

Supplementary Information

Fructose-1,6-bisphosphatase loss modulates STAT3-dependent expression of PD-L1 and cancer immunity

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Supplementary Table S1. Sequences of primers for RT-qPCR and ChIP-qPCR.

For RT-qPCR (Human)		
Gene	Forward	Reverse
<i>GAPDH</i>	ACCCAGAAGACTGTG GATGG	TTCAGCTCAGGGATGA CCTT
<i>FBP1</i>	ACATCGATTGCCTTGT GTCC	CCACCAAAATGAACTC CCCG
<i>PD-L1</i>	GGTGCCGACTACAAG CGAAT	AGCCCTCAGCCTGACA TGTC
For RT-qPCR (Mouse)		
Gene	Forward	Reverse
<i>Gapdh</i>	AGGTTGTCTCCTGCG ACTCA	GGGTGGTCCAGGGTTT CTTACT
<i>Pd-l1</i>	AATGCTGCCCTTCAG ATCAC	ATAACCCTCGGCCTGA CATA
For ChIP-qPCR (Human)		
Gene Locus	Forward	Reverse
<i>PD-L1</i>	GGC GTT GGA CTT TCC TGA	CAA GGT GCG TTC AGA TGT TG

Supplementary Table 2. Sequences of shRNA and sgRNA

Human	
Gene	Sequence
<i>shFBP1-1</i>	5'- CCGGCCTTGATGGATCTTCCAAC ATCTCGAGATGTTGGAAGATCCA TCAAGGTTTTTG-3'
<i>shFBP1-2</i>	5'- CCGGCGACCTGGTTATGAACATG TTCTCGAGAACATGTTTCATAACC AGGTCGTTTTTG-3'
<i>SgSTAT3</i>	Forward:
	CACCGAGATT GCCCGGATTGT GGCC
	Reverse:
	AAACGGCCAC AATCCGGGCA ATCTC
Mouse	
Gene	Sequence
<i>shFbp1</i>	5'- CCGGCATAGCTTATGTCATGGAG AACTCGAGTTCTCCATGACATAA GCTATGTTTTTG-3'

Supplementary Figure

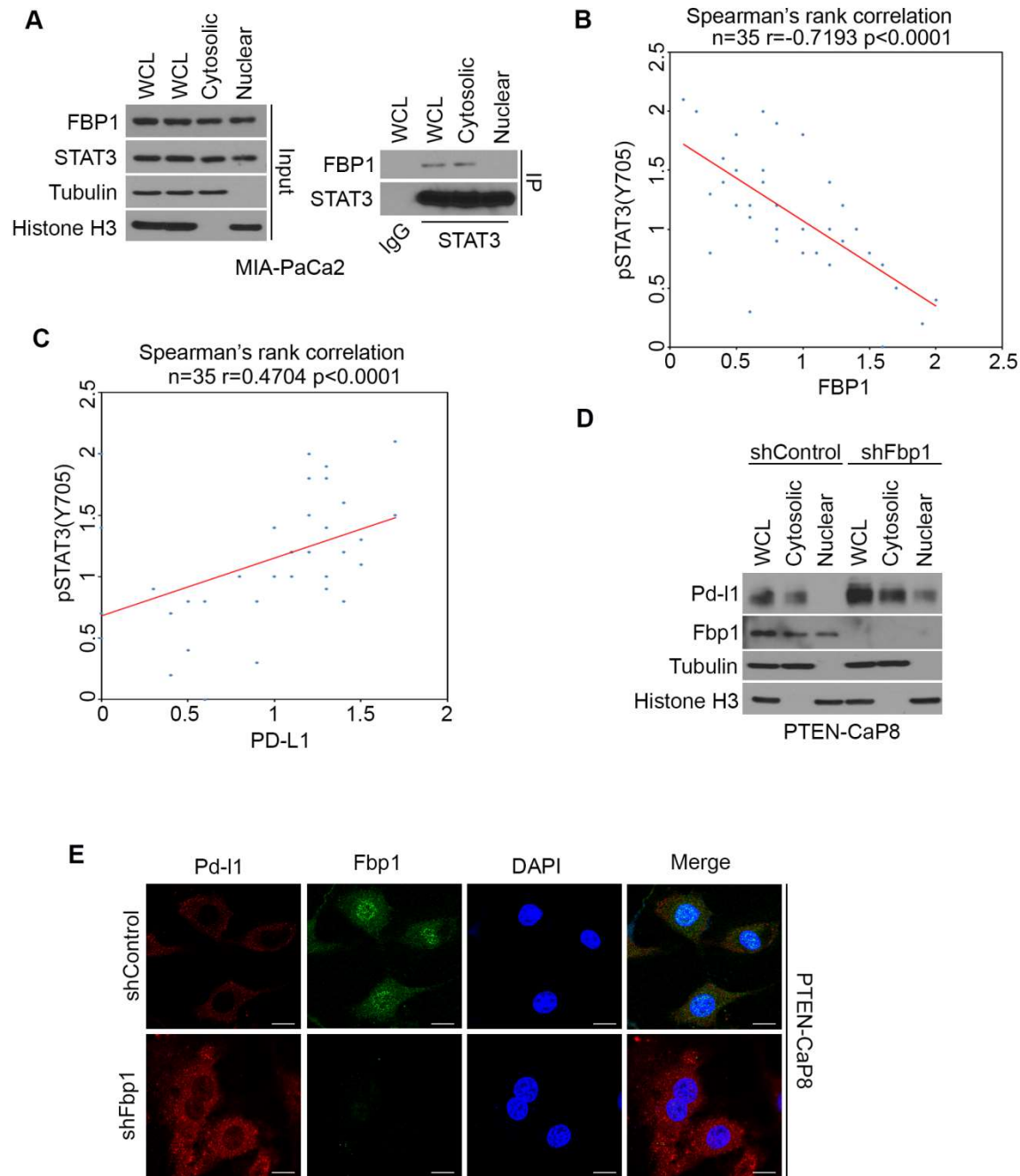


Figure S1. FBP1 interacts with STAT3 in the cytoplasm and knocking down of Fbp1 in murine PTEN-CaP8 cells changes Pd-I1 subcellular localization

(A) Western blot analysis of whole cell lysate (WCL), cytosolic fractionation and nuclear fractionation and co-immunoprecipitated endogenous FBP1 and STAT3 in Mia PaCa-2 cells.

(B) Correlation analysis of the staining index for expression of FBP1 and pSTAT3 (Y705) in specimens of PDAC patients (n=35). Spearman's rank correlation coefficient and *P* values are shown.

(C) Correlation analysis of the staining index for expression of pSTAT3 (Y705) and PD-L1 in specimens of PDAC patients (n=35). Spearman's rank correlation coefficient and *P* values are shown.

(D) Western blot analysis of whole cell lysate (WCL), cytosolic fractionation and nuclear fractionation in shControl and Fbp1 knocking down PTEN-CaP8 cells.

(E) PTEN-CaP8 cells were infected with lentivirus expressing indicated shRNA. The expression and subcellular localization of Fbp1 and Pd-l1 were examined using fluorescent cytochemistry (IFC).