Argonaute 2 Expression Correlates with a Luminal B Breast Cancer Subtype and Induces Estrogen Receptor Alpha Isoform Variation

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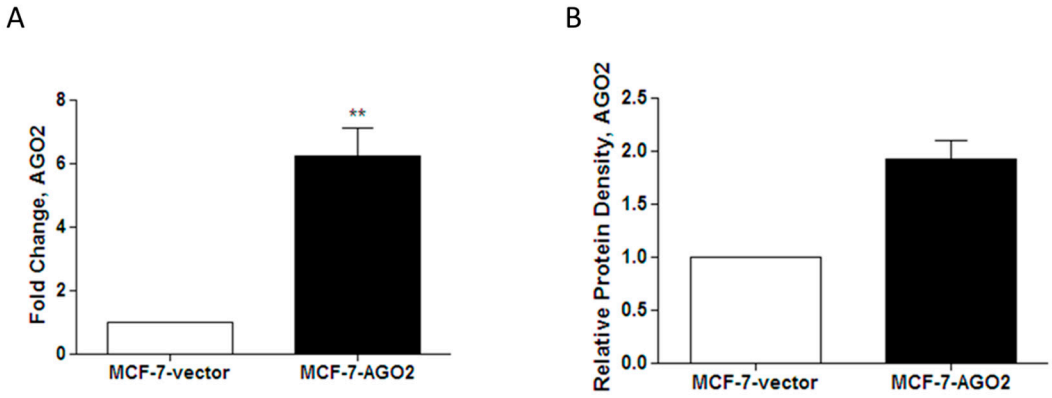

Figure S1. Validation for the overexpression of AGO2 in the MCF-7-AGO2 cell line. (**A**) qPCR and (**B**) Western blot for AGO2 gene and protein levels respectively in the MCF-7-AGO2 cell line vs. –vector. ** $p < 0.01$. $n = 3$ biological repeats.

Table S1. Overexpression of AGO2 alters the miRNA expression profile in the MCF-7 breast cancer cell line.

Expression Changes	miRNAs	Role	Target Genes	Refs.
Upregulated (>1.5 Fold Change)	hsa-miR-196a	Oncogenic	*ANXA1*	[1]
	hsa-miR-193b	Tumor Suppressor	*KRAS, MAX*	[2]
	hsa-miR-20b	Oncogenic	*HIF1A, MDR1, HIPK2, PTEN*	[3,4]
	hsa-miR-21	Oncogenic	*TGFB, TRIM2, SKI, RAS, RAB6A, RAB6C, PDCD4, GRHL3, PTEN*	[1,5-9]
	hsa-miR-335	Tumor Suppressor	*ROCK1*	[10]
	hsa-miR-132	Oncogenic	*RB1*	[11]
	hsa-miR-125a-5p	Tumor Suppressor	*BCL2, BCL2L12, MCL-1*	[1,12]
	hsa-miR-124	Tumor Suppressor	*ERK2*	[13]
	hsa-miR-212	Oncogenic	*RB1*	[11]
	hsa-let-7i	Tumor Suppressor	*RAS*	[14]
	hsa-miR-134	Oncogenic	*WWOX*	[15]
	hsa-miR-200c	Tumor Suppressor	*ZEB1, ZEB2*	[16]
	hsa-miR-18b	Tumor Suppressor	*Erα, MDM2-p53*	[17]
	hsa-let-7e	Tumor Suppressor	*RAS*	[14]
	hsa-miR-205	Oncogenic	*SHIP2*	[17]
	hsa-miR-215	Oncogenic	*RB1*	[18]
	hsa-let-7f	Tumor Suppressor	*MYH9*	[19]
	hsa-miR-184	Oncogenic	*SOX7*	[20]
Downregulated (<−1.5 Fold Change)	hsa-miR-210	Oncogenic	*ISCU*	[1,21]
	hsa-miR-96	Tumor Suppressor	*KRAS*	[22]
	hsa-miR-181d	Tumor Suppressor	*KRAS, BCL2*	[23]
	hsa-miR-100	Oncogenic and Tumor Suppressor	*RBSP3*	[1,24]
	hsa-let-7b	Tumor Suppressor	*RAS*	[1,14]
	hsa-miR-148a	Tumor Suppressor	*ROCK1*	[25]
	hsa-miR-29b	Tumor Suppressor	*TIAM1*	[26]
	hsa-miR-143	Tumor Suppressor	*COX2*	[1,27,28]
	hsa-miR-363	Tumor Suppressor	*PDPN*	[29]
	hsa-miR-29a	Oncogenic and Tumor Suppressor	*TCL1*	[1,30]
	hsa-let-7d	Tumor Suppressor	*RAS*	[14]
	hsa-miR-125b	Tumor Suppressor	*MMP13*	[1,31]
	hsa-miR-92a	Oncogenic	*CDH1*	[32]

Table S1. *Cont.*

Expression Changes	miRNAs	Role	Target Genes	Refs.
Downregulated (<−1.5 Fold Change)	hsa-let-7g	Tumor Suppressor	*RAS*	[14]
	hsa-miR-34a	Tumor Suppressor	*SIRT6*	[33]
	hsa-miR-25	Oncogenic	*BIM*	[34]
	hsa-miR-20a	Oncogenic	*TIMP2, ATG7*	[35]
	hsa-miR-135b	Oncogenic	*LATS2, β-TrCP, MDR2, LZTS1*	[1,36]
	hsa-miR-10b	Tumor Suppressor	*TIAM1*	[1,37]
	hsa-miR-140-5p	Tumor Suppressor	*VEGFA*	[1,38]
	hsa-miR-34c-5p	Tumor Suppressor	*BMF*	[39]
	hsa-miR-27a	Oncogenic	*HIF1A, MDR1, HIPK2*	[3]
	hsa-miR-218	Tumor Suppressor	*CDK6, RICTOR, CTSB*	[40]
	hsa-miR-98	Tumor Suppressor	*IL6*	[41]
	hsa-miR-181a	Oncogenic and Tumor Suppressor	*RaIA, ATM*	[42,43]
	hsa-miR-181c	Oncogenic	*WIF-1*	[44,45]
	hsa-miR-130a	Oncogenic	*PTEN, ZBTB4, TGFBR2, SMAD4*	[1]
	hsa-miR-191	Oncogenic	*BDNF, CDK6, SATB1*	[46]
	hsa-miR-32	Tumor Suppressor	*SOX9*	[47]
	hsa-miR-18a	Tumor Suppressor	*KRAS, CDC42*	[48,49]
	hsa-miR-15b	Tumor Suppressor	*BCL2*	[50]
	hsa-miR-149	Tumor Suppressor	*RAP1a, RAP1b*	[51]
	hsa-miR-301a	Oncogenic	*SMAD4*	[1,52]
	hsa-miR-17	Oncogenic	*PTEN, ZBTB4, TGFBR2, SMAD4*	[1]
	hsa-miR-7	Tumor Suppressor	*PIK3CD*	[53]
	hsa-miR-193a-5p	Tumor Suppressor	*PIK3R3, mTOR*	[54]
	hsa-miR-128	Tumor Suppressor	*BMI-1, NANOG, TGFBR1*	[55]
	hsa-miR-23b	Tumor Suppressor	*ZEB1*	[56]
	hsa-miR-9	Oncogenic	*LASS2*	[57]
	hsa-miR-19a	Oncogenic	*PTEN, ZBTB4, TGFBR2, SMAD4*	[1]
	hsa-miR-203	Tumor Suppressor	*c-JUN*	[58]

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