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Supplemental information

hsa_circ_0001018 promotes papillary thyroid cancer by facilitating cell survival, invasion, G_1/S cell cycle progression, and repressing cell apoptosis via crosstalk with miR-338-3p and SOX4

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Table S1 The baseline characteristics of PTC patients (n = 51)

Characteristics	**No. of cases**	**Expression of circ_0001018**		***P***
		High (n=26)	**Low(n=25)**	
Gender				
male	24	14	10	0.322
female	27	12	15	
Age				
＜55	22	9	13	0.210
≥55	29	17	12	
TNM stage				
I-II	28	10	18	0.016 [a]
III-IV	23	16	7	
Tumor size				
<2	34	15	19	0.167
≥2	17	11	6	
Lymph node metastasis				
Present	38	23	15	0.020[a]
Absent	13	3	10	
Distant metastasis				
Present	15	11	4	0.039[a]
Absent	36	15	21	

The data were analyzed using the chi-quare test. [a]P<0.05.

Table S2 the sequences of circ_0001018 OE, shRNA and miR-338-3p mimic

Name	Sequence (5'-3')
circ_0001018 OE-F	CGGATCCGATGGATAATCAAA
circ_0001018 OE-R	GGAATTCCGTTTGACGAGTTC
circ_0001018 shRNA1-F	GCTCAAGATGGATAATCAA
circ_0001018 shRNA1-R	TTGATTATCCATCTTGAGC
circ_0001018 shRNA2-F	GGTGATTAAGGATATTGAA
circ_0001018 shRNA2-R	TTCAATATCCTTAATCACC
miR-338-3p mimic	AACAATATCCTGGTGCTGAGTG
miR-338-3p inhibitor	UCCAGCAUCAGUGAUUUUGUUG
SOX4 OE-F	CGGATCCGGCTCTAAGCTGCA
SOX4 OE-R	GGAATTCCTGACTTGGGATTT

Table S3 Primers used in this study

Primer	Primer Sequence (5'-3')
circ0001018-F	CTGAGTTAGCTGAGGAGGTCA
circ0001018-R	TGGGCATAGTCAGAAACCACT
circ0000011-F	AGGTGGTGTTCCGAGATGAG
circ0000011-R	GTAGCCAGCATAGGCCAAGA
circ0000326-F	CAAAGTCAGATCAGTTATGGGACA
circ0000326-R	TGCCAGTTACTCCAGCATAAA
circ0001199-F	CTACGCTTGTGACGATGAGC
circ0001199-R	GAAGGGGGTGTCAAACTTCA
circ0000937-F	GCACTATCTGCTGAGCCAAG
circ0000937-R	GAACTGGGGCTTGTCATCC
CCT4-F	GTATTACATCCAGCAGCCAGA
CCT4-R	CTGTGGCTGGGTCAATCACT
miR-338-3p-F	TGCGGTCCAGCATCAGTGAT
miR-338-3p-R	CCAGTGCAGGGTCCGAGGT
SOX4-F	GGTCTCTAGTTCTTGCACGCTC
SOX4-R	CGGAATCGGCACTAAGGAG

Figure S1 Expression levels of the four most significant circular RNAs in PTC and the detection of transfection efficiency of circ_0001018 shRNAs and overexpression vectors.

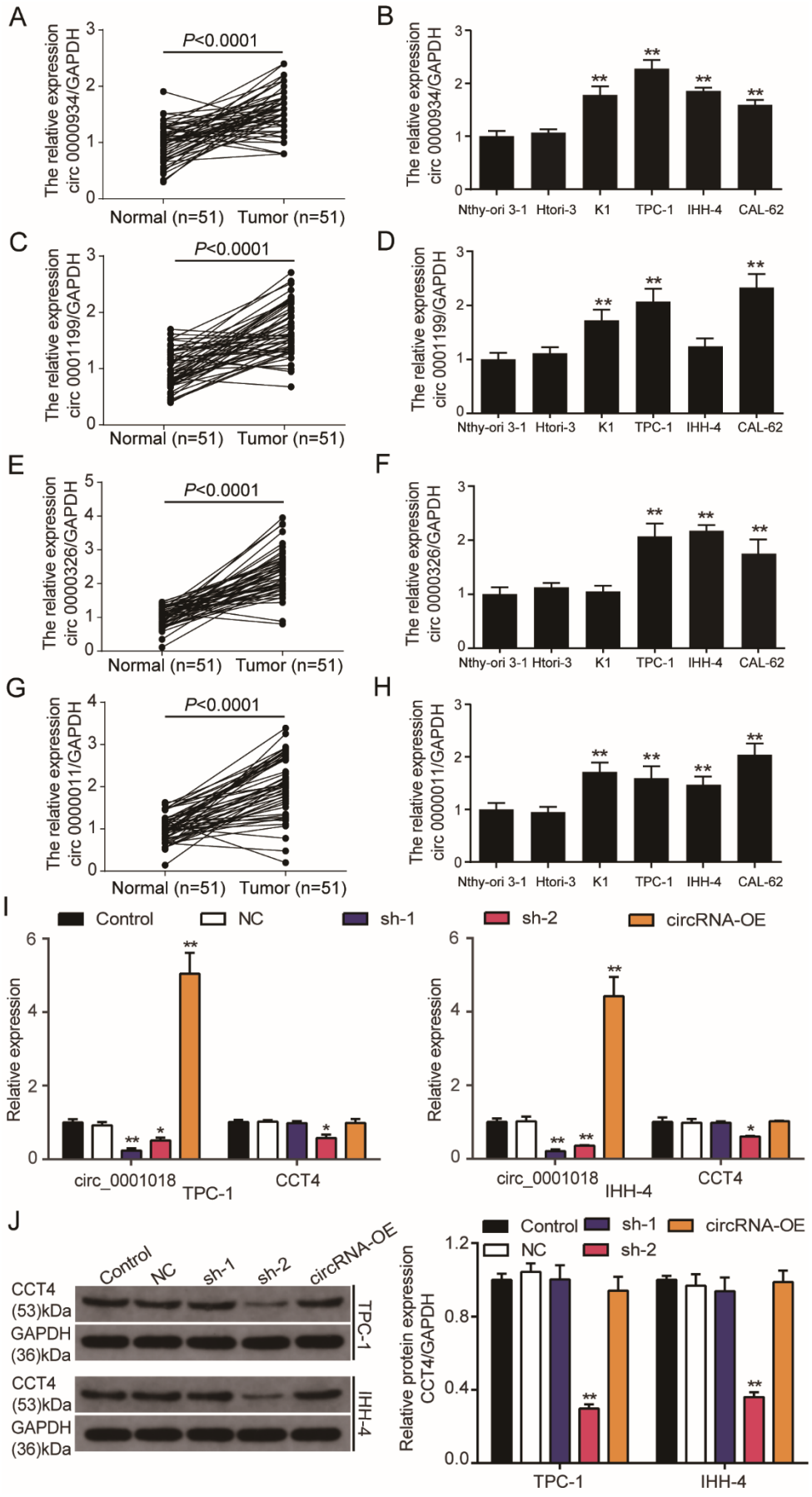


Figure S2 The enrichment of five most significant circular RNAs in PTC cells on miR-338-3p.

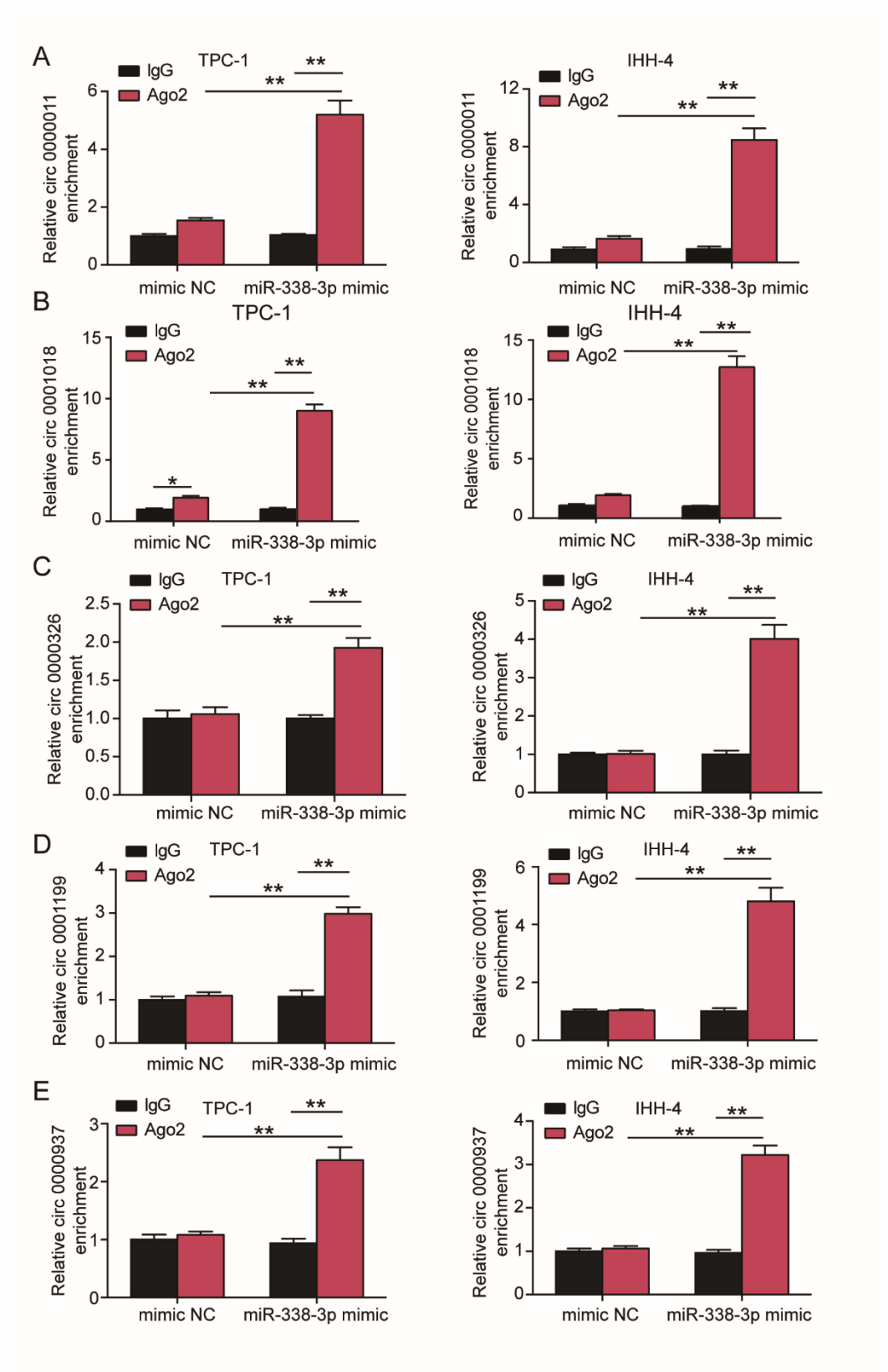


Figure S3 The structure of circ_0001018. CDS (coding sequences) are colored in green.

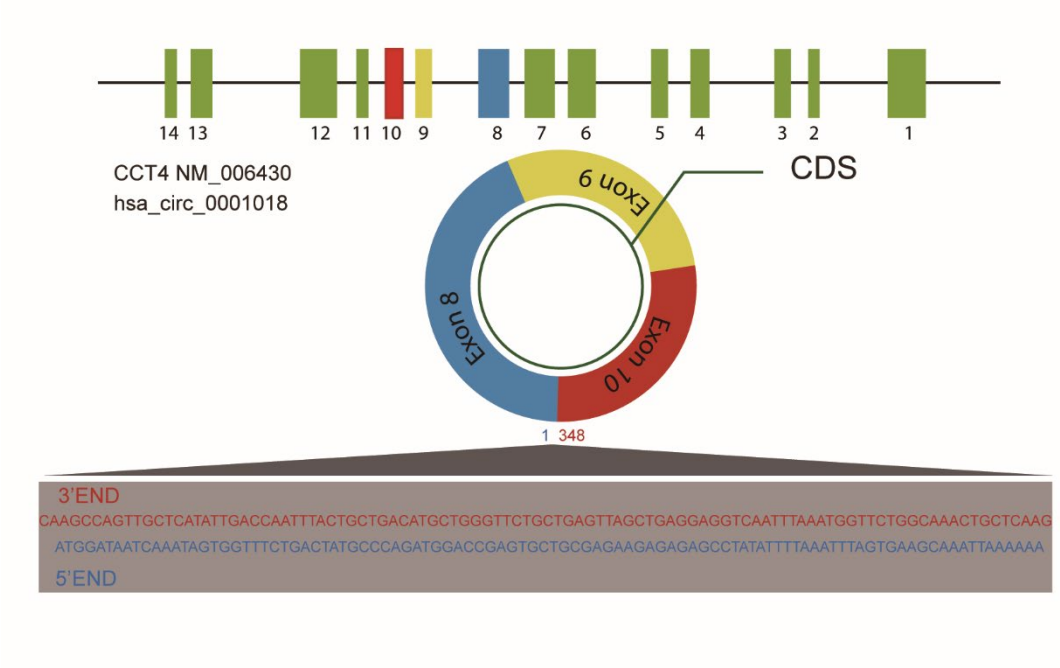


Figure S4 SOX4 was detected to express more in tumor tissues than the normal in TCGA database.

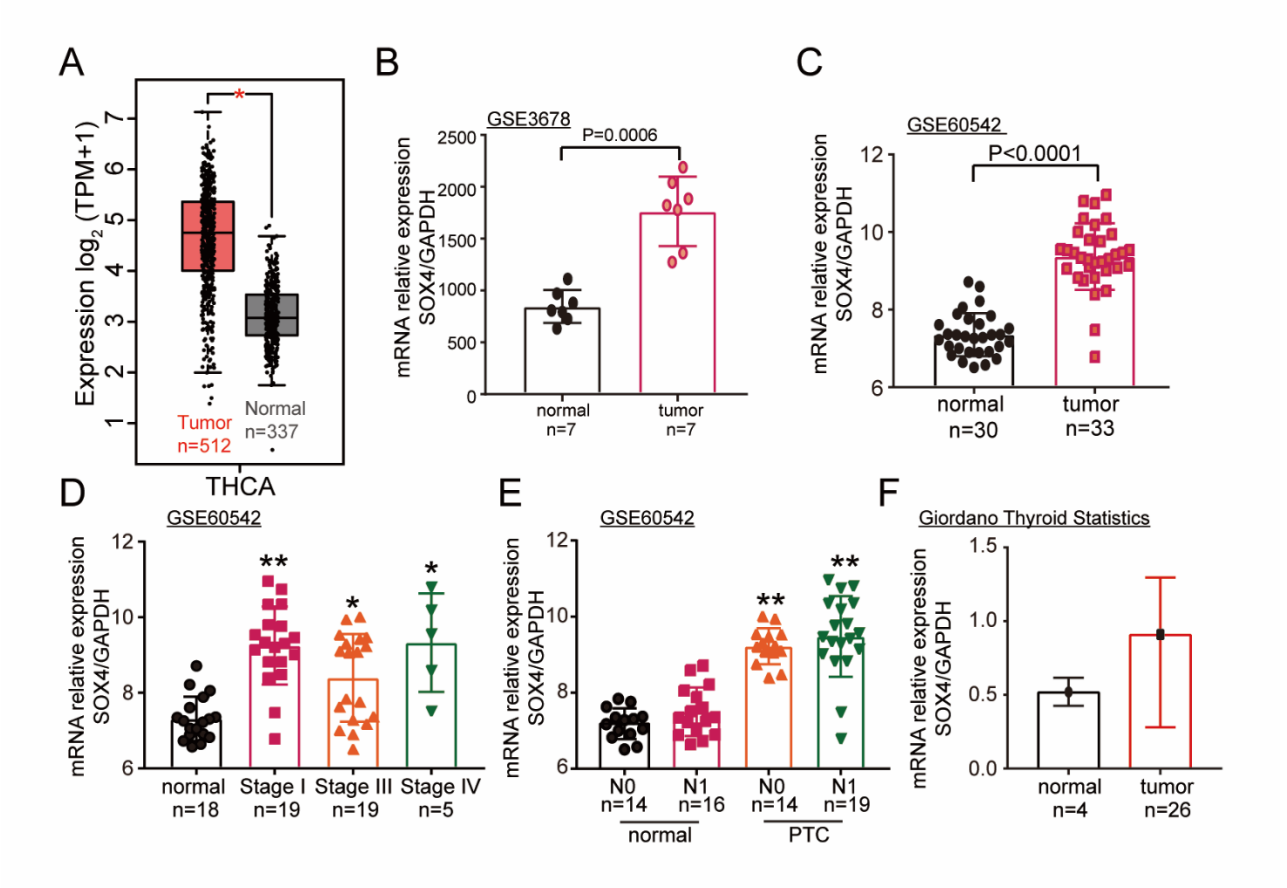
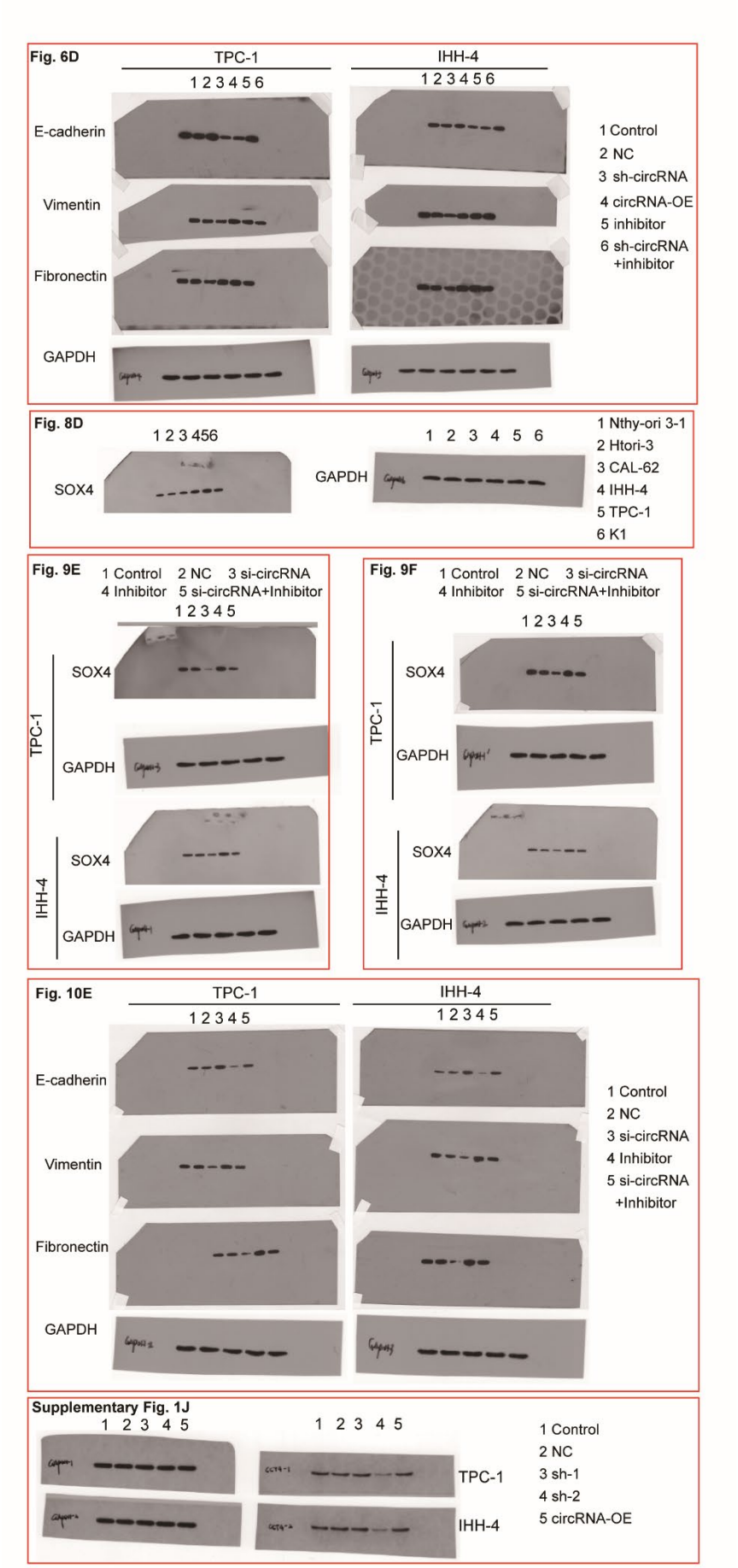


Figure S5 All images of western blot in this study.



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