	TGGGGCGAGTATTCCAATG	TGGGGAAATTTGGGAAGCAGT
ERCC95	CTTGCTGCTGCATGTTGTG	GAGCGATAGCGGTTAAGCCA
ERCC108	GCCGCTGTTGCGTAAATCAA	AGCCGACTGCTGCTCATATC
ERCC130	GTACTGACCAGCGTCACACA	GCGTGCGGTCAATCATCTTC

**Table S6. Adaptors for 5'-Triphosphate RNA Sequencing, Related to STAR Methods.**

P5_RNA	ACACUCUUUCCCUACACGACGCUCUCCGAUCU
P7_N9	GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCTNNNNNNNNN

**Table S7. Gene Targeting Sequences for siRNA, shRNA and CRISPR gRNA, Related to STAR Methods.**

siRNA

	Sequence	Catalog Number
CTRL	Non-Targeting #1	D-001810-01-20
POLR3F	SMARTpool	L-019240-01-0005
SRP9	SMARTpool	L-019731-01-0005
SRP14	SMARTpool	L-017767-01-0005
MYC	SMARTpool	L-003282-02-0005

shRNA

	Sequence	Catalog Number
CTRL	GIPZ Non-Silencing shRNA	RHS4346
RIG-I #1	TTAAATTTGTCGCTAATCC	V2LHS-199776
RIG-I #2	TAAAGTCCAGAATAACCTG	V2LHS_197176

CRISPR

	gRNA Sequence
RIG-I #1	GGGTCTTCCGGATATAATCC
RIG-I #2	GGATTATATCCGGAAGACCC

**Table S8. Ribozyme Containing RNA Sequences for In Vitro Transcription, Related to STAR Methods.**

	Sequence
RN7SL1 WT	GTAAAACGACGGCCAGTAATACGACTCACTATAGGCCGGGCGCGGTG GCGCGTGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCTGGAGGA TCGCTTGAGTCCAGGAGTTCTGGGCTGTAGTGCGCTATGCCGATCGG GTGTCCGCACTAAGTTCGGCATCAATATGGTGACCTCCCGGGAGCGG GGGACCACCAGGTTGCCTAAGGAGGGGTGAACCGGCCAGGTTCGGA AACGGAGCAGGTCAAACCTCCCGTGCTGATCAGTAGTGGGATCGCGC CTGTGAATAGCCACTGCACTCCAGCCTGGGCAACATAGCGAGACCC GTCTCTGGCCGGCATGGTCCCAGCCTCCTCGCTGGCGCCGGCTGGG CAACATTCCGAGGGGACCGTCCCCTCGGTAATGGCGAATGGGACGT CGACTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACC GCTGAGCAATAACTAGCATAACCCCTTGGGGCCTCTAACGGGTCTT GAGGGGTTTTTTGCTGAAAGGAGGAACTATATGTCATAGCTGTTTCCT G
RN7SL1 Scr	GTAAAACGACGGCCAGTAATACGACTCACTATAGTTCACATGGGCGA CCTACCGCGACAGTAGGTGGTTTTCGCTGTGGAGCTTCGCGGGAACAT TCTCACTCCGCAGTGTCCCGTTAAACGGCGGGGCTGGTGCCCGGAC AGGGGCGGGGTGTCTACCACTGGTCCAGCTCACTTTGGCGAGACGA CCGCAGTCCGAATAAATGCATGAGGCGGGCCGCACAAGCTGAAGAG AACTCCGATGGGCGGGGTATCCACCCGGCCCGTGGGGGATATGATG CCAGCTCGGTCCAACGAGCGGTTAGGGCGACCCTTGCGGCGATATG TCGAGTCCGGGCCGGCATGGTCCCAGCCTCCTCGCTGGCGCCGGCT GGGCAACATTCCGAGGGGACCGTCCCCTCGGTAATGGCGAATGGGA CGTCGACTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCC ACCGCTGAGCAATAACTAGCATAACCCCTTGGGGCCTCTAACGGGT CTTGAGGGGTTTTTTGCTGAAAGGAGGAACTATATGTCATAGCTGTTT CCTG
RN7SL1 5'Mut	GTAAAACGACGGCCAGTAATACGACTCACTATAGGCCGCCGGGCGGTG GCGCGTGCCTGTAGTGGGAGCTACTCGGGACCGTCTCGGTCCAGGA AGCGATGAGTCGTCCAGTTGACCGCTGTTACGCGATAGCCGATCGG GTGTCCGCACTAAGTTCGGCATCAATATGGTGACCTCCCGGGAGCGG GGGACCACCAGGTTGCCTAAGGAGGGGTGAACCGGCCAGGTTCGGA AACGGAGCAGGTCAAACCTCCCGTGCTGATCAGTAGTGGGATCGCGC CTGTGAATAGCCACTGCACTCCAGCCTGGGCAACATAGCGAGACCC GTCTCTGGCCGGCATGGTCCCAGCCTCCTCGCTGGCGCCGGCTGGG CAACATTCCGAGGGGACCGTCCCCTCGGTAATGGCGAATGGGACGT CGACTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACC GCTGAGCAATAACTAGCATAACCCCTTGGGGCCTCTAACGGGTCTT GAGGGGTTTTTTGCTGAAAGGAGGAACTATATGTCATAGCTGTTTCCT G
RN7SL1 MidMut	GTAAAACGACGGCCAGTAATACGACTCACTATAGGCCGGGCGCGGTG GCGCGTGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCTGGAGGA TCGCTTGAGTCCAGGAGTTCTGGGCTGTAGTGCGCTATGCCGATCGG GTGTCCGCACTAAGTTCGGCATggtataccactggtgggGGGAGCGGGGAC CACCAGGTTGCCTAAGGAGGGGTGAACCGGCCAGGTTCGGAACCGG AGCAGGTCAAACCTCCCGTGCTGATCAGTAGTGGGATCGCGCCTGTG AATAGCCACTGCACTCCAGCCTGGGCAACATAGCGAGACCCCGTCTC TGGCCGGCATGGTCCCAGCCTCCTCGCTGGCGCCGGCTGGGCAACA

	TTCCGAGGGGACCGTCCCCTCGGTAATGGCGAATGGGACGTCGACT GCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGA GCAATAACTAGCATAACCCCTTGGGGCCTCTAAACGGGTCTTGAGGG GTTTTTTGCTGAAAGGAGGAACTATATGTCATAGCTGTTTCCTG
GAPDH300	GTAAAACGACGGCCAGTAATACGACTCACTATAGATGGGGAAGGTGA AGGTTCGGAGTCAACGGATTTGGTCGTATTGGGCGCCTGGTCACCAGG GCTGCTTTTAACTCTGGTAAAGTGGATATTGTTGCCATCAATGACCCC TTCATTGACCTCAACTACATGGTTTACATGTTCCAATATGATTCCACCC ATGGCAAATTCCATGGCACCGTCAAGGCTGAGAACGGGAAGCTTGTC ATCAATGGAAATCCCATCACCATCTTCCAGGAGCGAGATCCCTCCAAA ATCAAGTGGGGCGATGCTGGCGCTGAGTACGTCGTGGAGTCCACTG GGGCCGGCATGGTCCCAGCCTCCTCGCTGGCGCCGGCTGGGCAACA TTCCGAGGGGACCGTCCCCTCGGTAATGGCGAATGGGACGTCGACT GCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGA GCAATAACTAGCATAACCCCTTGGGGCCTCTAAACGGGTCTTGAGGG GTTTTTTGCTGAAAGGAGGAACTATATGTCATAGCTGTTTCCTG