## Supplementary

Table S1 Immunohistochemical staining results of KMT2D and PPARG proteins obtained by Human Protein Atlas in normal prostate tissues and prostate cancer tissues

Protein	Normal –	Cancer (cases)				Antibody
		High	Medium	Low	Not detected	Anibody
KMT2D	Low		9 (90%)	1 (10%)		HPA035977
PPARG	Not detected			7 (63.6%)	4 (36.4%)	CAB004282



**Figure S1** The mRNA expression levels of KMT2D and PPARγ in prostate cancer cell lines. (A,B) The transcription levels of PPAR and KMT2D in CCLE database. (C) The mRNA expression levels of PPARγ by RT-PCR. KMT2D, kinase tethers histone-lysine N-methyltransferase 2D; PPARγ, peroxisome proliferator-activated receptor gamma; CCLE database, Cancer Cell Line Encyclopedia database; RT-PCR, reverse transcription-polymerase chain reaction.



**Figure S2** Expression of KMT2D in TCGA database. (A) Expression levels of *KMT2D* in tumor and paracancer samples in TCGA; (B) with the increase of Gleason score, the expression levels of KMT2D and PPARγ were significantly increased in TCGA. KMT2D, kinase tethers histone-lysine N-methyltransferase 2D; TCGA, The Cancer Genome Atlas; PPARγ, peroxisome proliferator-activated receptor gamma.