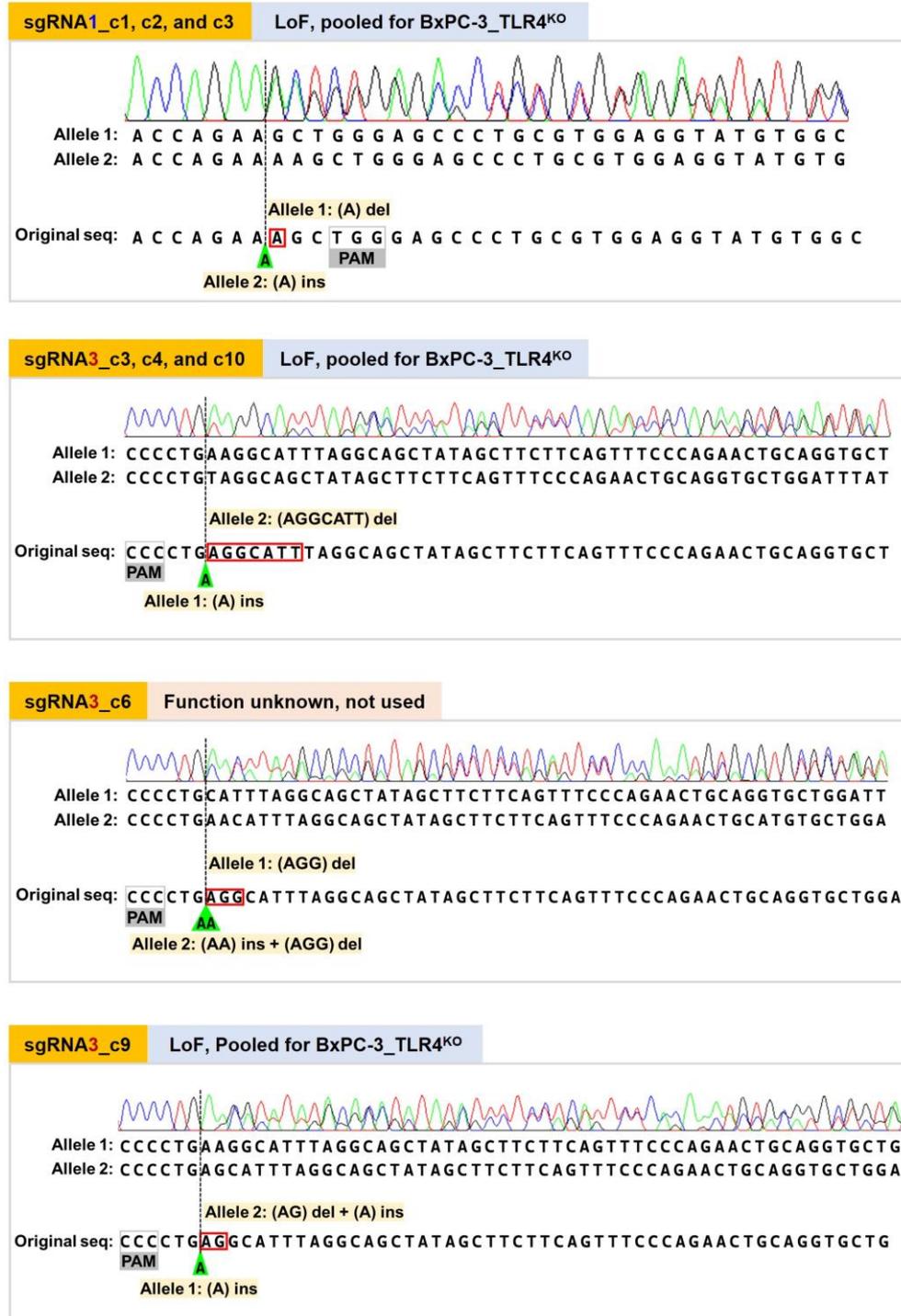


**B**



**Supplementary Figure S1.** Eight single clones with biallelic mutations in the TLR4 gene were obtained. (A) A total of thirty-two single colonies were picked after BxPC-3 cells were transfected with TLR4 sgRNA1, sgRNA2, or sgRNA3, which have either non-mutation, or mixed mutations, or biallelic mutations. (B) Sanger sequencing results of eight single clones with biallelic mutations. Dash line indicates 3 bp upstream of protospacer adjacent motif (PAM) site. LoF = loss-of-function; del = deletion; ins = insertion.

★ Stop Codon

sgRNA1\_c1, c2, and c3

Allele 1: (A) del					Allele 2: (A) ins						
1	MMSASRLAGT	LIPAMAF1SC	VRPEAGSPAW	RWFLLILLINA	WS*ISTKSPST	1	MMSASRLAGT	LIPAMAF1SC	VRPEK1GALRA	GGGS*Y1LSM	HGAEF1QNPR
51	TSPSQRTWT	*ALIP*GI*A	AIASSVSQNC	RCW1YFGVKS	RQLKMGHIRA	51	QPFL1NQEPG	FEL*SPEAFR	QL*LLQFPRT	AGAGFIQV*N	FDN*RWGISE
101	*ATSLP*Y*Q	ETPSRV*PWE	PFLDYQVYRS	WWLWROI*HL	*RTSPLDISK	101	PKPFLYL1NID	RKPHPEFSPG	SLFW1K1FTE	AGCGDKKSI	SRELPHWTSQ
151	L*K1N1M1W1TI	LSN1SNY1SI	FLI*PI*STW	TFPATRFKVF	IAQTCGFYIK	151	NFERT*CGSQ	SYPIFQIT*V	FF*SDQSRA1	GFQQQDSKY	LLHRLAGSTS
201	CPYS1SL*TC	P*TL*TL1SNQ	VHLK1K1GF1S	*L*E1I1L1V*	M**K1LVFK1W	201	NAFTQSLFRP	VPEPYEL1PT	RCI*RN*AS*	ADFKK*F**F	KCNEN1YSRS
251	LV*KS1V1WF	ENLEK1E1TWK	SLTNL1R1AC	AI*PLKNSD*	HT*TT1SM1L	251	GWFRSPSPFGS	GRI*K*RK1G	KV*Q1CSRGP	VQFDH*RIPI	S1LRL1LPR*Y
301	LY1L1V*QMF	LHFF*V*LL	KG*KTF1L1S	DGNI*N*LV	NLDSFP1NS	301	Y*LI*LFDKC	FF1FPG1E1DY	*KGR1L1F*	RMATFR1S*L	*I1W1VSH1ET
351	NLSKGL1SLP	TKVGM1FQK1L	IYQAL1S*1S	VEMA*VSKVA	VLK1V1LQ1PA	351	Q1SQKAY1FH	QQRW1E1CFRS	*STK*V1SR	*Q*W1E1FQRL	LFSK*F1W1DQ
401	*SI*I*AS1M	LLP*VQ1SWA	*NN*NIW1S	IPI*NK*V1S	QYSYH1E1S1F	401	PKVFR1E1LQW	CY1HE1FK1L1G	LR1TR1SG1F	AFQ1E1NE*V	FS1P1TQ1K1PH
451	TLTFL1L1TPE	LLSMAS1MAC	PVSKS*K1W1LA	ILSRK1TSFQ1I	SSQS*E1T*P1S	451	LP*HFSY1SHQ	SCFQW1HLQ1W	VQSR1S1L1E1W	QFF1F1G1K1L1P1SR	Y1LHRA1E1K1LD1L
501	W1SL1SVN1W1S	CLQO1L1T1H1SP	V1RY*I*1AT1T	TSF1W1R1F1L1I	SV*TP1SR1F1L1I	501	PG1L1SV1S1TGA	V1VNS1*L1L	QSS1G1K1Y1E1P	Q1L1F1G1Y1V1S1L	*V1S1E1L1P1F1G1S
551	TVS1I1T*1LPK	NRN1YS1FQ1V	*L1S*1LL1R1M1T	LLV1L1V1N1TR1V	CNG1S1R1T1R1G1S	551	LQ1SQ1SH1N1D1FQ	KTG1T1AF1SK*	SS1FL1K1YS1E*	L1C1Y1L*1T1P1E1F	PAM1DQ1G1P1E1A
601	W1K1L1N1E1W1V1Q	HLQ1S1R1A1C1L	*V*1S1P1V1R*1I	R1E1S1L1V1C1R1S1V	CL*Y1L1*Q1F1W	601	LG1S1*1N1G1M1C	N1TR*1A1GH1AC	A1E1F1Y1H1L1S1D1E	*D1H1H1C1V1G1P1Q	C1A1C1S1C1C1S1S
651	S1S1S1I1T*1CF	L1L1A*1S1M1V1E	KT1S1M1P1L1L1S1T	Q1A1R1M1T1G1*1G1M	S**R1*1K1K1G1C	651	GL*V1L1F1S1P1D1A	SC1W1L1K1V1N*1R	*K1H1*1C1L1C1Y1L	L1K1P1*1G1L1G1E	*A1S1K1E1F1R1R1G
701	L1H1F1S1A1F1T1E	T1L1F1V1W1L1L1P	T1S1M1K1V1S1I1K1A	ER*1L1W1C1P1S1T	S1R1A1A1G1V1S1L1N	701	A1S1I1S1A1L1P1S1LQ	R1Y1S1R1C1H1C1C	Q1H1P*1R1F*1K	PK1G1D1C1C1G1V1E1A	L1H1E1P1L1V1Y1L*
751	M1R1L1R1P1G1S1F*	AV1L1V1S1S1L1S	CR1W1R1R1C1P1G1S	S1R1W1S1C1T1A1F1S1A	G1T1L1W1S1G1R1V1T	751	I*1D1C1S1D1L1A1V	E1Q1S1C1W1Y1H1L1C	P1A1E1G1E1D1P1A	A1A1G1A1V1P1P1S1Q	Q1E1H1P1G1V1G1G1Q
801	SW1G1T1S1S1G1D1D	S1E1K1P1C1W1M1V1N1H	G1Q1K1E1Q1W1V1D	A1I1G1R1K1Q1H1L1S	801	CP1G1A1H1L1L1E1T	TQ1K1S1P1A1G*1I	M1E1S1R1R1N1S1G1Y1R	M1Q1L1A1G1S1N1Y1L		

sgRNA3\_c3, c4, and c10

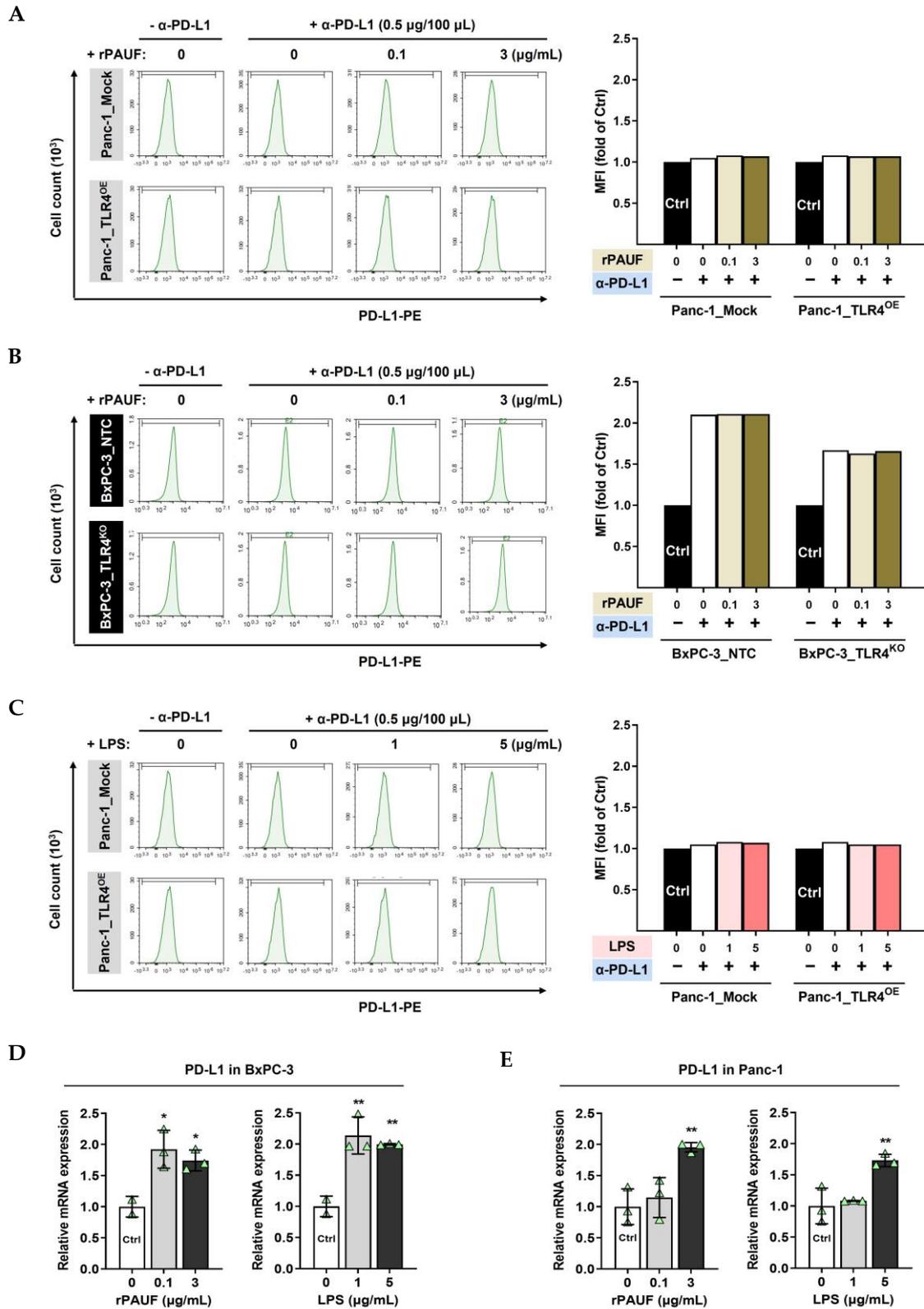
Allele 1: (A) ins					Allele 2: (AGCATT) del						
1	MMSASRLAGT	LIPAMAF1SC	VRPE1S1W1E1P1C1V	E1V1V1N1I1Y1Q1C	M1E1L1N1F1Y1K1I1P1D	1	MMSASRLAGT	LIPAMAF1SC	VRPE1S1W1E1P1C1V	E1V1V1N1I1Y1Q1C	M1E1L1N1F1Y1K1I1P1D
51	N1L1P1F1S1T1K1N1L1D	L1S1F1N1P1L1K1A1F1R	Q1L*1L1L1Q1F1P1R1T	AG1A1G1F1I1Q1V1N	FD1N*1R1W1G1I1S1E	51	N1L1P1F1S1T1K1N1L1D	L1S1F1N1P1L1K1A1F1R	Q1L*1L1L1Q1F1P1R1T	AG1A1G1F1I1Q1V1N	FD1N*1R1W1G1I1S1E
101	PKPFLYL1NID	RKPHPEFSPG	SLFW1K1F1K1T1E	AGCGDKKSI	SRELPHWTSQ	101	TSLP*Y*QET	PSRV*PWEFF	LDYQVYRSW	LWRQI*HLR	TSPLDISKL*
151	NFERT*CGSQ	SYPIFQIT*V	FF*SDQSRA1	GFQQQDSKY	LLHRLAGSTS	151	K1N1M1W1L1T1I1S	L1S1N1S1N1Y1S1I1F1L	I*P1*P1*1S1T1W1T1F	P1A1T1R1F1K1V1E1A	Q1T1C1G1F1Y1I1K1P1C
201	NAFTQSLFRP	VPEPYEL1PT	RCI*RN*AS*	ADFKK*F**F	KCNEN1YSRS	201	Y1S1S1L*1T1C1E*	T1L*1T1S1N1Q1V1H	L1K1K1L1G1F1S1*1L	*E1I1L1V1M*	*K1L1V1F1K1V1W1
251	GWFRSPSPFGS	GRI*K*RK1G	KV*Q1CSRGP	VQFDH*RIPI	S1LRL1LPR*Y	251	*KS1V1W1V1F1W	L1E1M1E1K1E1T1W1K1S1L	T1N1L1R1A1C1A1I	*P1L1K1N1S1D*	*T1T1S1M1L1T
301	Y*LI*LFDKC	FF1FPG1E1DY	*KGR1L1F*	RMATFR1S*L	*I1W1V1S1H1E1T	301	Y1L1V*Q1M1F1H	FFW*V*1L1K1G	*K1T1F1L1S1D1G	N1I*1*1T1H1N1L	D1S1F1H*1N1S1L
351	Q1SQKAY1FH	QQRW1E1CFRS	*STK*V1SR	*Q*W1E1F1Q1R1L	LFSK*F1W1D1Q	351	S1K1L1S1L1P1T1K	V1G1M1L1F1Q1K1L1I1Y	Q1A1L1S1F1I1S1V1E	M1A*1V1S1K1V1A1V1L	K1V1L1Q1P1A*1S
401	PKVFR1E1LQW	CY1HE1FK1L1G	LR1TR1SG1F	AFQ1E1NE*V	FS1P1TQ1K1PH	401	I*1I*AS1M1V1L	P*V1Q1T1S1W1A*N	N*NIW1I1S1I1P	I*NK*V1S1F1Q1Y	S1Y1H1E1S1T1F1L
451	LP*HFSY1SHQ	SCFQW1HLQ1W	VQSR1S1L1E1W	QFF1F1G1K1L1P1SR	Y1LHRA1E1K1LD1L	451	T1L1L1T1P1E1L	S1M1A1S1M1A1C1P1V	S1K1S*K1W1L1A1L	S1R1K1T1S1F1Q1I1S	Q1S*E1T*P1S1W1T
501	PG1L1SV1S1TGA	V1VNS1*L1L	QSS1G1K1Y1E1P	Q1L1F1G1Y1V1S1L	*V1S1E1L1P1F1G1S	501	S1L1S1V1N1W1S1C1L	QO1L1T1H1S1P1V1F	R1Y*I*1A1T1T1S	F1H1W1R1F1L1S1V	*T1P1S1R1F1L1I1V
551	LQ1SQ1SH1N1D1FQ	KTG1T1AF1SK*	SS1FL1K1YS1E*	L1C1Y1L*1T1P1E1F	PAM1DQ1G1P1E1A	551	S1I1T**1L1P1K1N1R	N1Y1S1I1F1Q1V1*1L	S*1L1L1R1M1T1L	V1L1V1N1T1R1V1S1C1N	G1S1R1T1R1G1S1W1W
601	LG1S1*1N1G1M1C	N1TR*1A1GH1AC	A1E1F1Y1H1L1S1D1E	*D1H1H1C1V1G1P1Q	C1A1C1S1C1S1S	601	K1L1N1E1W1N1V1Q1L	Q1S1R1A1C1L*1V	*1S1P1V1R*1I1R1P	S1L1V1C1R1S1V1C1L	*Y1L1*Q1F1W1I
651	GL*V1L1F1S1P1D1A	SC1W1L1K1V1N*1R	*K1H1*1C1L1C1Y1L	L1K1P1*1G1L1G1E	*A1S1K1E1F1R1R1G	651	S1S1I1T*1C1F1L	L1L1A*1S1M1V1E1T	S1M1P1L1L1S1T	R1M1R1T1G1*1M1S	*R1*1K1K1G1L1H
701	A1S1I1S1A1L1P1S1LQ	R1Y1S1R1C1H1C1C	Q1H1P*1R1F*1K	PK1G1D1C1C1G1V1E1A	L1H1E1P1L1V1Y1L*	701	F1S1S1A1F1T1E1T1L	F1V1F1V1W1L1L1P1T1S	S1M1K1V1S1I1K1A1E1R	*L1L1W1C1P1S1T	R1A1A1G1V1S1L1N1R
751	I*1D1C1S1D1L1A1V	E1Q1S1C1W1Y1H1L1C	P1A1E1G1E1D1P1A	A1A1G1A1V1P1P1S1Q	Q1E1H1P1G1V1G1G1Q	751	L1L1R1P1G1S1*1A1V	V1L1V1S1S1L1S1C1R	R1W1R1R1C1P1G1S1R	W1S1C1T1A1F1S1A1G1T	L1T1W1S1G1R1V1S1W
801	CP1G1A1H1L1L1E1T	TQ1K1S1P1A1G*1I	M1E1S1R1R1N1S1G1Y1R	M1Q1L1A1G1S1N1Y1L	801	G1T1S1S1G1D1S1E	K1F1C1W1M1V1N1H1G1I	Q1K1E1Q1W1V1D1A1I	G1R1K1Q1H1L1S		

sgRNA3\_c6

Allele 1: (AGG) del					Allele 2: (AA) ins + (AGG) del						
1	MMSASRLAGT	LIPAMAF1SC	VRPE1S1W1E1P1C1V	E1V1V1N1I1Y1Q1C	M1E1L1N1F1Y1K1I1P1D	1	MMSASRLAGT	LIPAMAF1SC	VRPE1S1W1E1P1C1V	E1V1V1N1I1Y1Q1C	M1E1L1N1F1Y1K1I1P1D
51	N1L1P1F1S1T1K1N1L1D	L1S1F1N1P1L1K1A1F1R	Q1L*1L1L1Q1F1P1R1T	AG1A1G1F1I1Q1V1N	FD1N*1R1W1G1I1S1E	51	N1L1P1F1S1T1K1N1L1D	L1S1F1N1P1L1K1A1F1R	Q1L*1L1L1Q1F1P1R1T	AG1A1G1F1I1Q1V1N	FD1N*1R1W1G1I1S1E
101	SHLST1L1T1G	N1F1Q1S1L1A1L1G1S	F1S1G1L1S1L1Q1L1K1	V1A1V1E1N1L1A1S1L	EN1F1I1G1H1L1K1T	101	*ATSLP*Y*Q	ETPSRV*PWE	PFLDYQVYRS	WWLWROI*HL	*RTSPLDISK
151	LKELNVAHNL	IQSF1K1P1E1Y1F	SNL1T1N1L1E1H1D	L1S1N1K1I1Q1S1Y1	C1T1D1L1R1V1H1Q1M	151	L*K1N1M1W1L1T1I	LSN1SNY1S1I	FLI*PI*STW	TFPATRFKVF	IAQTCGFYIK
201	PLN1L1S1D1L1S	LN1M1N1F1I1Q1P1G	AF1K1E1R1L1H1K1L	T1R1N1D1F1O1S1N	V1M1K1T1C1I1Q1L1A	201	CPYS1SL*TC	P*TL*TL1SNQ	VHLK1K1GF1S	*L*E1I1L1V*	M**K1LVFK1W
251	G1E1V1H1R1L1V1G	E1F1R1N1E1G1N1E1K1	F1D1K1S1A1L1E1G1C	N1L1T1E1E1F1R1L1A	Y1D1Y1L1D1D1I	251	LV*KS1V1WF	ENLEK1E1TWK	SLTNL1R1AC	AI*PLKNSD*	HT*TT1SM1L
301	DLN1C1L1N1V1S	S1F1S1V1S1Y1T1E	R1V1K1D1F1S1Y1N1G	W1Q1L1E1L1V1N1C1K	Q1G1O1F1L1K1L1K	301	LY1L1V*QMF	LHFF*V*LL	KG*KTF1L1S	DGNI*N*LV	NLDSFP1NS
351	S1K1R1L1T1F1T1S	R1G1N1A1F1S1E1V1D	L1P1S1L1E1L1D1L1S	R1N1G1L1S1F1K1G1C	S1F1Q1D1G1T1S1L	351	NLSKGL1SLP	TKVGM1FQK1L	IYQAL1S*1S	VEMA*VSKVA	VLK1V1LQ1PA
401	KYLDLSFNGV	ITMS1N1F1L1G	E1Q1E1H1L1D1F1Q1H	S1N1L1Q1M1S1E1F1S	V1F1L1S1R1N1L1Y1I	401	*SI*I*AS1M	LLP*VQ1SWA	*NN*NIW1S	IPI*NK*V1S	QYSYH1E1S1F
451	L1D1I1S1H1T1R1V	AF1N1G1F1N1L1S	S1E1V1L1K1M1A1G1N	S1F1Q1E1N1L1D1I	F1T1E1R1N1L1T1F1L	451	TLTFL1L1TPE	LLSMAS1MAC	PVSKS*K1W1LA	ILSRK1TSFQ1I	SSQS*E1T*P1S
501	D1L1S1Q1C1L1E1Q1L	S1P1T1A1N1S1L1S	L1Q1V1L1M1S1H1N1	F1F1S1D1T1F1P1Y1K	C1N1L1S1L1Q1V1D1Y1	501	W1SL1SVN1W1S	CLQO1L1T1H1SP	V1RY*I*1AT1T	TSF1W1R1F1L1I	SV*TP1SR1F1L1I
551	S1N1H1M1T1S1K	Q1E1L1Q1H1F1P1S1L	A1F1L1N1L1O1N1D1F	A1C1T1E1Q1H1S1F1L	Q1W1K1D1O1R1L1L	551	TVS1I1T*1LPK	NRN1YS1FQ1V	*L1S*1LL1R1M1T	LLV1L1V1N1TR1V	CNG1S1R1T1R1G1S
601	VEVERMECAT	PSDKQMPVL	SLN1T1C1O1M1K	T1I1G1V1S1V1S1L	L1V1S1V1A1V1L1V	601	W1K1L1N1E1W1V1Q	HLQ1S1R1A1C1L	*V*1S1P1V1R*1I	R1E1S1L1V1C1R1S1V	CL*Y1L1*Q1F1W
651	Y1K1F1H1L1M1L	AGC1K1Y1G1R1G1E	N1Y1D1A1F1V1Y1S	S1Q1E1D1W1R1N1E	L1V1N1L1E1G1V1P	651	S1S1S1I1T*1CF	L1L1A*1S1M1V1E	KT1S1M1P1L1L1S1T	Q1A1R1M1T1G1*1G1M	S**R1*1K1K1G1C
701	F1P1Q1C1L1H1Y1R1D	F1P1G1V1A1I1A1N	I1I1E1G1F1H1K1S1R	K1V1I1V1V1S1Q1F	I1Q1S1R1C1I1F1E1Y	701	L1H1F1S1A1F1T1E1T	T1L1F1V1W1L1L1P1T1S	T1S1M1K1V1S1I1K1A	ER*1L1W1C1P1S1T	S1R1A1A1G1V1S1L1N
751	E1A1Q1T1Q1F1L1S	S1R1A1I1I1F1I1V1L	Q1R1V1E1T1L1L1R1Q	Q1V1E1L1Y1R1L1S1H	N1T1Y1E1W1E1D1S1V	751	M1R1L1R1P1G1S1F*	AV1L1V1S1S1L1S	CR1W1R1R1C1P1G1S	S1R1W1S1C1T1A1F1S1A	G1T1L1W1S1G1R1V1T
801	LGR1H1F1W1R1L	RK1A1L1D1G1K1W	N1F1E1G1T1V1G1T1C	N1W1Q1E1A1T1S1*	801	SW1G1T1S1S1G1D1D	S1E1K1P1C1W1M1V1N1H	G1Q1K1E1Q1W1V1D	A1I1G1R1K1Q1H1L1S		

sgRNA3\_c9

Allele 1: (A) ins					Allele 2: (AG) del + (A) ins						
1	MMSASRLAGT	LIPAMAF1SC	VRPE1S1W1E1P1C1V	E1V1V1N1I1Y1Q1C	M1E1L1N1F1Y1K1I1P1D	1	MMSASRLAGT	LIPAMAF1SC	VRPE1S1W1E1P1C1V	E1V1V1N1I1Y1Q1C	M1E1L1N1F1Y1K1I1P1D
51	N1L1P1F1S1T1K1N1L1D	L1S1F1N1P1L1K1A1F1R	Q1L*1L1L1Q1F1P1R1T	AG1A1G1F1I1Q1V1N	FD1N*1R1W1G1I1S1E	51	N1L1P1F1S1T1K1N1L1D	L1S1F1N1P1L1K1A1F1R	Q1L*1L1L1Q1F1P1R1T	AG1A1G1F1I1Q1V1N	FD1N*1R1W1G1I1S1E
101	PKPFLYL1NID	RKPHPEFSPG	SLFW1K1F1K1T1E	AGCGDKKSI	SRELPHWTSQ	101	*ATSLP*Y*Q	ETPSRV*PWE	PFLDYQVYRS	WWLWROI*HL	*RTSPLDISK
151	NFERT*CGSQ	SYPIFQIT*V	FF*SDQSRA1	GFQQQDSKY	LLHRLAGSTS	151	L*K1N1M1W1L1T1I	LSN1SNY1S1I	FLI*PI*STW	TFPATRFKVF	IAQTCGFYIK
201	NAFTQSLFRP	VPEPYEL1PT	RCI*RN*AS*	ADFKK*F**F	KCNEN1YSRS	201	CPYS1SL*TC	P*TL*TL1SNQ	VHLK1K1GF1S	*L*E1I1L1V*	M**K1LVFK1W
251	GWFRSPSPFGS	GRI*K*RK1G	KV*Q1CSRGP	VQFDH*RIPI	S1LRL1LPR*Y	251	LV*KS1V1WF	ENLEK1E1TWK	SLTNL1R1AC	AI*PLKNSD*	HT*TT1SM1L
301	Y*LI*LFDKC	FF1FPG1E1DY	*KGR1L1F*	RMATFR1S*L	*I1W1V1S1H1E1T	301	LY1L1V*QMF	LHFF*V*LL	KG*KTF1L1S	DGNI*N*LV	NLDSFP1NS
351	Q1SQKAY1FH	QQRW1E1CFRS	*STK*V1SR	*Q*W1E1F1Q1R1L	LFSK*F1W1D1Q	351	NLSKGL1SLP	TKVGM1FQK1L	IYQAL1S*1S	VEMA*VSKVA	VLK1V1LQ1PA
401	PKVFR1E1LQW	CY1HE1FK1L1G	LR1TR1SG1F	AFQ1E1NE*V	FS1P1TQ1K1PH	401	*SI*I*AS1M	LLP*VQ1SWA	*NN*NIW1S	IPI*NK*V1S	QYSYH1E1S1F
451	LP*HFSY1SHQ	SCFQW1HLQ1W	VQSR1S1L1E1W	QFF1F1G1K1L1P1SR	Y1LHRA1E1K1LD1L	451	TLTFL1L1TPE	LLSMAS1MAC	PVSKS*K1W1LA	ILSRK1TSFQ1I	SSQS*E1T*P1S
501	PG1L1SV1S1TGA	V1VNS1*L1L	QSS1G1K1Y1E1P	Q1L1F1G1Y1V1S1L	*V1S1E1L1P1F1G1S	501	W1SL1SVN1W1S	CLQO1L1T1H1SP	V1RY*I*1AT1T	TSF1W1R1F1L1I	SV*TP1SR1F1L1I
551	LQ1SQ1SH1N1D1FQ	KTG1T1AF1SK*	SS1FL1K1YS1E*	L1C1Y1L*1T1P1E1F	PAM1DQ1G1P1E1A	551	TVS1I1T*1LPK	NRN1YS1FQ1V	*L1S*1LL1R1M1T	LLV1L1V1N1TR1V	CNG1S1R1T1R1G1S
601	LG1S1*1N1G1M1C	N1TR*1A1GH1AC	A1E1F1Y1H1L1S1D1E	*D1H1H1C1V1G1P1Q	C1A1C1S1C1S1S	601	W1K1L1N1E1W1V1Q	HLQ1S1R1A1C1L	*V*1S1P1V1R*1I	R1E1S1L1V1C1R1S1V	CL*Y1L1*Q1F1W



**Supplementary Figure S3.** rPAUF does not impact cell surface PD-L1 expression, but increases PD-L1 expression in cytoplasm, of pancreatic cancer cells. And PD-L1 expression in cells with higher basal surface PD-L1 expression (BxPC-3>>Panc-1), is more sensitive to TLR4 activity change. Flow cytometry showed cell surface PD-L1 expression in (A) Panc-1\_Mock and Panc-1\_TLR4OE cells, and in (B) BxPC-3\_NTC and BxPC-3\_TLR4KO cells, after the cells were treated by 0, 0.1, or 3  $\mu\text{g/mL}$  of rPAUF for 24 hr, and in (C) Panc-1\_Mock and Panc-1\_TLR4OE cells after cells were treated by 0, 1, or 5  $\mu\text{g/mL}$  of LPS for 24 hr. mRNA expression of PD-L1 in (D) BxPC-3 and (E) Panc-1 cells, after the cells were treated by rPAUF (0, 0.1, or 3  $\mu\text{g/mL}$ ) or LPS (0, 1, or 5  $\mu\text{g/mL}$ ) for 6 hr.