

Supplemental Materials

Molecular Biology of the Cell

Jin et al.

Supplemental Figure Legends

Supplemental Figure 1. Sequence alignment of Fam13a across species. Residues of the 14-3-3 binding motifs and nuclear localization signals are highlighted in blue and red boxes, respectively. The sequence of the B56-binding domain is underlined in green.

Supplemental Figure 2. Leptomycin B (LMB) blocks OA-induced cytoplasmic sequestration of Fam13a. Representative immunofluorescence images showing subcellular distribution of Fam13a in control (DMSO), LMB-, OA-, and OA+LMB-treated NIH3T3 cells. Fam13a was primarily nuclear in control (DMSO) and LMB-treated NIH3T3 cells. OA treatment induced cytoplasmic sequestration of Fam13a. LMB treatment blocked OA-induced cytoplasmic sequestration of Fam13a. The graph on the right shows the percentage of cells displaying nuclear (N), cytoplasmic (C), or even distribution between nucleus and cytoplasm (N=C).

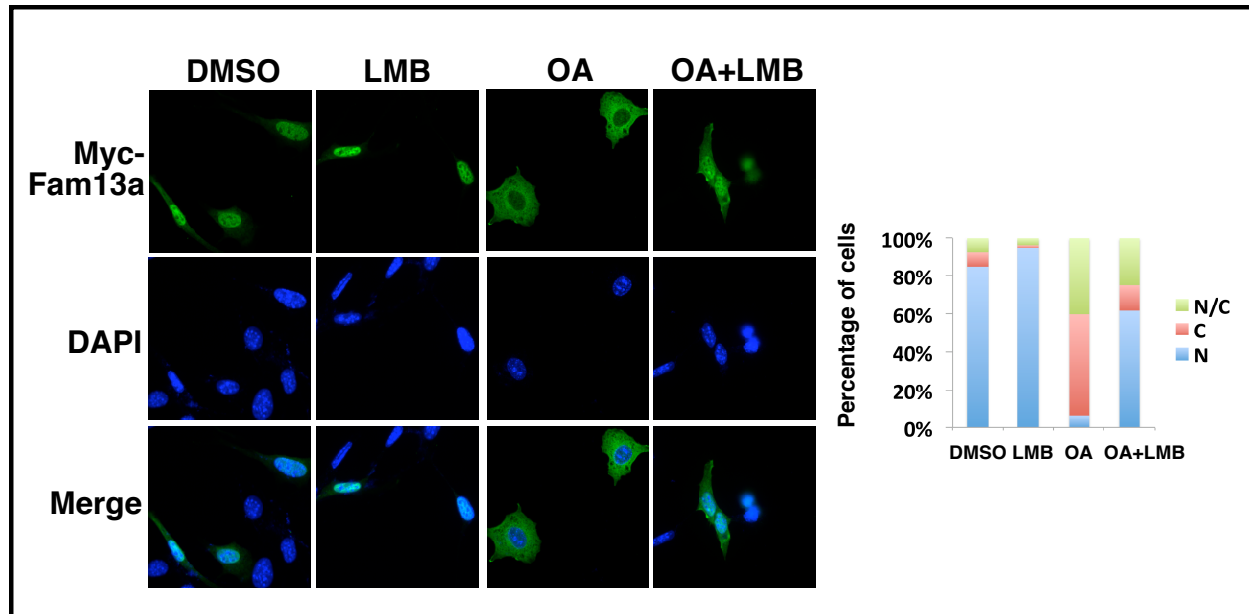
Supplemental Figure 3. Specificity of the anti-Fam13a antibody. **A.** Western blot showing that overexpressed myc-Fam13a could be recognized by the anti-myc and anti-Fam13a antibodies on Western blot. **B.** Western blot showing detection of endogenous Fam13a in A549 cells by the anti-Fam13a antibody. Note that transfection of a siRNA against FAM13A (siFam13a) reduced the amount of endogenous Fam13a in A549 cells.

Supplemental Figure 4. The motif between residues 404 and 418 of Fam13a is a 14-3-3 binding motif. The left panel is a CoIP experiment, showing that mutation of the 14-3-3 binding domain located between 404-418 (Δ 315-329; T411A) abolished the weak binding between Δ 315-329 and 14-3-3. The right panel is a GST-pull down assay, showing that bacterially expressed GST-14-3-3 η could pull down the wild type Fam13a, a small amount of Δ 315-329, but not Δ 315-329; T411A.

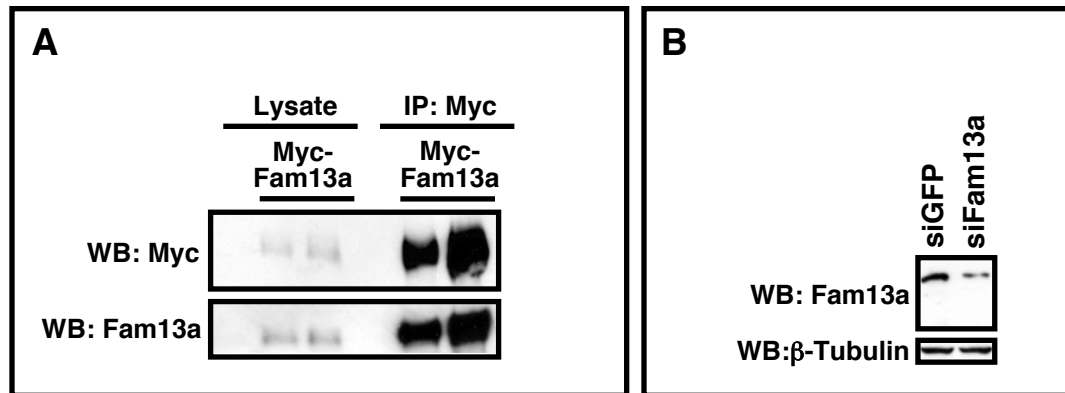
Supplemental figure 1

mouse	284	PMLS	PRFY	YAGQ	SRQY	LDDT	EVPP	SPPN	SHSFM	-RRR	SSSL	GSYD	DEQ-	EDLT	PVQL	TRR	341																																			
rat		PMLS	PRFY	YAGQ	SRQY	LDDT	EVPP	SPPN	SHSFM	-RRR	SSSL	GSYD	DEQ-	EDLT	PVQL	TRR																																				
human		PMLS	PRFY	YAGQ	SRQY	LDDT	EVPP	SPPN	SHSFM	-RRR	SSSL	GSYD	DEQ-	EDLT	PAQL	TRR																																				
chicken		PMLS	PRFY	YAGQ	SQQY	LDDT	EVPP	SPPN	SHSFM	-RRR	SSSL	GSYED	DDR-	EDLT	PAQL	TRR																																				
xenopus		PMLS	PRFY	YAGHS	QQY	LDDP	EVPP	SPPN	NAHSFM	-RRR	SSSL	GSHEE	DRDE	EDLT	PAQL	TRK																																				
zebrafish		PMV	SPRF	YG	DGHQ	YLDD	TEVPP	SPPN	AHSFV	SRRR	SSSL	GSCE	DER-	EELT	SAQL	SKR																																				
mouse	342	IQT	LKKK	IRKF	EDR	FEEER	KYR	PSHS	SDKA	ANPE	VLK	WTND	LAK	FRK	QLK	ESKL	KI	SEEDL	401																																	
rat		IQT	LKKK	IRKF	EDR	FEEER	KYR	PSHS	SDKA	ANPE	VLK	WTND	LAK	FRK	QLK	ETKL	KI	SEEDL																																		
human		IQSL	LKKK	IRKF	EDR	FEEEK	KYR	PSHS	SDKA	ANPE	VLK	WTND	LAK	FR	RQL	ESKL	KI	SEEDL																																		
chicken		IQGL	LKKK	IRKF	EDK	FEEER	KYR	PSHS	SDKA	ANPE	VLK	WTND	LAK	FRK	QLK	ESKL	KI	SEEDL																																		
xenopus		IQSL	LKKK	IRKF	EDK	FEEER	KYR	PSHR	DKA	TNPE	VLK	WMN	ELAK	FRK	QLK	ETKI	KL	SEDDL																																		
zebrafish		IHL	LKKK	IRRY	EK	FEEER	KYR	PSHG	DKA	GNPE	VLRW	MNEL	TRL	RKD	LKD	HKL	LK	SEEDL																																		
mouse	402	TPR	TRQ	RSNT	LPKS	FGS	QLE	KEDE	KKQ	ELLD	KAIR	PSVE	ATLE	GIL	RKL	QEK	RVE	SSRPE	461																																	
rat		TPR	TRQ	RSNT	LPKS	FGS	QLE	KEDE	KKQ	ELVD	KAIR	PSVE	ATLE	GIL	RKL	QEK	RM	ESSRPE																																		
human		TPR	MRQ	RSNT	LPKS	FGS	QLE	KEDE	KKQ	ELVD	KAI	KPSVE	ATLES	IQR	KLQ	EK	RAE	SSRPE																																		
chicken		GPV	VRQ	RSNT	LPKS	FGS	QLE	KEDE	DKQ	DLSD	KA	PAVE	VTLD	SIQ	KKL	QEK	RTET	NRPE																																		
xenopus		VPQ	MRQ	RSNT	LPKS	FGS	QLD	REEE	KKP	PETVE	KPA	KSME	ATME	AIQ	KKL	QEK	RNE	VNRPE																																		
zebrafish		TP	IPR	Q	RSNT	LPKS	FGS	QLE	KKTP	PET	----	KAP	KPP	VE	STLE	TVTN	KLQ	EKRKE	AGRPE																																	
mouse		DIK	DMTK	DQ	IANE	KVAL	QKAL	LYYES	IHGR	PVT	KT	TERQ	IMK	PLY	DRY	RLV	KQIL	SR	ASTV	521																																
rat		DIK	DMTK	DQ	IANE	KVAL	QKAL	LYYES	IHGR	PVT	KT	TERQ	IMK	PLY	DRY	RLV	KQIL	SR	ASTV																																	
human		DIK	DMTK	DQ	IANE	KVAL	QKAL	LYYES	IHGR	PVT	KNERQ	VMK	PLY	DRY	RLV	KQIL	SR	ANTI																																		
chicken		DIK	DMTR	DQ	IAAE	KVAL	QKAL	LYYES	IHGR	PVT	KNERQ	VMK	PLY	DRY	RLV	KQIL	SR	ANTI																																		
xenopus		DIK	DMTR	DQ	IAAE	KV	SLQ	KAL	LYYES	IHGR	PVT	KNERQ	VMK	PLY	DRY	RLF	KQIL	SR	ANTI																																	
zebrafish		DIK	DMT	RE	Q	IGA	EK	VAI	QKAL	LYYES	IHGR	P	T	KNERQ	VMK	PLY	DRY	RLV	KQIL	CRASAI																																
mouse	522	PI	IGS	PSS	KRR	SPSL	QPI	IE	GETA	SFF	KEI	IK	----	QEE	GSE	DD	SST	KPDF	AVTL	KTD	CS	577																														
rat		PI	IGS	PSS	KRR	SPSL	QPI	IE	GETA	SFF	KEI	IK	----	QEE	GSE	DD	SST	KPDF	FTV	TL	KTD	SS																														
human		PI	IGS	PSS	KRR	SP	LLQ	PI	IE	GETA	SFF	KEI	IK	----	EEG	SE	DD	SNV	KPDF	FM	VT	LK	DFS																													
chicken		PI	IGS	PSS	KRR	SP	LLQ	PI	IE	GETA	SFF	KEI	IK	----	EEG	SE	ED	SNV	KPDF	TIT	MK	TDF	N																													
xenopus		PV	IGS	PSS	KRR	SP	LLQ	PI	IE	GETA	SFF	KEV	KE	TL	PEE	E	G	SE	DD	TNG	NTD	FTV	TM	KPG																												
zebrafish		PV	IGS	PSS	KRR	SP	LLQ	PI	IE	G	V	P	A	L	F	F	S	D	T	K	----	E	E	D	G	S																										
mouse	578	AHC	FLD	Q	LEDD	DAD	GFI	SP	MDD	KM	PSK	CS	QDS	GLS	NL	HS	AS	IPEL	LEY	LQ	EM	REE	K	M	IRK	637																										
rat		AHC	FLD	Q	LEDD	DAD	GFI	SP	MDD	KM	PSK	CS	QDS	GLS	NL	HS	AS	IPEL	LEY	LQ	E	I	REE	K	M	IRK																										
human		ARC	FLD	Q	FEDD	DAD	GFI	SP	MDD	KI	PSK	CS	QDT	GLS	NL	HA	AS	IPEL	LE	HL	LQ	EM	REE	K	R	IRK																										
chicken		VRS	FLD	Q	LEDD	DAD	GFV	SP	VDD	KI	PS	RSN	QDM	GLS	NL	HE	AS	IPEL	LE	QL	Q	EV	REE	K	R	IRK																										
xenopus		VRT	F	L	E	Q	LDD	DAD	GFV	SP	VDD	N	I	PSK	S	S	QD	L	GL	NL	HS	AS	IPEL	LE	Q	LQ	E	A	REE	K	R	IRK																				
zebrafish		ML	GL	L	D	Q	L	D	E	D	A	D	G	F	I	S	P	V	D	E	L	S	P	S	K	N	T	D	M	R	L	S	N	L	H	A	A	T	M	Q	E	L	V	E	L	Q	E	A	REE	K	R	IRK

Supplemental figure 2



Supplemental figure 3



Supplemental figure 4

