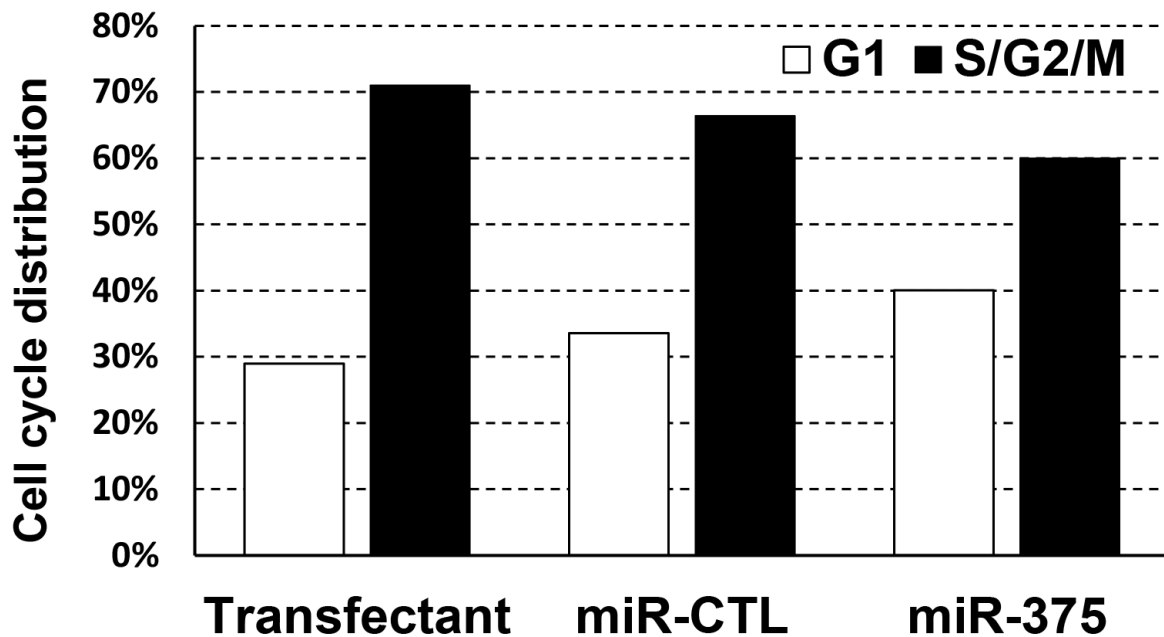
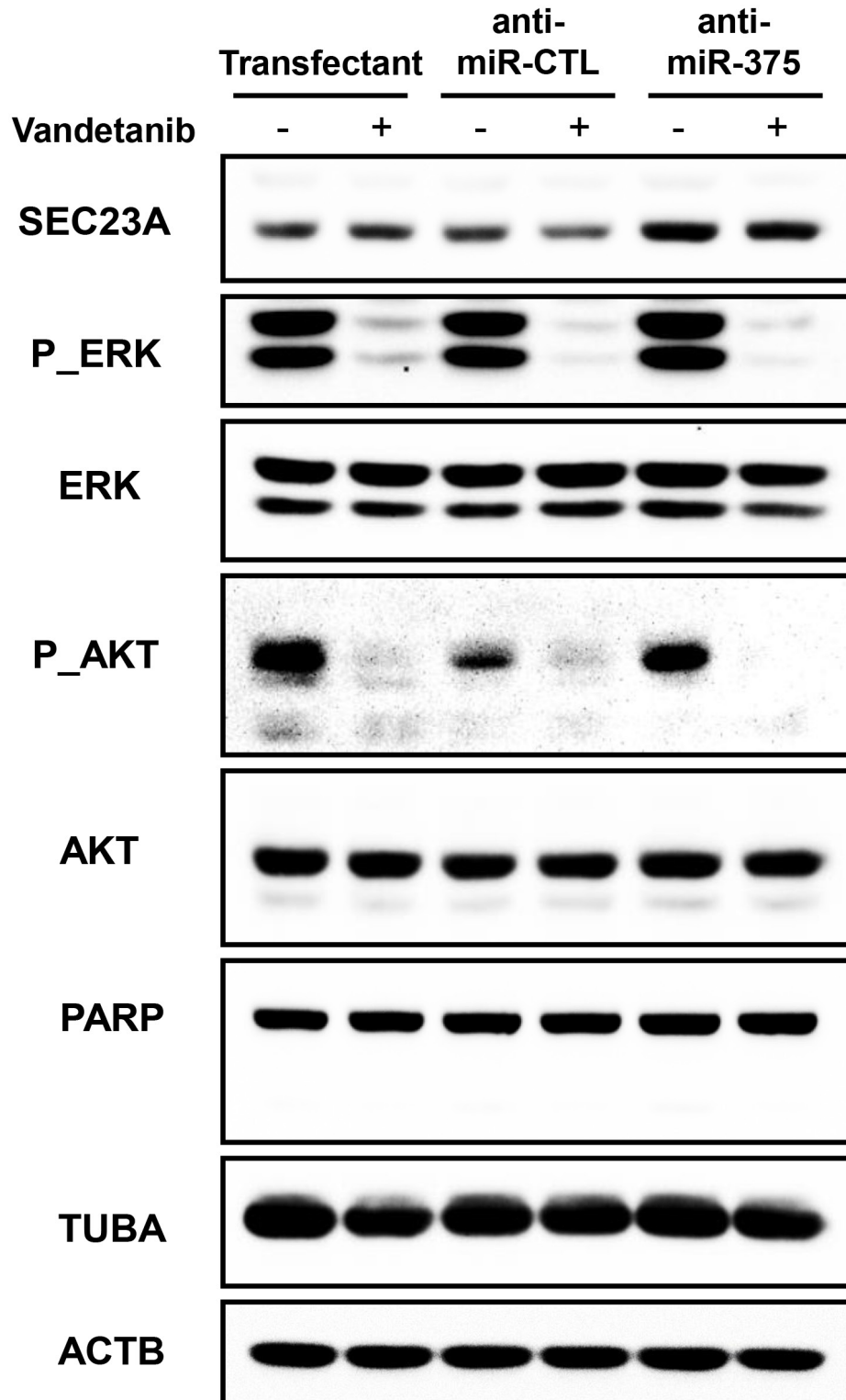


## MicroRNA-375/SEC23A as biomarkers of the *in vitro* efficacy of vandetanib

### SUPPLEMENTARY FIGURES AND TABLES



Supplementary Figure S1: Nthy-ori 3-1 - FUCCI2A cells were seeded and transfected with pre-miR-375 or pre-miR-CTL at 20pM for 24h. Cells were then harvested and analyzed by flow cytometry as described in the Material and methods.



Supplementary Figure S2: TT cells were seeded and transfected with antagomiR-375 (anti-miR-375) or antagomiR-CTL (anti-miR-CTL) for 24h and vandetanib was then added for 48h. Quantification of propidium iodide positive TT cells. Quantification of ERK, AKT pathways and PARP cleavage was performed by immunoblotting. Tubulin (TUBA) and actin B (ACTB) protein levels were used as loading controls.

Supplementary Table S1: List of different primers used for qPCR analysis

MicroRNAs	Target sequences	Applied references
Hsa-miR-375	UUUGUUCGUUCGGCUCGCGUGA	000564
Hsa-miR-451	AAACCGUUACCAUUACUGAGUU	001105
RNU 19	TTGCACCTCTGAGAGTGGAATGACTCCTGTGGAGTT GATCCTAGTCTGGGTGCAAACAATT	001003

**Supplementary Table S2: The transcriptome microarray expression profile for the set of 22 genes (24 probe-sets) down-regulated in NThy-ori 3-1 pre-mir-375 transfected cells and up-regulated in the TT antagomir-375 transfected cells**

See Supplementary File S1

**Supplementary Table S3: Genes under-expressed in the TT cell line and predicted as strong targets of miR-375**

See Supplementary File S2

Supplementary Table S4: Overview of the studies that performed a miRNA analysis of MTC

Authors	Results	Prognostic value
Abraham <i>et al.</i> 2011	Over-expression of miR-182, -183, -375, -551b and down-regulation of miR-199b-5p, -9, -9*, -223, let-7i, miR-23a in SMTC vs HMTC	miR-183 and -375 associated with - lymph node metastases - residual disease - mortality
Duan <i>et al.</i> 2014	Down-regulation of miR-129-5p	
Gundara <i>et al.</i> 2014	Primary tumor and nodal metastases miRNA relative expression correlation for miR-9*, -183 and -375	
Hudson <i>et al.</i> 2013	Over-expression of miR-375, -10a and down-regulation of miR-455	
Mian <i>et al.</i> 2012	Over-expression of miR-21, -127, -154, -224, -323, -370, -183, -375, -9*	miR-224 associated with - absence of lymph node metastases - lower stages at diagnosis - biochemically-free status at the end of the follow-up
Nikiforova <i>et al.</i> 2008	Over-expression of miR-323, -370, -129, -137, -10a, -124a, 224, 127, -9, -154.	
Pennelli <i>et al.</i> 2015	Over-expression of miR-21	Associated with high calcitonin levels, lymph node metastases, advanced stages, biochemically persistent disease
Santarpia <i>et al.</i> 2013	Over-expression of miR-130a, -138, -193a-3p, -373, -498 and down-regulation of miR-10a, -200b/-200c, -7, -29c in metastatic MTC	

Supplementary Table S5: Overview of miRNA studies performed on MTC

Patients	% C-Cells			$\Delta$ CT (CT-RNU19)		
	Non tumoral tissue	C-Cell Hyperplasia	MTC	Non tumoral tissue	C-Cell Hyperplasia	MTC
Patient 1	0	20	90	3.68	9.36	13.40
Patient 2	0	5	40	2.40	3.28	4.35
Patient 3	0	10	90	0.25	5.31	12.49
Patient 4	0	10	70	2.97	4.17	12.66
Patient 5	0	3	90	4.03	4.25	13.09
Patient 6	0	20	70	3.70	7.92	12.02