

Table S1. All primers used for RT-PCR. Primers annealing to parental genes of candidate chimeric RNA and flanking the fusion junction site were designed.

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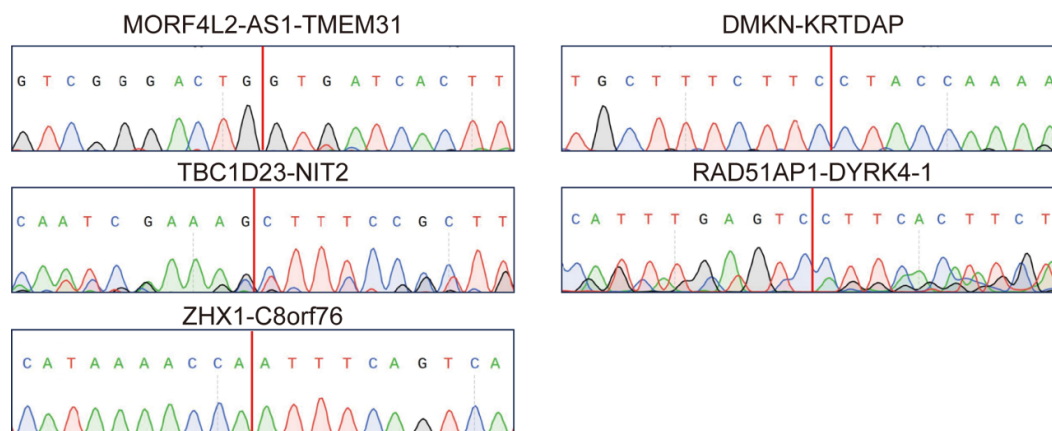
Fusion genes	Forward Primer	Reverse primer
<i>RAD51AP1-DYRK4-1</i>	TGAACCAGACTTTGCACCTG	TTCCTTCGCAGAGGTGAACT
<i>SUMO3-UBE2G2</i>	GGCAGCCAATCAATGAACT	ATTCTTCCGGAGGATTGAG
<i>DMKN-KRTDAP</i>	GCAGTGGGTGAAGTTTTGGT	CATCCCAGTTGAGGAAAGGA
<i>MORF4L2-AS1-TMEM31</i>	GGCATTAAAGGCCAGTGTGTT	TTGTTGGGCTTGAGTTGTTG
<i>TBC1D23-NIT2</i>	AGTCTCGACAAGCGCTGAAT	CTCCCGGATGAAGCTACAAG
<i>ZHX1-C8orf76</i>	GAACCTCCACGACATGTGAA	ACCTTCTGGACATCCCTTT
<i>TPD52L2-DNAJC5</i>	GAAGACTTCAGCTGCCCTGT	GTTCTTGTCGAACCAAGGA
<i>TBC1D24-ATP6V0C</i>	CTCCAAGACCGAGTCCATGT	TGTCGTCATTGAGGAGTTG
<i>MSANTD3-TMEFF1</i>	AAAGTGAAACGGAGCGTCAG	GGCATGCACATTTCAAACC
<i>SMOX-LINC01433</i>	GAGATGCTGCGTCAGTTCAC	ATGAAGGCTGGTGAGCTTGT
<i>CLTC-VMP1</i>	CCAAAGAAGGCAGTGGATGT	GCACCAAAGAAGGTCCAAAA
<i>RAPH1-OLA1-1</i>	TGAGATGTTCCAGCAAGCAG	TGCAGAACGGGAAGTTTTCT
<i>RAPH1-OLA1-2</i>	CCAGCATGGACTCTTTGGAT	TGCAGAACGGGAAGTTTTCT
<i>RAD51AP1-DYRK4-2</i>	AGCTGCCGTCAAATCAGAAT	CTTCCTTCGCAGAGGTGAAC
<i>FARSA-SYCE2</i>	TGAAGAAGTGGGTGGAGGTC	CCGGCTCTTGTTGATTTTT
<i>SUMF1-BHLHE40-AS1</i>	CCTTCCCTCCAATGGTTAT	CACAGCCAACTGCTGAAAA
<i>MLLT1-PFKP</i>	TGACCCCAAGAAGACCAAC	GGACTGCAGATCCCTGATGTCGA
<i>CTNNBIP1-CLSTN1</i>	ATTCAGCAGAAGGTCCGAGT	TGTGACTATGCCGTGGTAGG
<i>CTNNBIP1</i>	CTCATGCTGCGGAAGATGGGAT	CTGGAACGCGCATCACACGT

Table 2. Read counts for the validated chimeric RNAs.

chimeric_RNA	HEK293T			HUVEC			LO2		
	span_read s	junc- tion_reads	to- tal_reads	span_read s	junc- tion_reads	to- tal_reads	span_read s	junc- tion_reads	to- tal_reads
CLTC-VMP1				3	1	4			
DMKN-KRTDAP	13	12	15						
FARSA-SYCE2	2	2	4				2	2	4
MLLT1-PFKP							4	1	5
MORF4L2-AS1- TMEM31	3	3	6						
MSANTD3-TMEFF1				1	2	3			
RAD51AP1-DYRK4-2	4	2	6				1	1	2
RAPH1-OLA1-1				9	2	11			
RAPH1-OLA1-2				7	20	27			
SMOX-LINC01433				2	4	6			
SUMF1-BHLHE40-AS1							3	4	7
SUMO3-UBE2G2	4	5	9						
TBC1D23-NIT2	1	5	6						
TBC1D24-ATP6V0C	4	2	6						
TPD52L2-DNAJC5	3	8	11	2	3	5	5	0	5
ZHX1-C8orf76	3	2	5						

HEK-293T

Read-Through



INTRA-Others

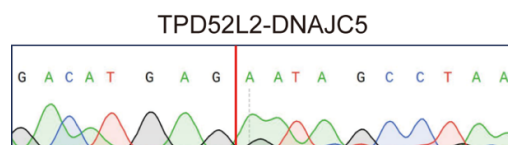
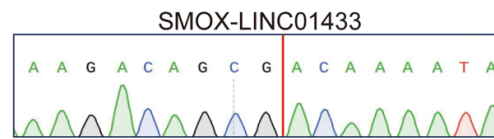


Figure S1

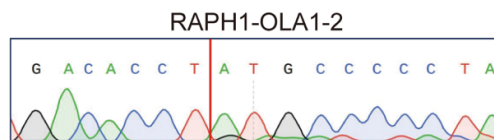
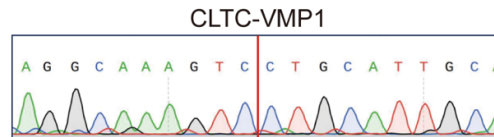
Supplementary Figure S1. Identification of chimeric RNA candidates. Sanger sequencing validation of five Read-Through chimeric RNAs and one INTRA-Others chimeric RNA in HEK-293T.

HUVEC

Read-Through



INTRA-Others



LO2

Read-Through

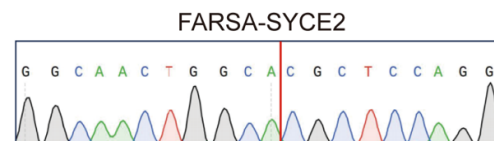


Figure S2

Supplementary Figure S2. Identification of chimeric RNA candidates. Sanger sequencing validation of one Read-Through chimeric RNA and two INTRA-Others chimeric RNAs in HUVEC, and one Read-Through chimeric RNA in LO2.