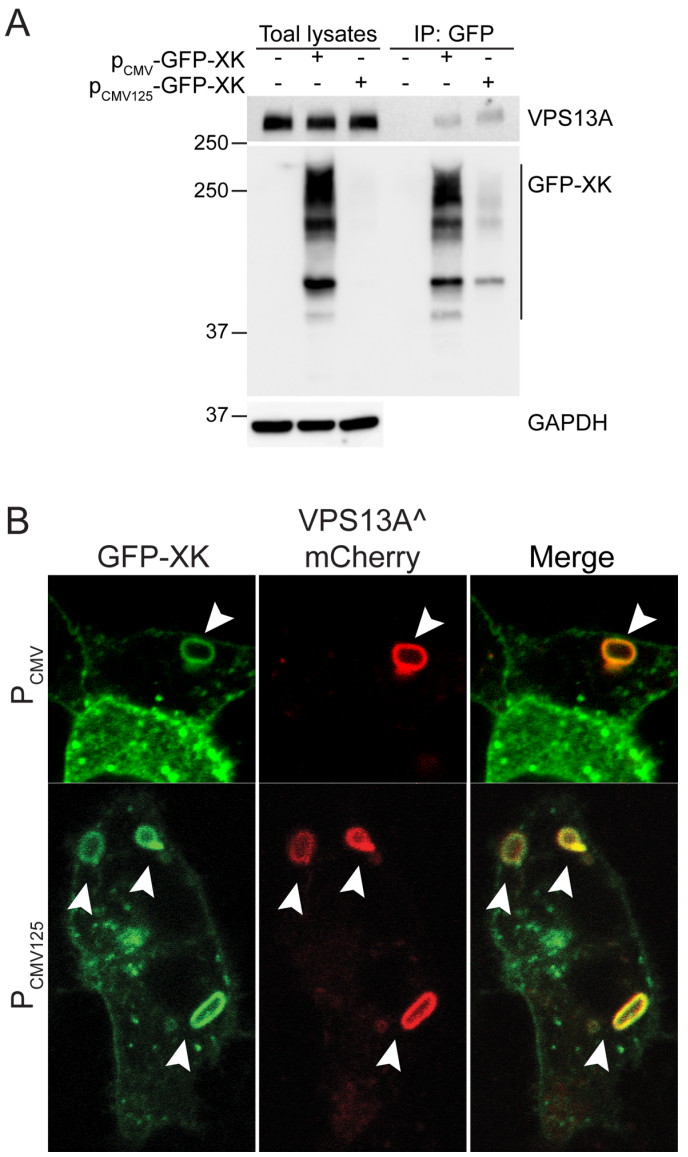

Fig. S1. Interaction of XK with VPS13A at reduced expression levels. (A) Co-immunoprecipitation of endogenous VPS13A protein with GFP-XK from HEK293T cells transfected with plasmid pcDNA3.1(+)-N-eGFP-*XK*, expressing GFP-XK under control of the full CMV promoter, or pJS163 with GFP-XK under control of a smaller 125bp fragment of the CMV promoter. GAPDH was used as a loading control. The experiment was performed three separate times. (B) HEK293T cells were co-transfected with pVPS13A^mCherry and either pcDNA3.1(+)-N-eGFP-*XK* or pJS163 and then imaged by fluorescence microscopy. Arrowheads indicate co-localization of VPS13A with GFP-XK. These structures were seen at both GFP-XK expression levels. This experiment was performed twice with each GFP-XK vector.

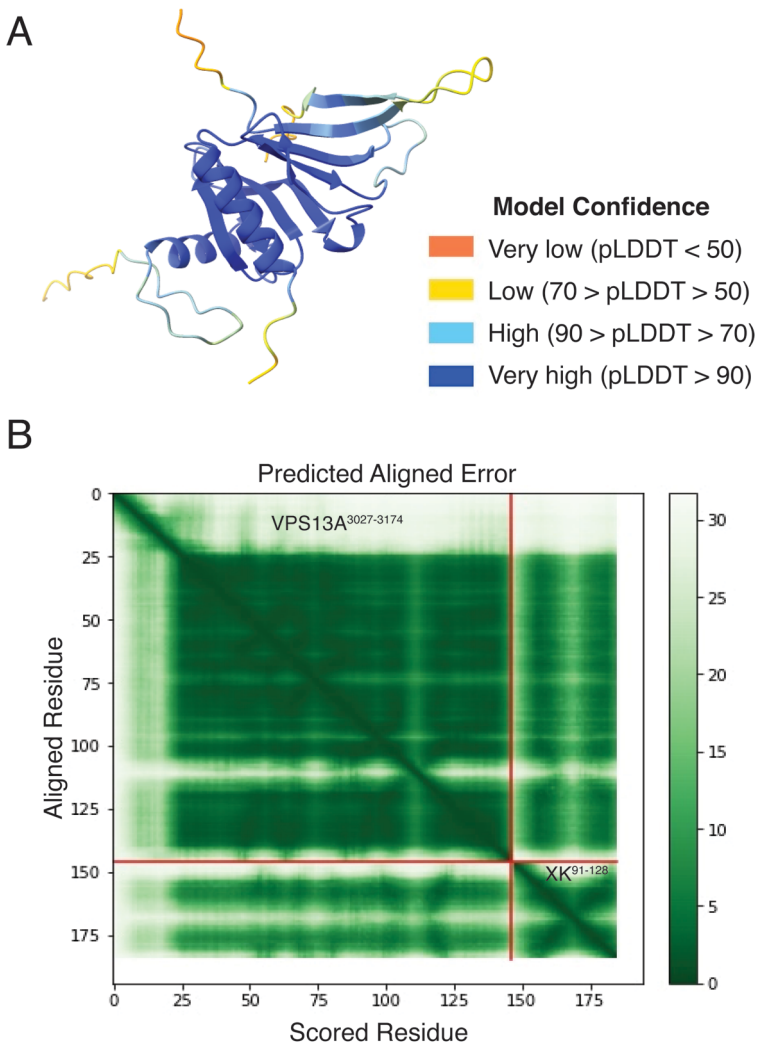

Fig. S2. Confidence values for the Alphafold structure of the VPS13A-XK interface shown in Figure 5A. (A) Structural model, oriented as in Figure 5A color coded to indicate the Local Difference Distance Test score at each position. Darker color indicates higher confidence. (B) The Predicted Aligned Error plot for the structure in Figure 5A.

Table S1. Plasmids used in this study

Name	Gene expressed	Source
pEGFP-C2	*GFP*	Clontech
pcDNA3.1(+)-N-eGFP-*XK*	*GFP-XK*	GenScript
p*VPS13A*^mCherry	*VPS13A*^mCherry	Kumar *et al*., 2018
JS141-E4	$VPS13A^{W2460R}$^*mCherry*	(Park and Neiman, 2020)
JS142-D3	*mRFP-XK*	this study
JS160	$VPS13A^{1-3143}$^mCherry	this study
JS163	*GFP-XK*	this study
JS164	$GFP\text{-}VPS13A^{2751-3174}$	this study
JS165	$GFP\text{-}XK^{EEPYVS\ to\ 6A}$	this study
JS166	$GFP\text{-}VPS13A^{3027-3174}$	this study
JS167	$GFP\text{-}VPS13A^{3144-3174}$	this study
JS169	*XK*	this study
JS171	$GFP\text{-}VPS13A^{3027-3143}$	this study
JS172	$GFP\text{-}VPS13A^{3027-31784}$*-I3148P*	this study
JS173	$XK^{EEPYVS\ to\ 6A}$	this study

Table S2. primers used in this study

Name	Sequence
JSO620	5’-AGACCCAAGCTGGCTAGCGTTTAAACTTAAGCTTGCCACCATGGCCTCCTCCGAGGACGT
JSO628	5’-GCCGGGAATTTCATAAGATATCTGCAGAATTCGGATCCGAGCTCGGTACCGGCGCCGGTGGAGTGGC
JSO731	5’-GTTTGTGGAAGGAATGGCACTAGGACTTAAGGCACTAGTTGGTGG
JSO732	5’-ATTATGATCTAGAGTCGCGGCCGCTTCATCTGGCATGAAATACAGACTTCACT
JSO733	5’-AGTGAAGTCTGTATTTCATGCCAGATGAAGCGGCCGCGACTCTAGATCATAAT
JSO734	5’-AAATATTAACGCTTACAATTTACGCCTTAAGATACATTGATGAGT
JSO741	5’-GCTTCGCGATGTACGGGCCAGATATACGCGTAAATGGCCCGCCTGGCAT
JSO742	5’-CATGGTGGCAAGCTTAAGTTTAAACGCTAGCCAGCTTGGGTCTCCCTATAG
JSO756	5’-CGAGCTGTACAAGTCCGGCCGGACTCAGATCTCGAGCGAATATAAAACAGCCTCATTAG
JSO757	5’-ATTATGATCAGTTATCTAGATCCGGTGGATCCCGGGTCAGAGGCTCGGAGAAGG
JSO758	5’-GGACGAGCTGTACAAGGGT
JSO759	5’-TTGGCATTTGCCTCTTCTTGGTGATAGCGGCAGCAGCCGCTGCATTGTTGCCTGACTGAAAGTAG
JSO760	5’-CTACTTTCAGTCAGGCAACAATGCAGCGGCTGCTGCCGCTATCACCAAGAAGAGGCAAATGCCAA
JSO761	5’-GCACAGTCGAGGCTGATCA
JSO775	5’-CGAGCTGTACAAGTCCGGCCGGACTCAGATCTCGAGCGCTACAGAGACTTCTGAAGT
JSO776	5’-CGAGCTGTACAAGTCCGGCCGGACTCAGATCTCGAGCGAGTTTGGAAAAATAATTAACTTC
JSO781	5’-ATTATGATCAGTTATCTAGATCCGGTGGATCCCGGGTCATCTGGCATGAAATACAGACT
JSO783	5’-CATCCTCTGGGGTCTTGAAGTTAATTGGTTTTCCAAAC
JSO784	5’-ATTTCATGCCAGAGAGTTTGGAAAACCAATTAACTTCA