

**Supplemental table 1 The dysregulation of lncRNAs in gastric cancer**

<b>miRNAs</b>	<b>Expression</b>	<b>Biological process</b>	<b>Targets</b>	<b>References</b>
Lin28	up	promote proliferation, migration, invasion and metastasis	Her2	[1]
Lin28B	up	unknown	unknown	[2]
miR-100	up	inhibit apoptosis	HS3ST2	[3]
miR-106a	up	regulate invasion and metastasis of gastric cancer	TIMP2	[4]
miR-106b	up	promote cell migration and invasion	PTEN	[5]
miR-10b	up	promotes cell invasion	HOXD10	[6]
miR-1274a	up	promote proliferation, invasion, and EMT	FOXO4	[7]
miR-1303	up	promote proliferation and invasion	claudin-18	[8]
miR-132	up	unknown	unknown	[9]
miR-150	up	promote gastric cancer proliferation	EGR2	[10]
miR-17-5p	up	promote proliferation	SOCS6	[11]
miR-181a	up	promote proliferation, migration, and invasion; inhibit apoptosis	KLF6, ATM	[12-13]
miR-181a-5p	up	promote cell proliferation	unknown	[14]
miR-181c	up	unknown	unknown	[15]
miR-18a	up	oncogene	STAT3	[16]
miR-192	up	promote invasion	unknown	[17]
miR-196a	up	promote proliferation	p27(kip1)	[18]
miR-196a-5p	up	unknown	unknown	[19]
miR-199a-3p	up	increase cell proliferation and suppress cell apoptosis	ZHX1	[20]
miR-19a	up	promote EMT	unknown	[21]
miR-20a	up	promote cell proliferation	UBE2C	[22]
miR-21	up	stimulate gastric cancer growth and invasion	PDCD4	[23]
miR-214	up	promote proliferation, migration and invasion	PTEN	[24]
miR-215	up	promote gastric cancer cell proliferation	RB1	[25]
miR-223	up	promote proliferation, invasion, and migration	EPB41L3,FBXW7,STMN1	[26-29]
miR-23b-3p	up	reverse cancer cell resistance	ATG12 and HMGB2	[30]
miR-25	up	promote proliferation, invasion, and migration	TOB1,RECK,FBXW7,LATS2	[31-34]
miR-27	up	promote human gastric cancer cell metastasis	unknown	[35]
miR-27a	up	promote proliferation	prohibitin	[36]
miR-296-5p	up	increases proliferation	CDX1	[37]

miR-301a	up	promote cell proliferation and invasion	RUNX3	[38]
miR-362	up	induce proliferation and apoptosis resistance	NF-κB signaling	[39]
miR-363	up	promote growth and EMT	MBP-1	[40]
miR-370	up	promote proliferation and anchorage-independent growth	FOXO1	[41]
miR-372	up	promote proliferation and suppress apoptosis	TNFAIP1 and affects NF-κB signaling	[42]
miR-373	up	increase cell proliferation	TNFAIP1	[43]
miR-374a	up	promote cell proliferation, migration and invasion	SRCIN1	[44]
miR-374b-5p	up	promote invasion and metastasis	RECK	[45]
miR-377	up	promote cell proliferation	p53, PTEN and TIMP1	[46]
miR-382	up	promote angiogenesis	PTEN	[47]
miR-421	up	promote gastric cancer cell growth and inhibited apoptosis	caspase-3	[48]
miR-423-5p	up	inhibit cell proliferation and invasion	TFF1	[49]
miR-425	up	promote gastric cancer cell growth	PTEN	[50]
miR-625	up	promote invasion and metastasis	ILK	[51]
miR-630	up	unknown	unknown	[52]
miR-650	up	promote proliferation and growth of cancer cells	ING4	[53]
miR-92	up	promote gastric cancer cell proliferation and invasion	FXR	[54]
miR-942	up	decrease TRAIL-induced apoptosis	AKT	[55]
let-7b	down	inhibit cell proliferation, migration, and invasion	Cthrc1,ING1	[56-57]
let-7f	down	unknown	pepsinogen C	[58]
let-7i	down	unknown	pepsinogen C	[58]
miR-1	down	inhibit gastric cancer cell proliferation and migration	MET	[59]
miR-101	down	involve in cell migration and invasion	EZH2, Cox-2, Mcl-1 and Fos	[60]
miR-103a	down	inhibit gastric cancer cell proliferation, migration and invasion	c-Myb	[61]
miR-1182	down	inhibit proliferation and metastasis	hTERT	[62]
miR-1207-5p	down	suppress gastric cancer growth and invasion	telomerase reverse transcriptase	[63]
miR-124	down	inhibit growth and invasion of gastric cancer	ROCK1	[64]
miR-1247a	down	inhibit gastric cancer cell growth and migration	NRP1,NRP2	[65]
miR-126	down	facilitate angiogenesis of gastric cancer	VEGF-A,SOX2	[66-67]
miR-1266	down	suppress gastric cancer growth and invasion	telomerase reverse transcriptase	[63]
miR-127	down	inhibit proliferation migration and invasion	MAPK4	[68]
miR-1271	down	inhibit proliferation, induced apoptosis	IGF1R, IRS1, mTOR, and BCL2	[69]

miR-129	down	modulate multi-drug resistance	ABC transporters	[70]
miR-129-1-3p	down	inhibit the migration	BDKRB2	[71]
miR-133a	down	inhibit proliferation, migration, invasion	Sp1,IGF1R,FSCN1	[72-75]
miR-133b	down	inhibit cell proliferation, cell migration and invasion	FSCN1	[76]
miR-135a	down	inhibit gastric cancer cell proliferation	unknown	[77]
miR-137	down	inhibit proliferation	Cox-2,CDK6,Cdc42	[78-80]
miR-139	down	induce apoptosis; inhibit cell migration and proliferation	Jun	[81]
miR-141	down	inhibit cell proliferation, invasion and migration	HDGF,STAT4,ZEB1/2,TAZ	[82-87]
miR-143	down	inhibit proliferation and induce apoptosis	IGF1R,BCL2,COX-2	[88-90]
miR-144	down	inhibit metastasis	MET	[91]
miR-145	down	suppress proliferation, migration, invasion, angiogenesis and metastasis	CDH2,Ets1,SP1,CTNND1,E2F3, CDK6 and FSCN1	[92-97]
miR-146a	down	inhibit invasion and metastasis	WASF2,UHRF1	[98-99]
miR-152	down	suppress gastric cancer cell proliferation and motility	CD151	[100]
miR-153	down	reduce migration and invasion	unknown	[101]
miR-155	down	cell growth and invasion	c-myc	[102]
miR-15a	down	suppress cell proliferation, invasion and migration	YAP1	[103]
miR-16-1	down	suppress cell proliferation, invasion and migration	YAP1	[103]
miR-181b	down	suppress growth	CREB1	[104]
miR-182	down	inhibit proliferation	ANUBL1	[105]
miR-183	down	inhibit invasion	Ezrin	[106]
miR-185	down	increase the sensitivity to low-dose chemotherapeutic agents	ARC	[107]
miR-194	down	inhibit proliferation, migration,invasion and EMT	FoxM1,RBX1	[108]
miR-195	down	suppress the growth of gastric cancer cells	unknown	[109]
miR-200a	down	inhibit EMT and tumor growth	ZEB1 and ZEB2	[110]
miR-200b	down	impaired cell growth and invasion	DNMT3A, DNMT3B, and SP1	[111]
miR-200c	down	impaired cell growth and invasion	DNMT3A, DNMT3B, and SP1	[111]
miR-202-3p	down	suppress cell proliferation and induce cell apoptosis	Gli1	[112]
miR-203	down	suppress cell proliferation and invasion	CASK	[113]
miR-204	down	inhibit the invasion and proliferation	SOX4	[114]
miR-204-5p	down	inhibit gastric cancer cell proliferation	USP47 and RAB22A	[115]
miR-205	down	inhibit gastric cancer cell proliferation	unknown	[116]
miR-206	down	inhibit proliferation,migration,invasion and metastasis	CCND2,PAX3	[117-119]

miR-212	down	inhibit proliferation	RBP2	[120]
miR-218	down	inhibit invasion and metastasis	Robo1 receptor	[121]
miR-219-2-3p	down	inhibit proliferation, cell migration and invasion	unknown	[122]
miR-22	down	suppress cell proliferation	CD151	[123]
miR-24	down	restrain gastric cancer progression	RegIV	[124]
miR-26a	down	suppress tumor growth and metastasis	FGF9	[125]
miR-29a	down	inhibit migration and invasion	Robo1	[126]
miR-29c	down	inhibit proliferation, adhesion, invasion and migration	ITGB1	[127]
miR-29s	down	inhibit cells invasion	AKT2	[128]
miR-302b	down	unknown	unknown	[129]
miR-31	down	unknown	unknown	[130]
miR-32	down	inhibit the proliferation and invasion	unknown	[131]
miR-320	down	induce apoptosis	Mcl-1	[132]
miR-329	down	inhibit invasion and proliferation	TIAM1	[133]
miR-331-3p	down	induce growth arrest	E2F1	[134]
miR-335	down	suppress migration and metastasis	RASA1	[135]
miR-338	down	inhibit growth, invasion and metastasis	NRP1	[136]
miR-338-3p	down	inhibit proliferation, migration, invasion and EMT	P-Rex2a,SSX2IP,ZEB2,MACC1/Met/Akt	[137-139]
miR-34	down	inhibit proliferation, migration and invasion	Yin Yang 1	[140]
miR-361-5p	down	suppress proliferation, migration and invasion	SND1	[141]
miR-367	down	inhibit the invasion and metastasis of gastric cancer	Rab23	[142]
miR-375	down	inhibit cell proliferation	JAK2,PDK1,14-3-3zeta,ERBB2 and p53	[143-146]
miR-378	down	inhibit proliferation, cell migration and invasion; induce apoptosis	MAPK1	[147]
miR-409	down	suppress tumour cell invasion and metastasis	radixin	[148]
miR-409-3p	down	inhibit cell proliferation and apoptosis	PHF10	[149]
miR-429	down	inhibit Cell viability, proliferation and attachment	c-myc	[150]
miR-433	down	inhibit proliferation, migration and invasion	KRAS	[68,151]
miR-449	down	inhibit cell proliferation	unknown	[152]
miR-449a	down	inhibit gastric adenocarcinoma cell growth and promote cell apoptosis	Bcl-2	[153-155]
miR-451	down	reduce cell proliferation and increase sensitivity to radiotherapy	unknown	[156]
miR-486	down	inhibit tumor progression	OLFM4	[157]
miR-490-3p	down	suppress growth and metastasis	SMARCD1	[158]

miR-494	down	impaired cell growth	c-myc	[159]
miR-495	down	inhibit gastric cancer cell migration and invasion	PRL-3	[160]
miR-497	down	modulate apoptosis	BCL2	[161]
miR-503	down	inhibit proliferation and sensitize the cells to DDP-induced apoptosis	IGF1R and BCL2	[162]
miR-506	down	inhibit proliferation, invasion and EMT	SNAI2, Yap1	[163-164]
miR-513b	down	inhibit cell proliferation, migration, and promote apoptosis	HMGB3	[165]
miR-520d-3p	down	inhibit gastric cancer cell proliferation, migration	EphA2	[166]
miR-542-3p	down	suppress cell growth of gastric cancer cells	astrocyte-elevated gene-1	[167]
miR-551a	down	inhibit the migration and invasion of human gastric cancer cells	PRL-3	[160]
miR-610	down	inhibit the migration and invasion of gastric cancer cells	VASP	[168]
miR-622	down	promote cellular invasion and tumor metastasis	ING1	[169]
miR-638	down	suppresses cell proliferation	Sp2	[170]
miR-663	down	induce mitotic catastrophe growth arrest	unknown	[171]
miR-7	down	inhibit the invasion and metastasis	EGFR	[172]
miR-874	down	inhibit proliferation, angiogenesis, migration and invasion	AQP3	[173-174]
miR-9	down	unknown	RAB34	[151]
miR-941	down	inhibit gastric cancer cell growth and migration	unknown	[175]