

Supplementary Table 5. Abbreviations in the TCGA and the CCLE databases.

Abbreviations	Full name	TCGA	CCLE
ACC	Adrenocortical carcinoma	√	
ALL	Acute lymphocytic leukemia		√
BLCA	Bladder urothelial carcinoma	√	√
BRCA	Breast invasive carcinoma	√	√
CESC	Cervical squamous cell carcinoma and endocervical adenocarcinoma	√	√
CLL	Chronic lymphocytic leukemia		√
CHOL	Cholangiocarcinoma	√	
COAD	Colon adenocarcinoma	√	√
DLBC	Diffuse large B cell lymphoma	√	√
	Esophageal carcinoma	√	√
ESCA	Ewings sarcoma		√
GBM	Glioblastoma multiforme	√	√
HNSC	Head and neck squamous cell carcinoma	√	√
KICH	Kidney chromophobe	√	
KIRC	Kidney renal clear cell carcinoma	√	√
KIRP	Kidney renal papillary cell carcinoma	√	
LAML	Acute myeloid leukemia	√	√
LCML	Chronic myelogenous leukemia		√
LGG	Brain lower grade glioma	√	√
LIHC	Liver hepatocellular carcinoma	√	√
LUAD	Lung adenocarcinoma	√	√
LUSC	Lung squamous cell carcinoma	√	√
MB	Medulloblastoma		√
MESO	Mesothelioma	√	√
MM	Multiple myeloma		√
NB	Neuroblastoma		√
NSCLC	Non-small cell lung cancer		√
OV	Ovarian serous cystadenocarcinoma	√	√
PAAD	Pancreatic adenocarcinoma	√	√
PCPG	Pheochromocytoma and paraganglioma	√	
PRAD	Prostate adenocarcinoma	√	√
READ	Rectal adenocarcinoma	√	√
SARC	Sarcoma	√	√
SCLC	Small cell lung cancer		√
SKCM	Skin cutaneous melanoma	√	√
STAD	Stomach adenocarcinoma	√	√
TGCT	Testicular germ cell tumor	√	
THCA	Thyroid carcinoma	√	√
THYM	Thymoma	√	
UCEC	Uterine corpus endometrial carcinoma	√	√
UCS	Uterine carcinosarcoma	√	
UVM	Uveal melanoma	√	

Supplementary Table 6. Features of the six transcripts of MAEL.

Transcript ID	Name	bp	Protein	Translation ID	Biotype	CCDS	UniProt match	RefSeq match
ENST00000367870.6	MAEL-201	1831	403aa	ENSP00000356844.2	Protein coding	CCDS65712	Q96JY0-2	-
ENST00000367872.9	MAEL-202	1737	434aa	ENSP00000356846.4	Protein coding	CCDS1257	Q96JY0-1	NM_032858.3
ENST00000447624.1	MAEL-203	1013	316aa	ENSP00000402143.1	Protein coding		X6RGB1	-
ENST00000487826.1	MAEL-204	416	No protein	-	Processed transcript		-	-
ENST00000491055.5	MAEL-205	2355	No protein	-	Processed transcript		-	-
ENST00000622874.4	MAEL-206	1700	378aa	ENSP00000482771.1	Protein coding	CCDS72975	E9JVC4	-

Supplementary Table 7. Associations of MAEL expression with clinicopathological features, copy number variations, and DNA methylation.

Variable	KIRC		TGCT	
	P-value	Pearson r	P-value	Pearson r
Age	0.426483266825387	-0.0324428362771666	0.752333563410853	0.0270047807184707
Sex	0.0904257180696398	NA	NA	NA
Race	0.194246293049914	NA	0.872982066854064	NA
Histological grade	0.021952312664529	NA	9.56399423005252E-07	0.40542915383908
Pathological T	0.135787374901966	NA	0.177488104232116	NA
Pathologic N	0.225732314323571	NA	0.958850252206529	NA
Pathological M	0.103451317195837	NA	NA	NA
Tumor stage	0.0639348682885934	NA	0.229241921454448	NA
Copy number variation	0.0000124053286982694	0.190110076688231	0.752916482313235	-0.0259154877503306
cg13081288	0.000785685953360897	-0.180743238710894	0.0000628585334375174	-0.314957369168476
cg08348962	0.0492590402535173	-0.108009393639065	0.243763849009391	-0.0938743944622001
cg18323210	0.092512587133264	-0.0911124474315059	0.5440767694976	0.0489361999183405
cg03758693	NA	NA	NA	NA
cg11503720	0.352805528905452	0.0503959163684299	0.480610749333206	0.0568827237605001
cg15965055	0.529796595162321	0.034090418549852	0.0315425603321009	0.172254607829556
cg22603542	0.409987244359549	0.0446936912631353	0.186481189999048	-0.106325340667379
cg07725889	NA	NA	NA	NA
cg10117884	0.897947345270261	0.00696064119958166	3.94858256423742E-09	-0.452757600333627
cg18894878	0.920711985278922	-0.00540209688290252	6.52822637100908E-16	-0.610024898231754
cg27053975	0.435695401537689	0.0422856006668722	2.99438405154888E-15	-0.596408048402836
cg24453820	0.301857453783545	-0.0559901939447633	8.67166538012812E-17	-0.627691428644751
cg23968893	0.896436555610462	-0.00706426328384486	1.84345878539201E-15	-0.60077299206138
cg11336590	0.66528813578229	-0.0236158222038295	3.53364947237034E-19	-0.673975652934597
cg19241352	0.0828312211934396	-0.0939273014761928	1.11483104794639E-18	-0.664515504411586
cg13480774	0.709249632452788	0.0202341815113491	1.49945009591534E-15	-0.602623339738763
cg24586196	0.212520272989992	-0.0675823337211926	2.40573208547595E-16	-0.618813017897356
cg00001349	0.28226677455352	-0.0583064319125126	1.2178606809646E-12	-0.539768091814994
cg13249256	0.283087524604477	-0.0582072645293623	6.21117501997563E-19	-0.669344119897905
cg17757848	0.84317847389987	-0.0107363993229523	2.95924429682114E-19	-0.675427522082466
cg13212575	0.969169533256836	0.00209763722753289	3.17730546470227E-16	-0.616374517921076
cg26308818	0.596084245542656	0.0287606442778004	3.39217204532824E-07	-0.396023176042178