

## Supplementary materials

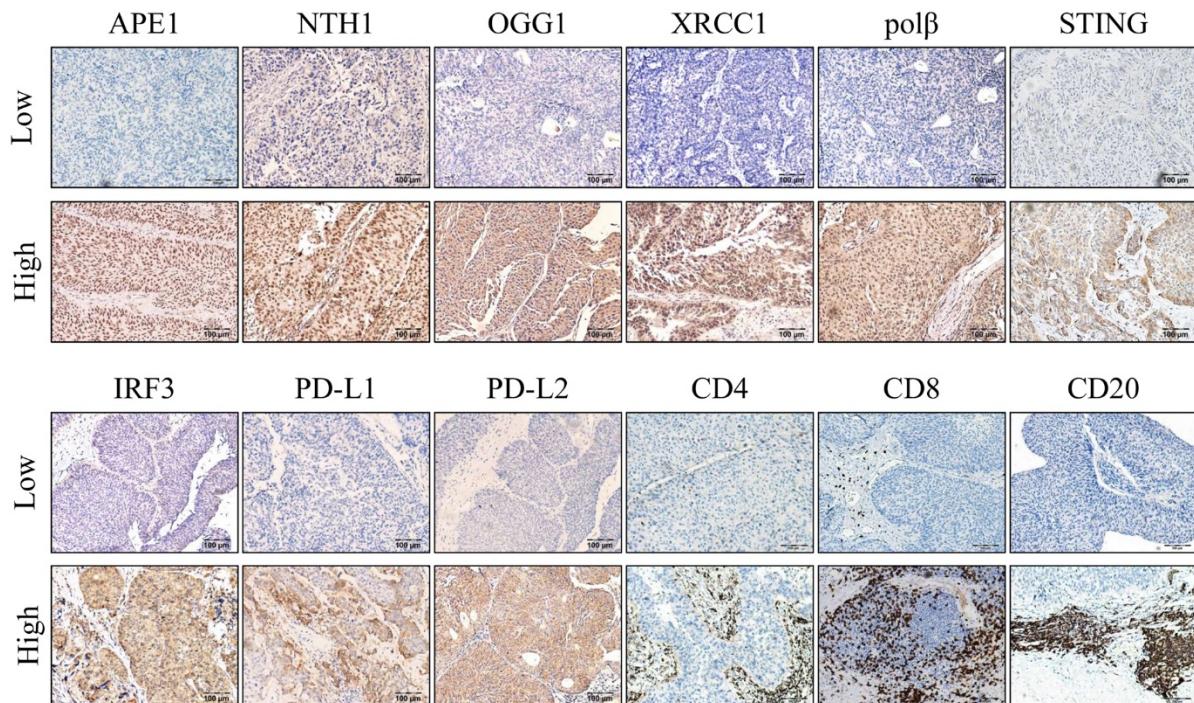


Figure S1. Immunohistochemical expression of makers in upper tract urothelial carcinoma tissue. (bar=100um). The two groups of low and high expression are mainly showed.

Table S1 Immunohistochemical antibody, use concentrations, and methods of heat induced epitope repair.

Antibody	Company	Host	HIER	concentration
APE1	Abcam ab194	Rabbit	Citrate	1:500
NTH1	Abcam ab 236143	Rabbit	Tris/EDTA pH 9.0	1:200
OGG1	Novus biological NB100-106	Rabbit	Tris/EDTA pH 9.0	1:100
POLB	Abcam ab26343	Rabbit	Tris/EDTA pH 9.0	1:150
XRCC1	Abcam ab1838	Mouse	Citrate	1:100
STING	CST #13647	Rabbit	Tris/EDTA pH 9.0	1:100
IRF3	Abcam ab68481	Rabbit	Tris/EDTA pH 9.0	1:300
PD-L2	Abcam ab231145	Rabbit	Citrate	1:50
PD-L1	Maxim biotechnologies, (Fuzhou, China), RMA-0724	Rabbit	Tris/EDTA pH 9.0	1:1
CD4	Maxim biotechnologies, (Fuzhou, China),RMA-0620	Rabbit	Citrate	1:1
CD8	Maxim biotechnologies, (Fuzhou, China),RMA-0514	Rabbit	Tris/EDTA pH 9.0	1:1
CD20	Maxim biotechnologies, (Fuzhou, China),kit-0001	Mouse	Citrate	1:1
IgG/anti-rabbit IgG secondary antibody	Maxim biotechnologies, (Fuzhou, China), Kit-0038			
DAB	Maxim biotechnologies, (Fuzhou, China) , Kit-0038			