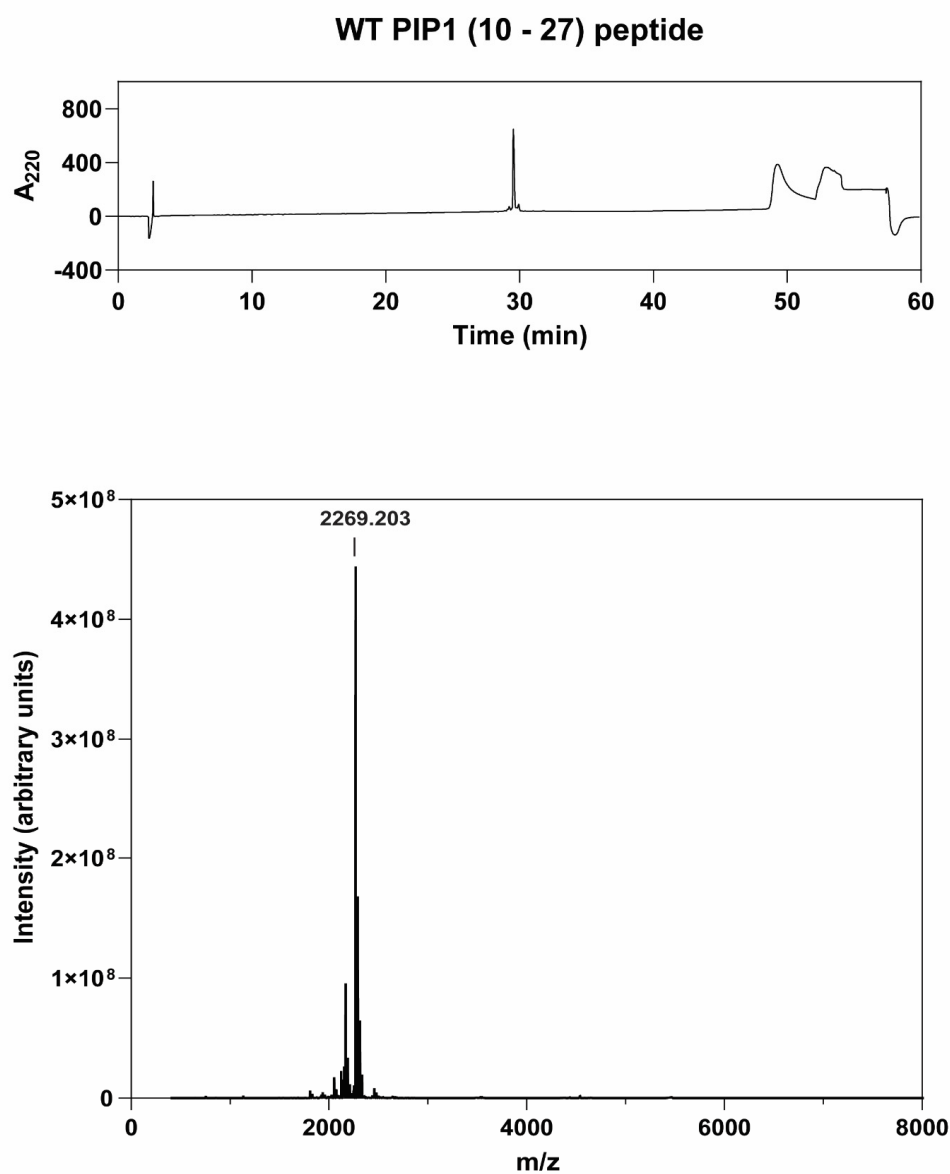


Supplementary Figures

Figure S1. Characterization of synthesized peptides. For each peptide, the top panel shows evaluation of peptide purity by analytical-scale reverse-phase high-performance liquid chromatography (HPLC), as assessed by UV absorbance at 220 nm. The HPLC conditions for each chromatographic run were: solvent A = water + 0.1% trifluoroacetic acid, solvent B = acetonitrile + 0.1% trifluoroacetic acid, gradient = 5-55% B over 30 or 60 min.

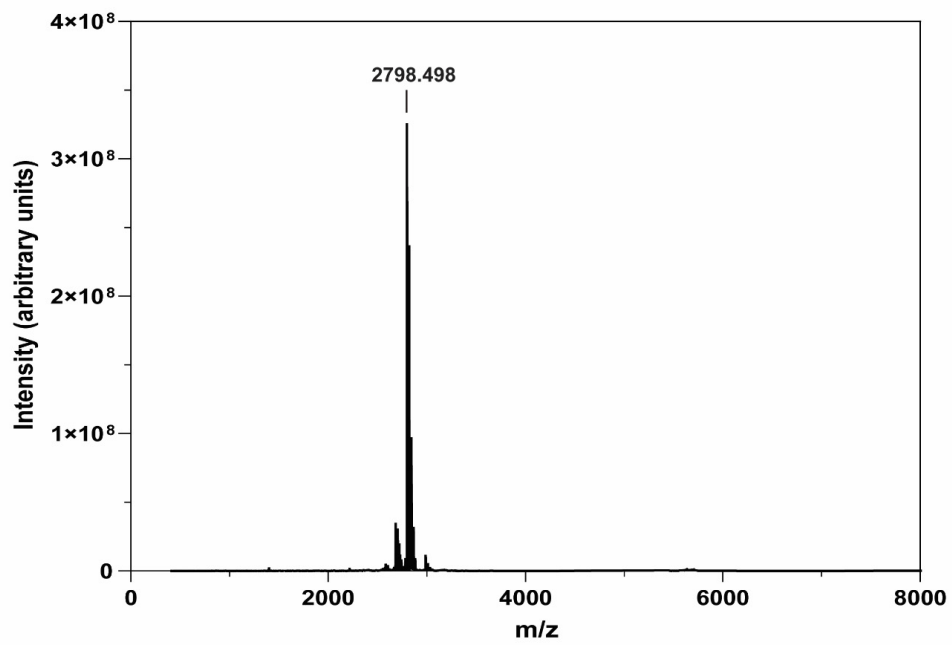
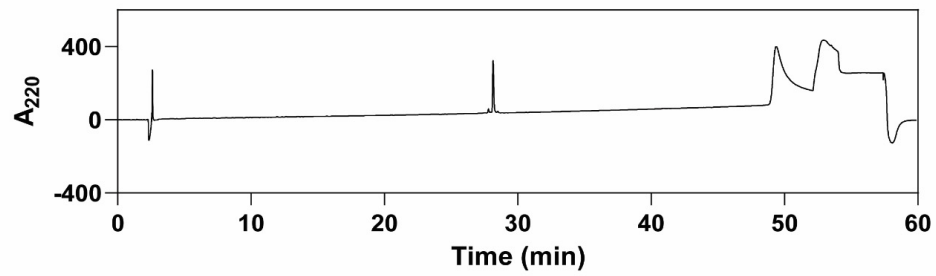
The bottom panel shows confirmation of peptide identity by matrix-assisted laser desorption ionization mass spectrometry using the monoisotopic $[M+H]^+$ peak in each spectrum.

(A) WT PIP1 peptide (10 – 27), calculated monoisotopic mass $[M+H]^+ = 2269.197$ m/z.

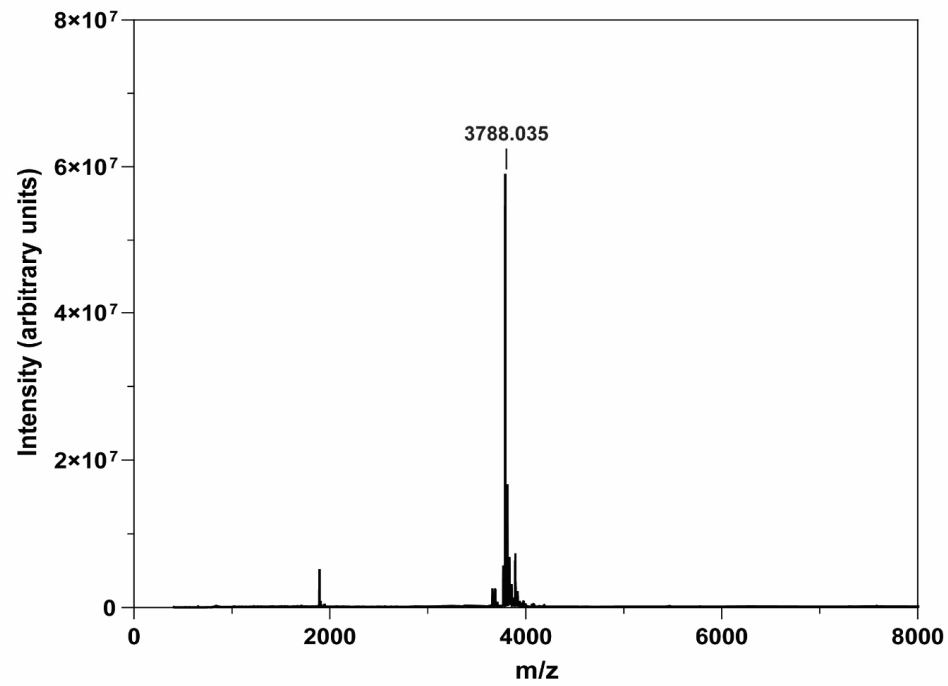
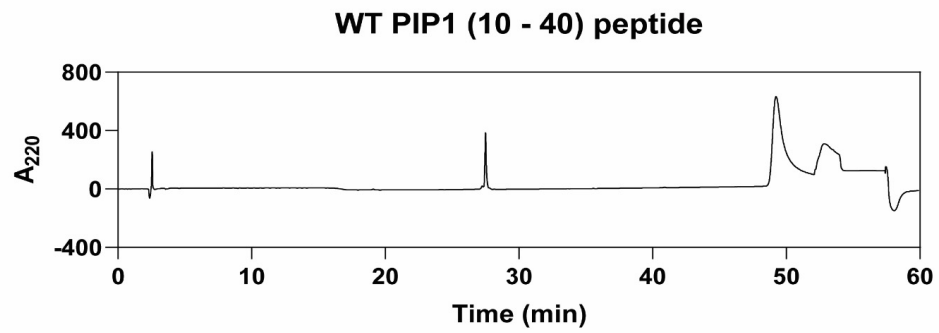


(B) WT PIP1 peptide (10 – 32), calculated monoisotopic mass $[M+H]^+ = 2798.484$ m/z.

WT PIP1 (10 - 32) peptide



(C) WT PIP1 peptide (10 – 40), calculated monoisotopic mass $[M+H]^+ = 3788.038$ m/z.



(D) * β mutant PIP1 (10 - 40) peptide, calculated monoisotopic mass $[M+H]^+ = 3513.906$ m/z.

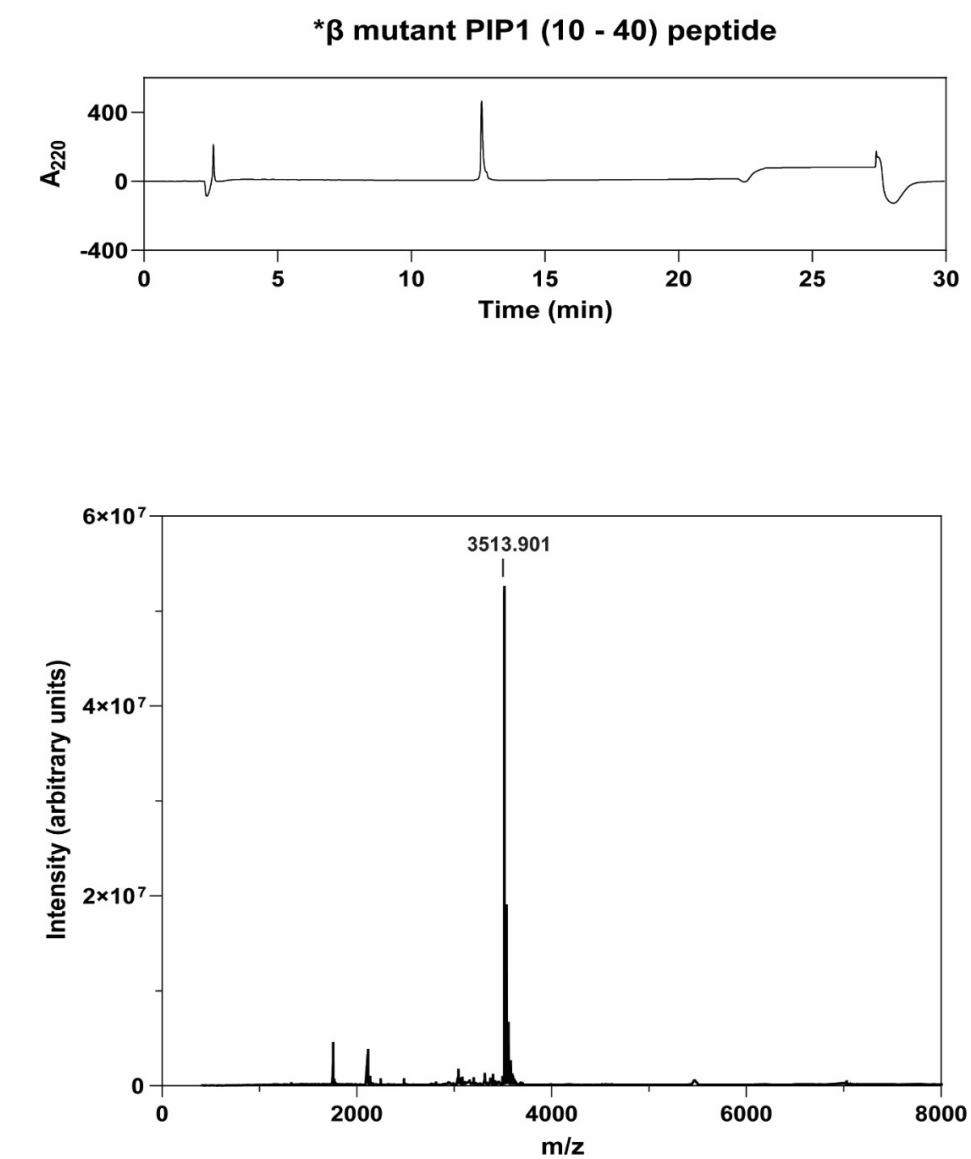


Table S1. Sequences and sources of peptides used in binding studies.

Figure	Peptide sequence	Source of peptide
3	WDDTKKKGILSFFQNT-OH	GenScript
6A	WLQDDTKKKGILSFFQNTT-NH ₂	Checco Lab
6B	WLQDDTKKKGILSFFQNTTTVKS-NH ₂	Checco Lab
6C	WLQDDTKKKGILSFFQNTTTVKS-NKFLTKEKD-NH ₂	Checco Lab
7B	LQDDTKKKGILSFFQNTAAAKSNKFLTKEKD-NH ₂	Checco Lab
7C	LQDDTKKKGILSAAQNTTTVKS-NK-OH	GenScript
7D	LQDDTKKKGILSAAQNTAAAKSNK-OH	GenScript
7E	LQDDTKKKGILSFFQNTTTVKS-NK-OH	GenScript
	LQDDTKKKGILSFFQNTAAAKSNK-OH	
	LQDDTKKKGILSAAQNTTTVKS-NK-OH	
	LQDDTKKKGILSAAQNTAAAKSNK-OH	

Note: peptides containing tryptophan were excluded from nanoDSF experiments because tryptophan fluorescence can interfere with the intrinsic fluorescence signal used to monitor PCNA thermal unfolding.

NH₂ = amide

OH = carboxylic acid

Table S2. Sequences of PCNA and PCNA-PIP1 fusion proteins.

Protein	Sequence
His ₁₂ -PCNA	(MHHHHHHHHHHHH) MLEAKFEEASLFKRIIDGFKDCVQLVNFQCKEDGIIAQAVDDSRVLLVSLEIGVEAFQEYRCDHPVTLGMDLTSLSKILRCGNNTDTLT LIADNTPDSIILLFEDTKKDRIAEYSLKLMIDADFLKIEELQYDSTLSLPS SEFSKIVRDLSQLSDSINIMITKETIKFVADGDIGSGSVIIKPFVDMHPET SIKLEMDQPVDLTFGAKYLLDIKGSLSLSDRVGIRLSSEAPALFQFDLKSGF LQFFLAPKFNDDEE
His ₆ -PCNA- PIP1	(MHHHHHH) MLEAKFEEASLFKRIIDGFKDCVQLVNFQCKEDGIIAQAVDDSRVLLVSLEIGVEAFQEYRCDHPVTLGMDLTSLSKILRCGNNTDTLT LIADNTPDSIILLFEDTKKDRIAEYSLKLMIDADFLKIEELQYDSTLSLPSSEFSKI VRDLSQLSDSINIMITKETIKFVADGDIGSGSVIIKPFVDMHPETSIKLEM DQPVDLTFGAKYLLDIKGSLSLSDRVGIRLSSEAPALFQFDLKSGFLQFFLA PKFNDEEGSGGDDTKKKGILSFFQNTTTVKS-NKFLT

Histidine tags are shown in parentheses.