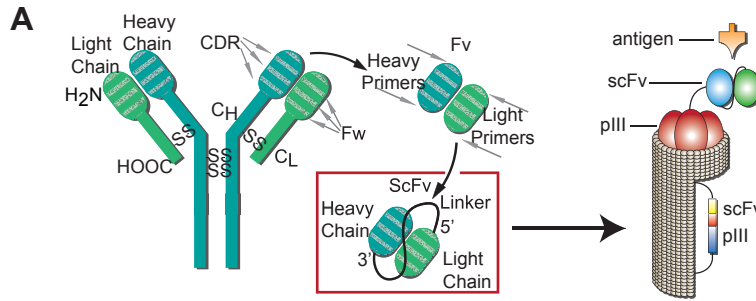


Figure S1



B

	1	10	20	30	40	50	60	70			
scFv12	VAQAALTOPSSVSANP	EGAVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv21	VAQAALTOPSSVSANP	EGTVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv28	VAQAALTOPSSVSANL	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv49	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv136	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv43	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv48	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv13	VAQAALTOPSSVSANL	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv104	VAQAALTOPSSVSANL	GETVE	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv45	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv57	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv67	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv106	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv64	VAQAALTOPSSVSANP	CDPLK	ITCSGG	SGYGY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv95	VAQAALTOPSSVSANP	GETVE	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv103	VAQAALTOPSSVSANP	GETVE	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv20	VAQAALTOPSSVSANP	GETVE	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv34	VAQAALTOPSSVSANL	GETVE	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv105	VAQAALTOPSSVSANP	EGAVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv102	VAQAALTOPSSVSANP	GETVK	ITCSGG	GSSSY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV
scFv33	VAQAALTOPSSVSANP	GETVK	ITCSGG	SGYGY	GWY	QOKSP	GSAPVTVI	YNDKRP	SDVPSRFSGSK	SGT	ATLTTITGV

	80	90	100	110	120	130	140	150
scFv12	QABDEAVYFCGGYDSS	.GD..GT	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv21	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv28	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv49	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv136	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv43	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv48	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv13	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv104	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv45	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv57	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv67	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv106	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv64	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv95	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv103	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv20	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv34	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv105	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv102	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF
scFv33	QABDEAVYFCGGYDSS	.YV..CI	FGAGT	TLTVLGGSSRSS	SGGSSGGGS	AVTLDSEGGGL	TPGGALSLV	CKASGFTF

	160	170	180	190	200	210	220	230						
scFv12	SGYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv21	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv28	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv49	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv136	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv43	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv48	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv13	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv104	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv45	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv57	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv67	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv106	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv64	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv95	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv103	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv20	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv34	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv105	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv102	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...
scFv33	SSYNDMGWV	ROAPGKGLE	WVGGT	SGSGR	RYTEY	GA	AVKGRATI	SRDNGOSTV	RLQNLNLR	RAEDT	GT	Y	CAKAAV	SDYCG...

	240	250	260	270			
scFv12	.GGCAGD	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv21	.GSDAGD	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv28	.WNYAGT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv49	.PGAAGT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv136	.PGAAGT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv43	.TFAFAG	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv48	.TFAFAG	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv13	.SAIAGD	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv104	.GNIAGS	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv45	...TGNST	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv57	...TGNST	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv67	...TGNST	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv106	...TGNST	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv64	...NGNNT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv95	...SGDIT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv103	...SGDIT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv20	...DVFAT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv34	...IGAYC	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv105	...IGAYC	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv102	...NSAGT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS
scFv33	...AGRIT	LD	AWGHGTE	IVSS	TSGQAGQH	HHHHHGAY	PDVDPDYAS

Figure S2

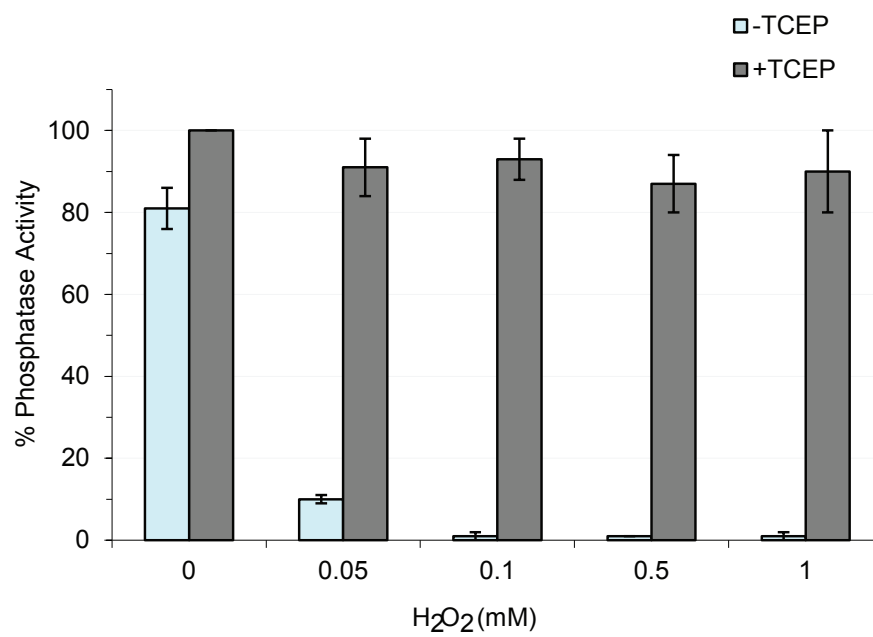
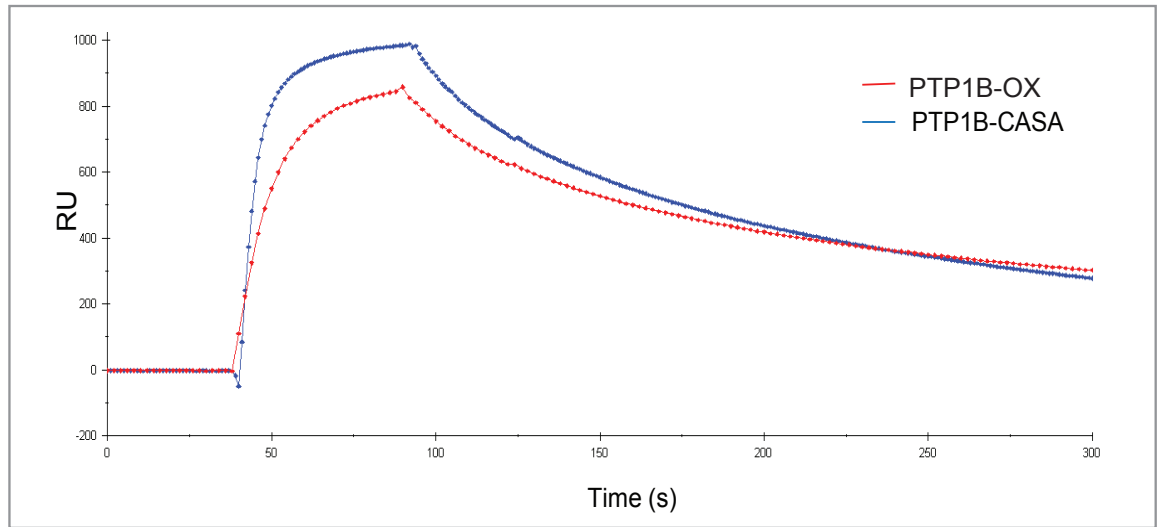


Figure S3

A



B

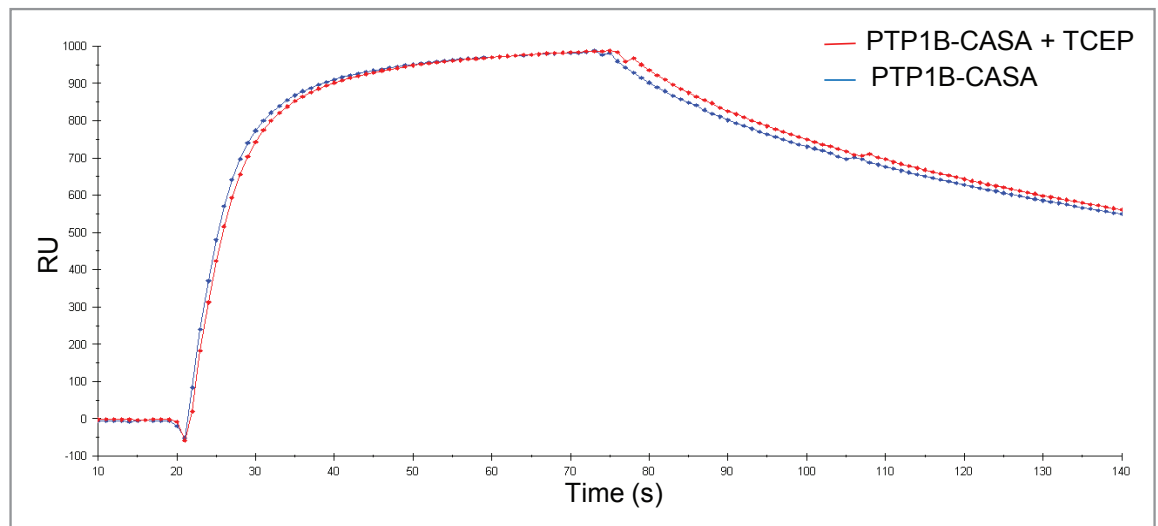


Figure S4

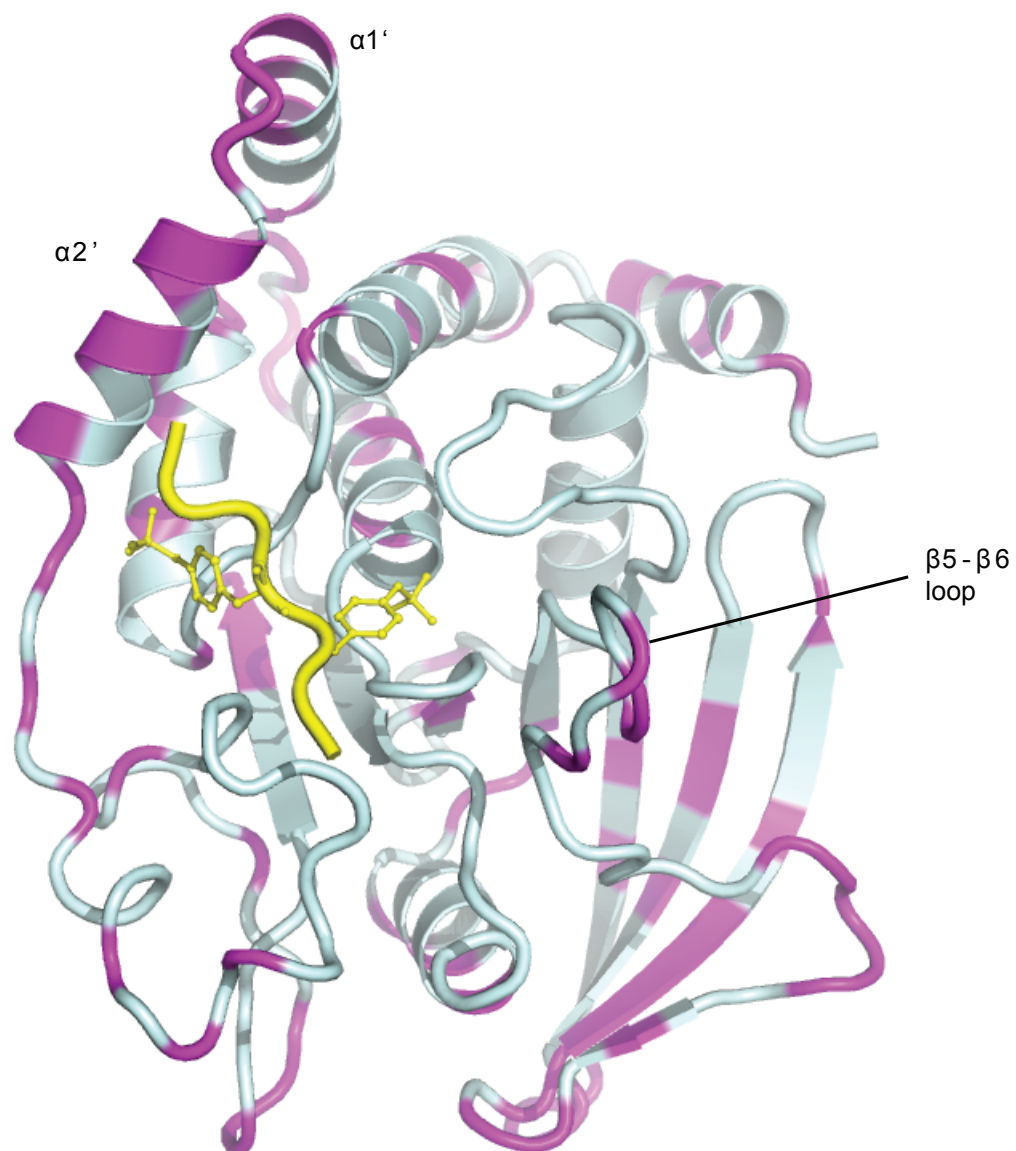




Figure S6

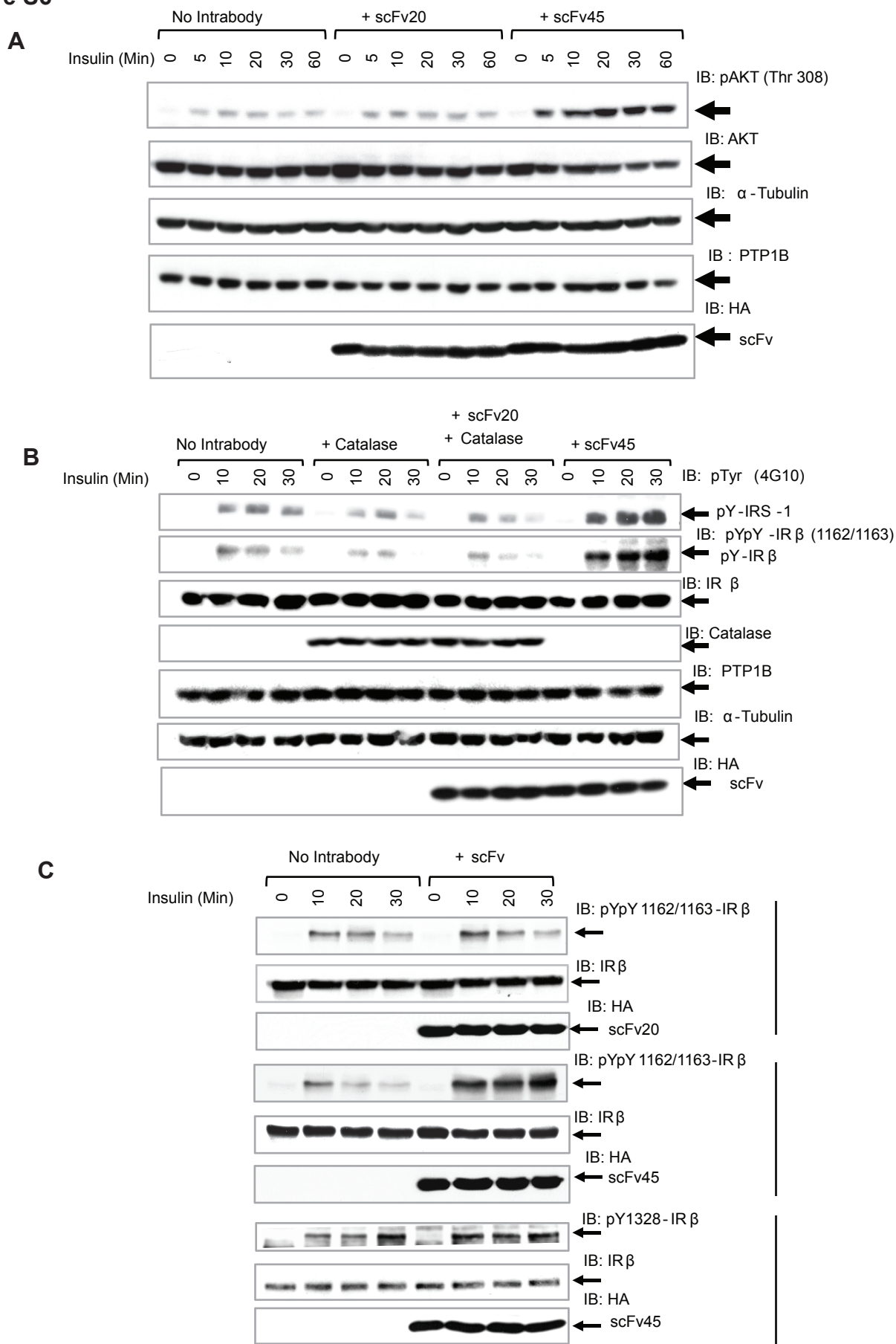


Figure S7

