

Supplementary Materials: ARMCX3 Mediates Susceptibility to Hepatic Tumorigenesis Promoted by Dietary Lipotoxicity

Serena Mirra, Aleix Gavaldà-Navarro, Yasmina Manso, Mónica Higuera, Román Serrat, María Teresa Salcedo, Ferran Burgaya, José Maria Balibrea, Eva Santamaría, Iker Uriarte, Carmen Berasain, Matias A. Avila, Beatriz Mínguez, Eduardo Soriano and Francesc Villarroya

Table S1. Clinical characteristics of 24 patients of bariatric surgery used in the study.

Demographics		
Gender, <i>n</i> (%)	Male	45.8%
Age, median (range)		43.69 (58–20)
Race/Ethnicity, <i>n</i> (%)	Caucasian	70.8%
	Hispanic	29.2%
Histology		
NASH CRN	1/8	16.6%
	2/8	8.33%
	3/8	12.5%
	4/8	33.33%
	5/8	4.16%
	6/8	4.16%
	7/8	8.33%
	8/8	4.16%
Fibrosis	F0	15%
	F1	48%
	F2	37%
Laboratory values		
Bilirubin mg/dL, median (range)		0.65 (0.69–0.61)
Albumin g/L, median (range)		3.86 (4.34–2.9)
Diabetes		16.6%
Dyslipidemia		29.2%
Hypertension		41.7%

Table S2. Clinical characteristics of the 19 control patients.

Demographics.		
Gender, <i>n</i> (%)	Male	85%
Age, median (range)		62.9 (76–47)
Race/Ethnicity, <i>n</i> (%)	Caucasian	92%
	Hispanic	8%
Laboratory values		
Bilirubin mg/dL, median (range)		0.43 (0.71–0.28)
Albumin g/L, median (range)		3 (4.4–2.3)
Diabetes		26%
Dyslipidemia		8%
Hypertension		23%

Table S3. Liver function tests in *fArmxc3/Cre-* (Control) and *ARMCX3-KO* (KO) mice fed low-fat diet (LFD) or high-fat diet (HFD) for 16 weeks. ALP, alkaline phosphatase; AST, aspartate aminotransferase; LDH, lactate dehydrogenase. Mean \pm SEM ($n = 6-8$).

header	Control LFD	Control HFD	KO LFD	KO HFD	ANOVA Control v. KO	ANOVA LFD v. HFD
ALP activity (U/L)	11.1 \pm 1.6	13.0 \pm 1.7	9.9 \pm 0.5	9.6 \pm 0.8	$p = 0.19$	$p = 0.64$
AST activity (U/L)	183 \pm 41	232 \pm 23	190 \pm 37	175 \pm 26	$p = 0.50$	$p = 0.64$
LDH activity (U/L)	914 \pm 232	1093 \pm 205	820 \pm 74	897 \pm 86	$p = 0.52$	$p = 0.57$

Table S4. Liver function tests in *fArmxc3/Cre-* (Control) and *ARMCX3-KO* (KO) mice treated with DEN and fed low-fat diet (LFD) or high-fat diet (HFD) for 24 weeks. ALP, alkaline phosphatase; AST, aspartate aminotransferase; LDH, lactate dehydrogenase. Mean \pm SEM ($n = 9-13$).

header	Control LFD	Control HFD	KO LFD	KO HFD	ANOVA Control v. KO	ANOVA LFD v. HFD
ALP activity (U/L)	12.3 \pm 1.1	12.8 \pm 3.5	10.7 \pm 0.8	10.9 \pm 0.8	$p = 0.39$	$p = 0.85$
AST activity (U/L)	189 \pm 13	262 \pm 29	202 \pm 24	267 \pm 41	$p = 0.75$	$p = 0.02$
LDH activity (U/L)	897 \pm 95	903 \pm 151	664 \pm 93	1016 \pm 141	$p = 0.62$	$p = 0.15$

Comentari [M1]: Please add a header

Comentari [M2]: Should it be vs.?

Comentari [M3]: Please check if it is right.

Comentari [M4]: Please add a header

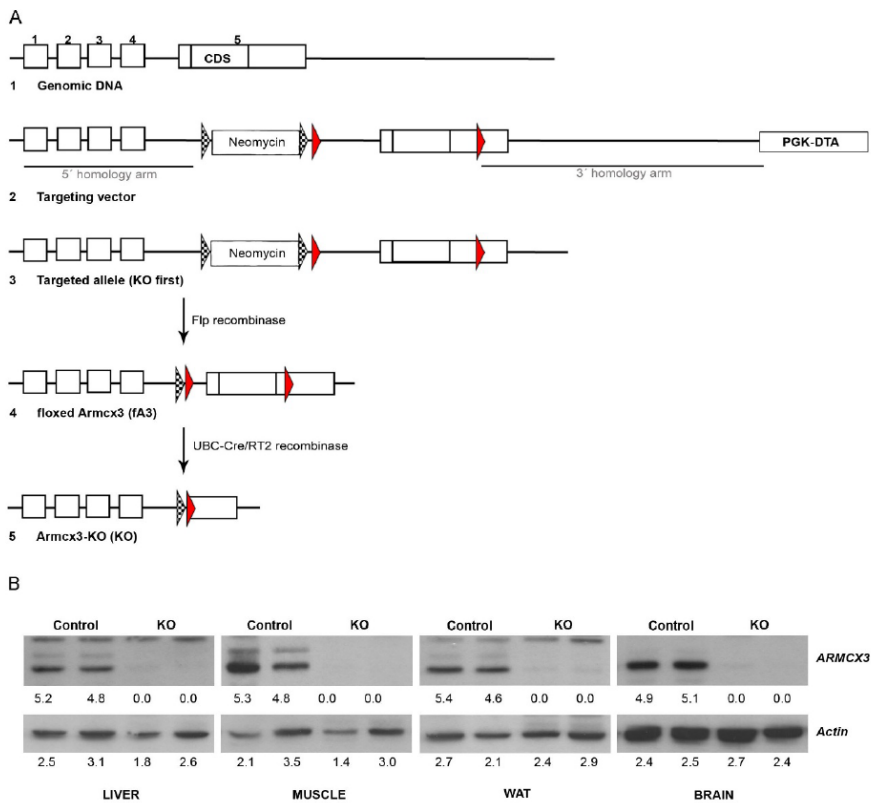


Figure S1.

Comentari [M5]: Please add a figure legend.

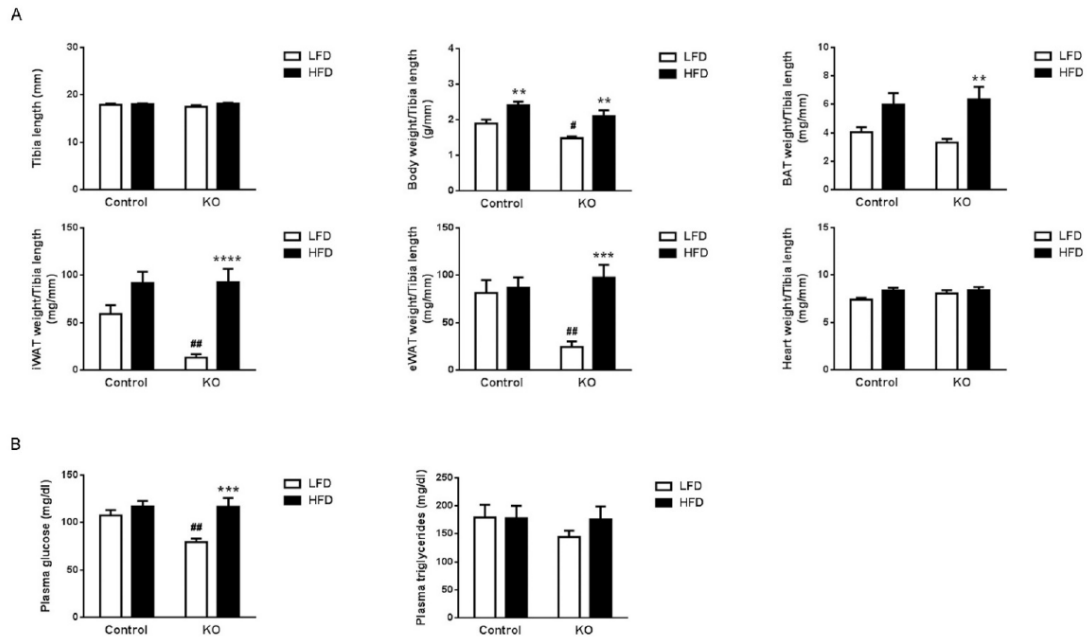


Figure S2.

Comentari [M6]: Please add a figure legend.

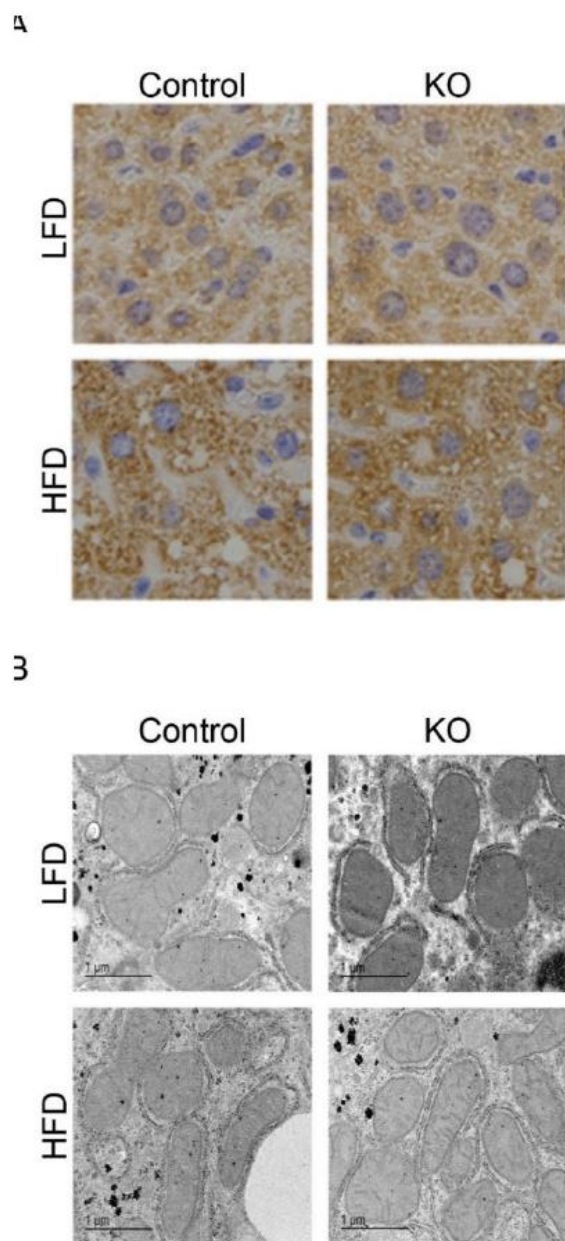


Figure S3.

Comentari [M7]: Please add a figure legend.

Query ID [NP_808817.1](#)
Description armadillo repeat-containing X-linked protein 3 [Homo sapiens]
Molecule type amino acid
Query Length 379

Subject ID [NP_082146.2](#)
Description armadillo repeat-containing X-linked protein 3 [Mus musculus]
Molecule type amino acid
Subject Length 379
Program BLASTP 2.9.0+ [Citation](#)

Range 1: 1 to 379 [GenPept](#) [Graphics](#) ▼ Next Match ▲ Previous Match

Score	Expect	Method	Identities	Positives	Gaps
652 bits(1682)	0.0	Compositional matrix adjust.	366/379(97%)	371/379(97%)	0/379(0%)
Query 1	MGYARKVGVVTAGLVIGAGACYCIYRLTRGRKQNKKEKMAEGGSGDVEDDAGDCSGARYNDW				60
Sbjct 1	MGYARKVGVVTAGLVIGAGACYCIYRLTRGRKQNKKEKMAEGGSGDVEDDAGDCSGARYNDW				60
Query 61	sdddddsNESKSIWYPPWariGteagtrrarararararrararavQKRASPNSDDTVLSP				120
Sbjct 61	SDDDDDSNESKSIWYPPWARIgTEAGTRARARARARATRRARRAVQKRASPNSDDTVLSP				120
Query 121	QELQKVLCLVEMSEKPYILEAALIALGNNAAYAFNRDIIRDLGGLPIVAKILNTRDPIVK				180
Sbjct 121	QELQKVLCLVEMSEKPYILEAALIALGNNAAYAFNRDIIRDLGGLPIVAKILNTRDPIVK				180
Query 181	EKALIVLNNLSVNAENQRRLKVYMNQVCDTITSRLNSSVQLAGLRLLTNMTVTNEYQH+				240
Sbjct 181	EKALIVLNNLSVNAENQRRLKVYMNQVCDTITSRLNSSVQLAGLRLLTNMTVTNEYQHI				240
Query 241	LANSISDFFRLFSAGNEETKlqv1k111n1AENPAMTRELLRAQVPSSLGSLFNKKENKE				300
Sbjct 241	LANSISDFFRLFSAGNEETKlQVLKLLLNLAENPAMTRELLRAQVPSSLGSLFNKKEYKE				300
Query 301	VILKLLVIFENINDNFKWEEENEPQNFEGGSLFFFLEKQVFCADKVLGIESHDFLVKV				360
Sbjct 301	VILKLLVIFENINDNFKWEEENEPQN F EGSLFFFLEKQVFCADKVLGIES HDF V+V				360
Query 361	KVGKFMAKLAEHMFPKSQE 379				
Sbjct 361	KVGKFAKLTERRMFPKSQE 379				

Figure S4.

Comentari [M8]: Please add a figure legend.

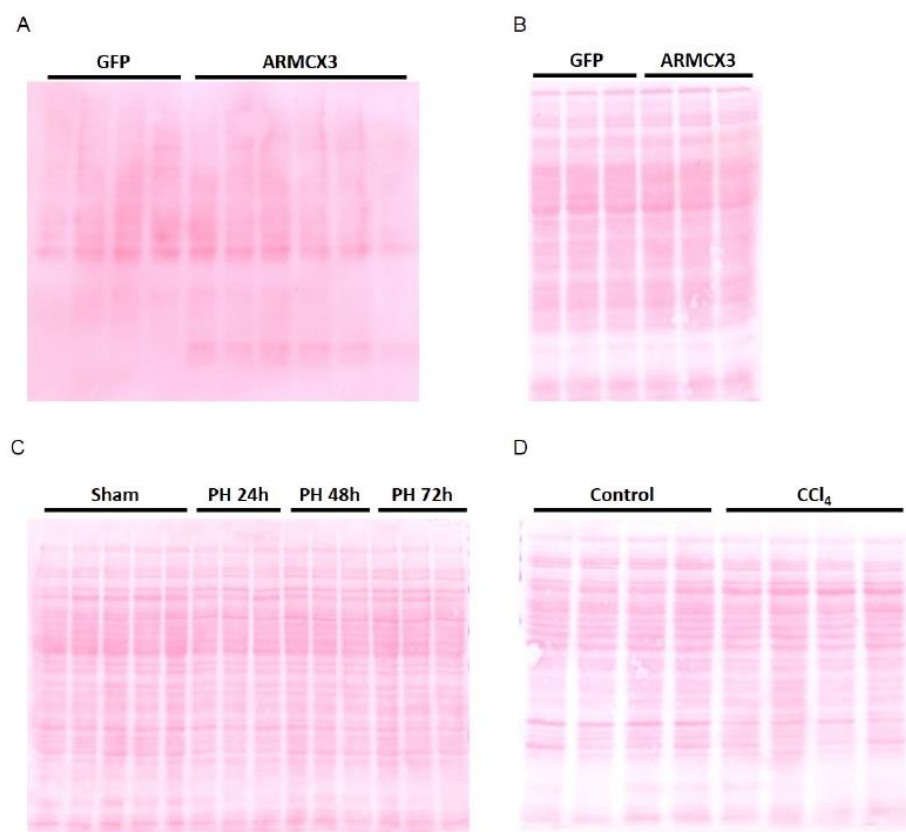


Figure S5.

Comentari [M9]: Please add a figure legend.

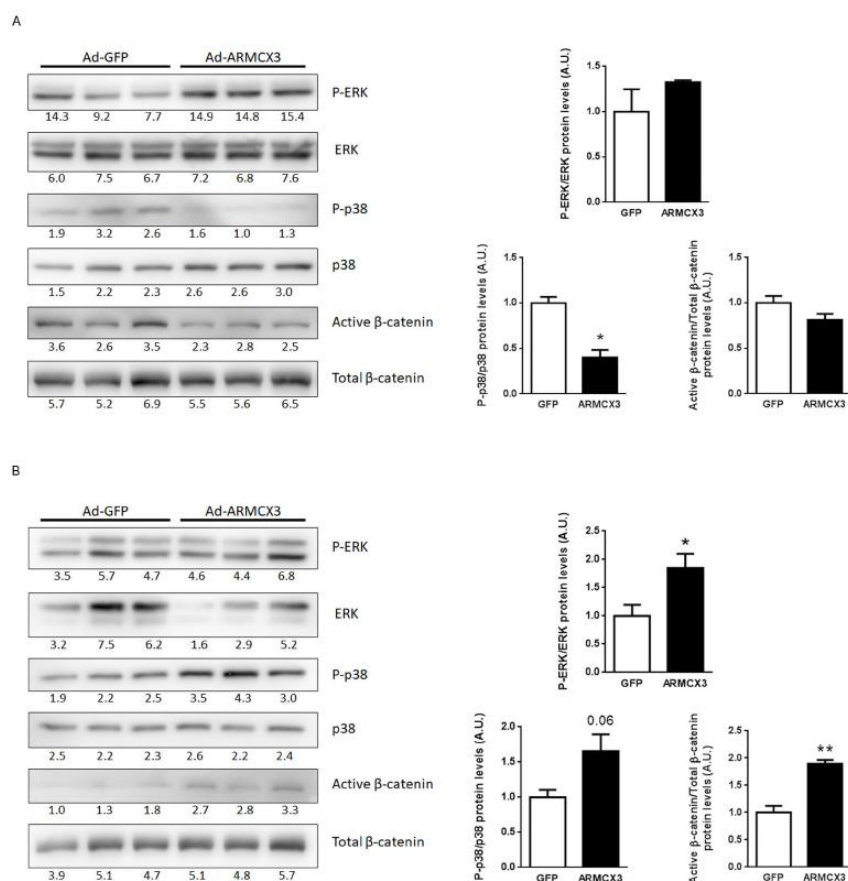


Figure S6.

Comentari [M10]: Please add a figure legend. Please add the reference of Figure S6 in the main text.