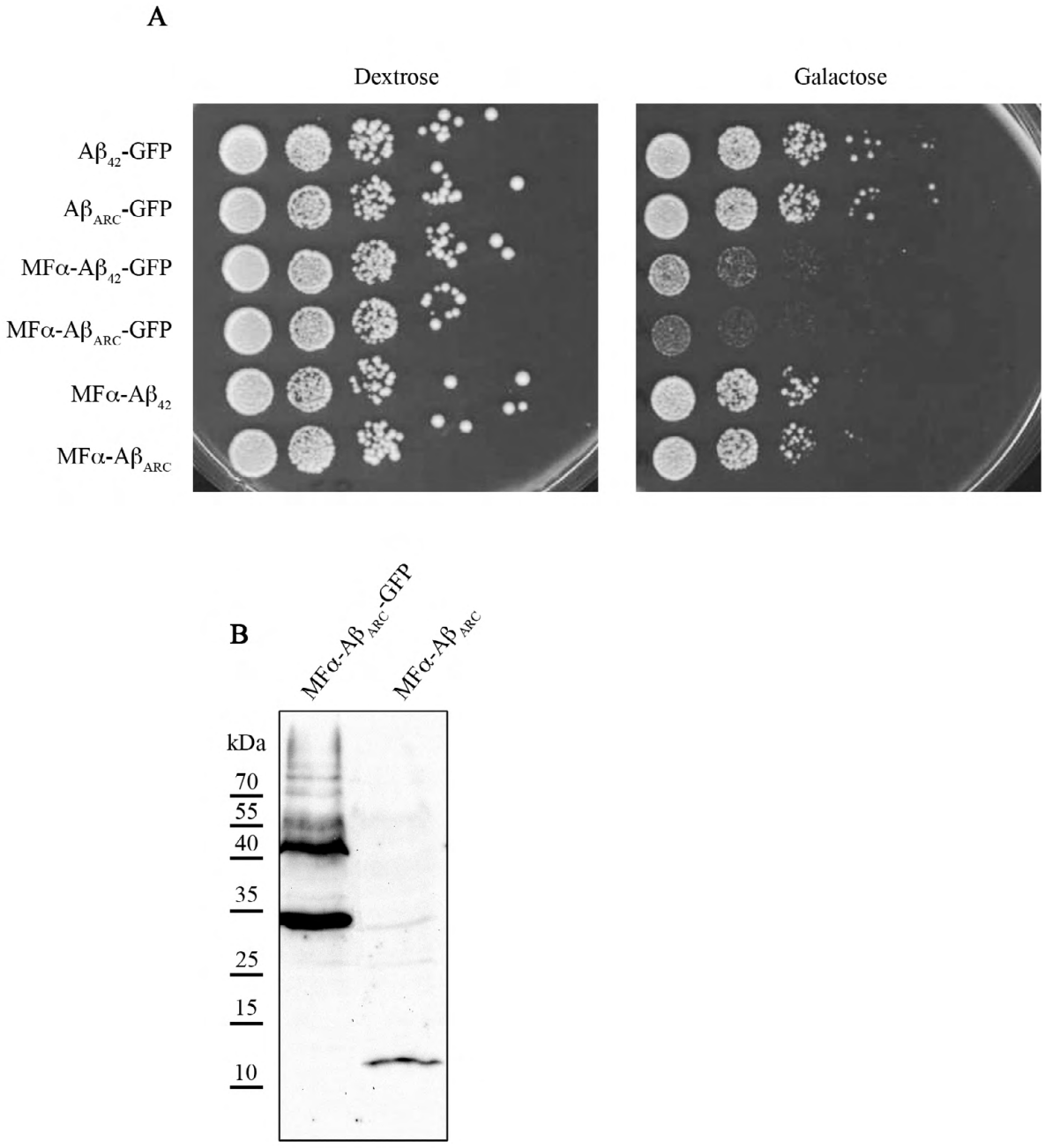

Fig. S1. Toxicity of Aβ alone. (A) Ten-fold dilutions of exponentially growing cultures of BY4742 cells transformed with plasmids carrying the different chimeric constructions under the GAL10 promoter were spotted onto SD (-) or SG (+) agar supplemented with 20 mg/l histidine, 20 mg/l lysine and 60 mg/l leucine. The cells were incubated at 30°C for 3 days. (B) BY4742 cells expressing the different chimeric proteins (6 hours of expression) were collected for total-protein extracts. Equal quantities of proteins were separated by SDS-PAGE on a 12% polyacrylamide gel, transferred onto a nitrocellulose membrane and exposed to anti-Aβ (Tebu) antibodies.

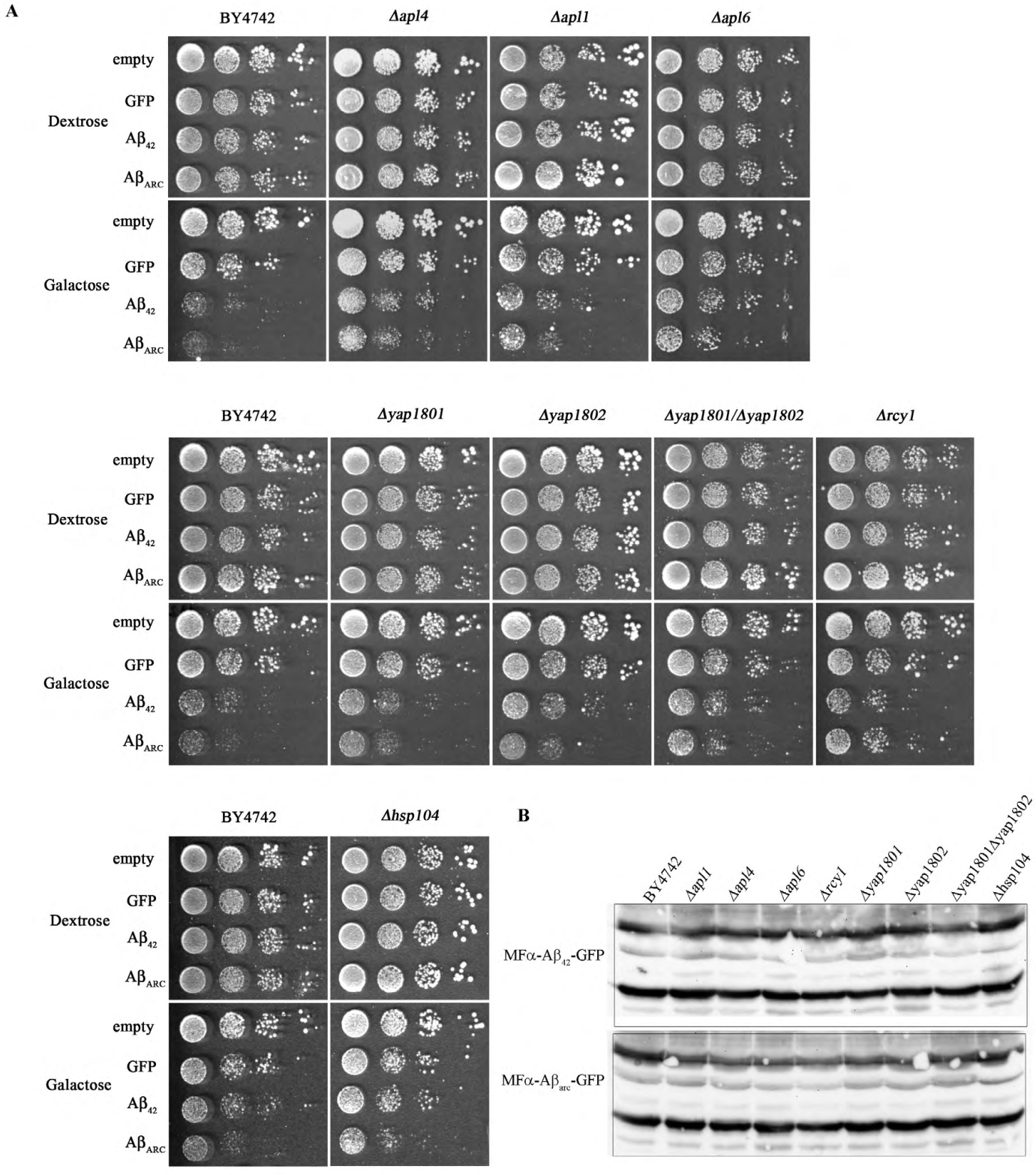

Fig. S2. Yeast mutants modulate Aβ toxixity without changing its protein level. (A) Ten-fold dilutions of exponentially growing cultures of deleted strains transformed with plasmids carrying the different chimeric constructions under the GAL10 promoter were spotted on the same plate onto SD (-) or SG (+) agar supplemented with 20 mg/l histidine, 20 mg/l lysine and 60 mg/l leucine. (B) Cells expressing the different chimeric proteins (6 hours of expression) were collected for total-protein extracts. Equal quantities of proteins were separated by SDS-PAGE on a 12% polyacrylamide gel, transferred onto a nitrocellulose membrane, and then exposed to monoclonal anti-GFP antibodies (Sigma).

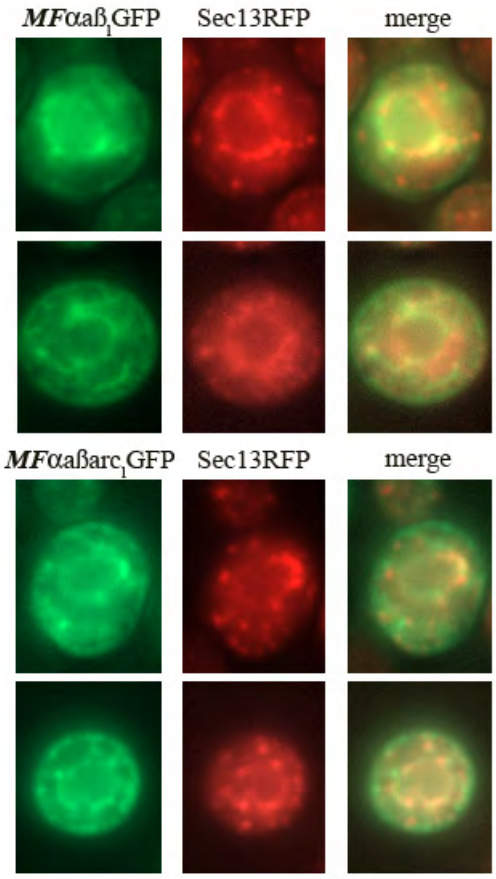

Fig. S3. Aβ-GFP species colocalize with ER. Wild-type or RFP-tagged strains were grown for 6 hours in SG liquid medium supplemented with 0.67% casaminoacids to induce the expression of the chimeric proteins and were then examined by epifluorescence microscopy.

Table 1. Yeast strains used in this study

Name of strain	Genotype	Source
BY4742	*MATa, his3Δ1, leu2Δ0, ura3Δ0*	Eurocarf yeast deletion library
Δ*apl4*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YPR029C::KanMX4*	Eurocarf yeast deletion library
Δ*apl1*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YJR005W::KanMX4*	Eurocarf yeast deletion library
Δ*apl2*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YKL135C::KanMX4*	Eurocarf yeast deletion library
Δ*apl3*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YBL037W ::KanMX4*	Eurocarf yeast deletion library
Δ*apm1*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YPL259C::KanMX4*	Eurocarf yeast deletion library
Δ*apm4*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YOL062C::KanMX4*	Eurocarf yeast deletion library
Δ*gga2*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YHR108W::KanMX4*	Eurocarf yeast deletion library
Δ*ent5*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YDR153C::KanMX4*	Eurocarf yeast deletion library
Δ*clc1*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YGR167W::KanMX4*	Eurocarf yeast deletion library
Δ*rcy1*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YJL204C::KanMX4*	Eurocarf yeast deletion library
Δ*yap1801*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YHR161C::KanMX4*	Eurocarf yeast deletion library
Δ*yap1802*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YGR241C::KanMX4*	Eurocarf yeast deletion library
Δ*hsp104*	*MATa, his3Δ1, leu2 Δ0, lys2 Δ0, ura3Δ0, YLL026W::KanMX4*	Eurocarf yeast deletion library
SEC13-RFP	*MATa, his3Δ1, leu2 Δ0, lys2 Δ0, ura3Δ0, YLR208W-RFP-KanMX6*	Peter Arvidson
Δ*yap1801/*Δ*yap1802*	*MATa, his3Δ1, leu2Δ0, ura3Δ0, YHR161C::KanMX4, YGR241C::KanMX4*	This study

Table S1. Yeast strains used in this study.

Table S2. Oligonucleotides used in this study

Number	Sequence
792	AAATACACACACTAAATTACCGGATCCTATGGATGCAGAATTCCGACATG
794	ACCAGTGAATAATTCTTCACCTTTAGACATCGCTATGACAACACCGCCCACC
705	GGATGGCCAGGCAACTTTAG
856	GAATAATTCTTCACCTTTAGACATAGCTTCAGCCTCTCTTTTATC
858	GAATAATTCTTCACCTTTAGACATGGATCCGGTAATTTAGTGTGT
859	GTCATGTCGGAATTCTGCATCCATGGATCCGGTAATTTAGTGTGT
706	TTTACACTTTATGCTTCCGG
857	ATGTCTAAAGGTGAAGAATTATTC
860	ATGGATGCAGAATTCCGACATG

Table S2. Oligonucleotides used in this study.