

**Supplementary table 1**

Abbreviation	Definition
ACC	adrenocortical carcinoma
BLCA	bladder urothelial carcinoma
BRCA	breast invasive carcinoma
CESC	cervical and endocervical cancers
CHOL	cholangiocarcinoma
CIC	capicua transcriptional repressor
COAD	colon adenocarcinoma
CTNNB1	catenin beta 1
DLBC	diffuse large B-cell lymphoma
EGFR	epidermal growth factor receptor
ESCA	esophageal carcinoma
FUBP1	far upstream element binding protein 1
GBM	glioblastoma multiforme
HNSC	head and neck squamous cell carcinoma
IDH1	isocitrate dehydrogenase 1
KICH	kidney chromophobe
KIRC	kidney renal clear cell carcinoma
KIRP	kidney renal papillary cell carcinoma
KRAS	kirsten rat sarcoma
LGG	low grade glioma
LIHC	liver hepatocellular carcinoma
LUAD	lung adenocarcinoma
LUSC	lung squamous cell carcinoma
MESO	mesothelioma
OV	ovarian serous cystadenocarcinoma
PAAD	pancreatic adenocarcinoma
PCPG	pheochromocytoma and paraganglioma
PRAD	prostate adenocarcinoma
PTEN	phosphatase and tensin homolog
READ	rectum adenocarcinoma
SARC	sarcoma
SKCM	skin cutaneous melanoma
STAD	stomach adenocarcinoma
TCGT	testicular germ cell tumors
THCA	thyroid carcinoma
THYM	thymoma
TP53	tumor protein 53
UCEC	uterine corpus endometrial carcinoma
UCS	uterine carcinosarcoma
UVM	uveal melanoma