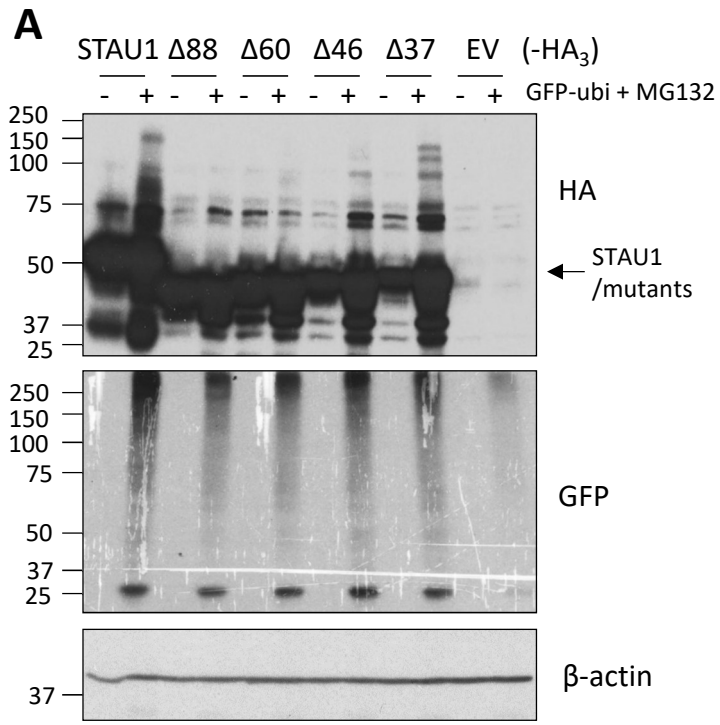
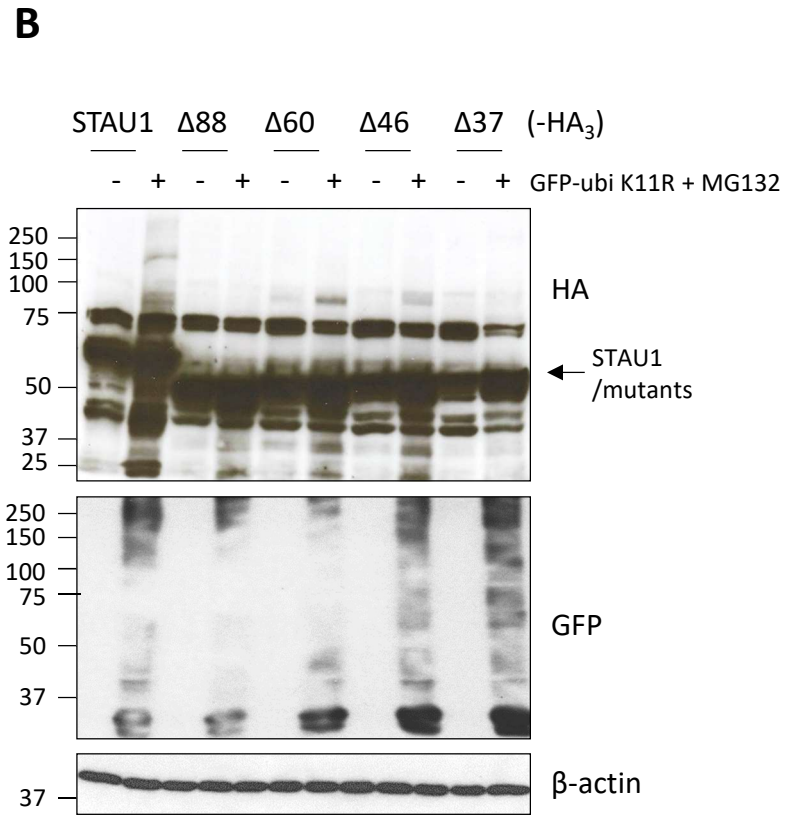
Supplementary figures

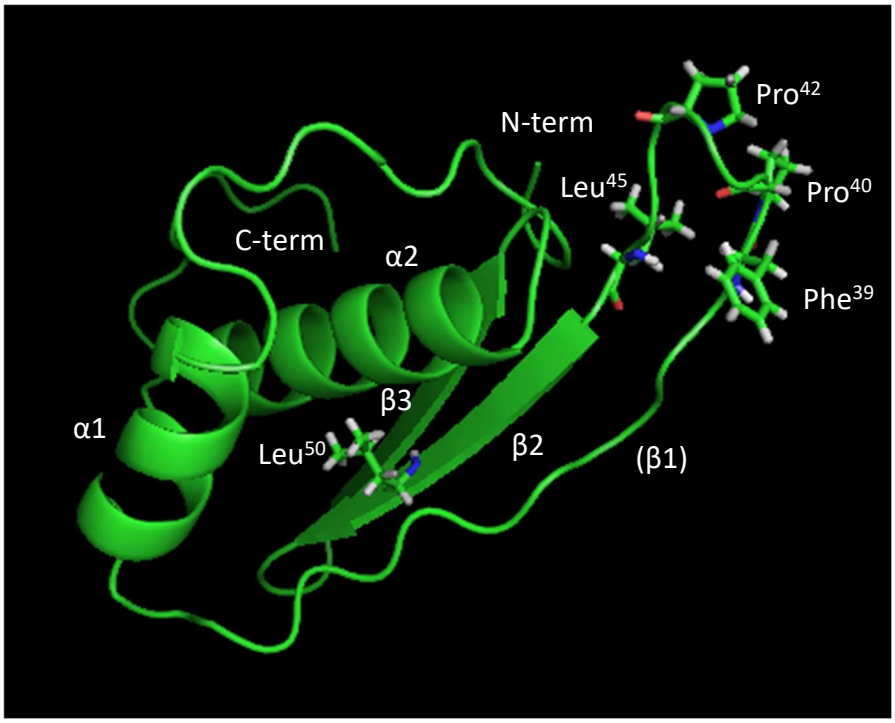
Supplementary Figure S1. STAU1^{55} is tagged by K11-ubiquitin chains. HEK293T cells were co-transfected with plasmids coding for STAU1^{55}-HA$_3$ (STAU1) or deletion mutants and for GFP-ubi (+) **(A)** or GFP-ubi-K11R (+) **(B)**. Cells expressing GFP-ubi or GFP-ubi-K11R were further incubated in the presence (+) or absence (-) of MG132 for 8 h. Protein extracts were analyzed by western blotting using anti-HA (to detect STAU1) and anti-GFP (to detect total protein ubiquitination) antibodies. The blots are representative of three independently performed experiments that gave similar results.

Supplementary Figure S2. In silico modelling of the FPL-motif. (A) In silico modelling (I-Tasser software) of the RBD2 domain with the position of amino acids of the FPL-motif. While the predicted alpha helices (α1 and α2) and the beta sheaths (β2 and β3) of RNA-binding domains are conserved, the beta sheath β1 is disordered in the modelling. The FPL-motif is located in the loop between the disordered region and β-sheath 2 (Phe^{39}, Pro^{40}, Pro^{42}, Leu^{45}) and in the beta sheath β2 (Leu^{50}). **(B-M)** Amino acid conservation of the FPL-motif through evolution.
Blue columns: amino acids required for the function of the FPL-motif.
Homo, humans. Macaca, macaques. Rattus, rats. Mus, mice. Bos, cattle. Canis, dog. Xenopus, frogs. Gallus, chicken. Danio, zebrafish.


A
STAU1 Δ88 Δ60 Δ46 Δ37 EV (-HA3)
- + - + - + - + - + - +
GFP-ubi + MG132
250
150
100
75
50
37
25
HA
STAU1
/mutants
GFP
β-actin


B
STAU1 Δ88 Δ60 Δ46 Δ37 (-HA3)
- + - + - + - + - +
GFP-ubi K11R + MG132
250
150
100
75
50
37
25
HA
STAU1
/mutants
GFP
β-actin

A



B **STAU1**

Homo	Y	P	F	P	V	P	P	L	L	Y	Q	V	E	L	S
Macaca	Y	P	F	P	V	P	P	L	L	Y	Q	V	E	L	S
Rattus	Y	P	F	P	V	P	P	L	L	Y	Q	V	E	L	S
Mus	Y	P	F	P	V	P	P	L	L	Y	Q	V	E	L	S
Bos	Y	P	F	P	V	p	P	L	L	Y	Q	V	E	L	S
Canis	Y	P	F	P	V	P	P	L	L	Y	Q	V	E	L	S
Xenopus	Y	P	F	P	V	A	P	I	L	Y	Q	V	E	L	S
Gallus	Y	P	F	P	V	G	P	L	L	Y	Q	V	E	L	S
Danio	Y	P	F	P	V	G	P	V	L	Y	H	M	E	L	S

C **MAP4K1**

Homo	V	L	F	P	L	P	T	P	L	S	V	F	A	L	L
Macaca	V	L	F	P	L	P	T	P	L	S	V	F	A	L	L
Rattus	V	L	F	P	L	P	T	P	L	P	V	F	A	L	L
Mus	V	L	F	P	L	P	T	P	L	P	V	F	T	L	L
Bos	V	L	F	P	L	P	T	P	L	P	V	F	A	L	L
Canis	V	L	F	P	L	P	T	P	L	P	V	F	A	L	L
Xenopus	F	D	F	P	L	P	N	P	L	R	V	F	Q	M	L
Gallus	F	D	F	P	L	P	S	P	L	R	V	F	E	M	L

D **ABCC11**

Homo	P	R	**F**	**P**	A	**P**	Q	P	**L**	D	N	A	G	**L**	F
Macaca	P	R	**F**	**P**	A	**P**	Q	P	**L**	D	D	A	G	**L**	F
Bos	P	K	**F**	**P**	E	**P**	Q	P	**L**	D	D	A	G	**L**	F
Canis	P	K	**F**	**P**	A	**P**	Q	P	M	D	D	A	G	**L**	F

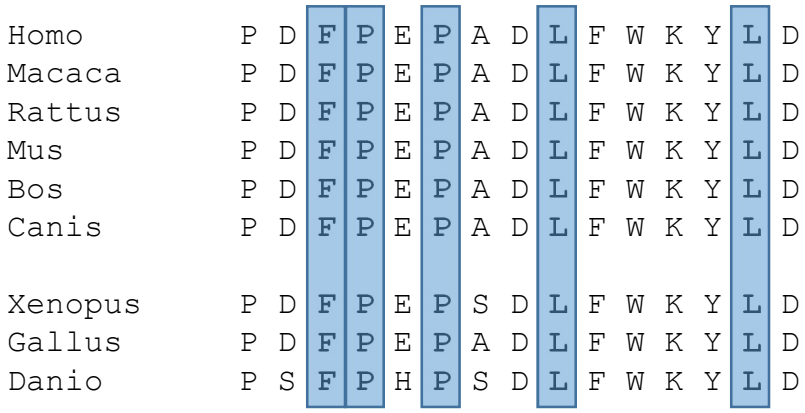
E **ABCF1**

Homo	F	T	**F**	**P**	D	**P**	P	P	**L**	S	P	P	V	**L**	G
Macaca	F	T	**F**	**P**	D	**P**	P	P	**L**	S	P	P	V	**L**	G
Rattus	F	T	**F**	**P**	D	**P**	P	P	**L**	S	P	P	V	**L**	G
Mus	F	T	**F**	**P**	D	**P**	P	P	**L**	S	P	P	V	**L**	G
Bos	F	T	**F**	**P**	D	**P**	P	P	**L**	S	P	P	V	**L**	G
Canis	F	T	**F**	**P**	N	**P**	P	P	**L**	S	P	P	V	**L**	G
Xenopus	F	T	**F**	**P**	N	**P**	P	P	**L**	S	P	P	I	**L**	G
Danio	F	T	**F**	**P**	N	**P**	P	P	**L**	S	P	P	I	**L**	G

F **ADGRG1**

Homo	R	S	**F**	**P**	D	**P**	R	G	**L**	Y	H	F	C	**L**	Y
Macaca	R	S	**F**	**P**	H	**P**	R	G	**L**	Y	H	F	C	**L**	Y
Rattus	Y	F	**F**	**P**	E	**P**	R	G	**L**	Y	H	F	C	**L**	Y
Mus	R	F	**F**	**P**	E	**P**	R	G	**L**	Y	H	F	C	**L**	Y
Bos	W	P	**F**	**P**	L	**P**	R	G	**L**	Y	H	F	C	**L**	Y
Canis	Q	L	**F**	**P**	E	**P**	R	G	**L**	Y	H	F	C	**L**	Y
Xenopus	F	T	L	Q	S	L	P	G	P	Y	I	F	C	V	H
Gallus	Y	S	L	**P**	T	T	L	G	R	Y	R	F	C	I	Y
Danio	L	D	S	N	P	H	Q	N	Q	S	H	F	C	V	F

G **GPR83**



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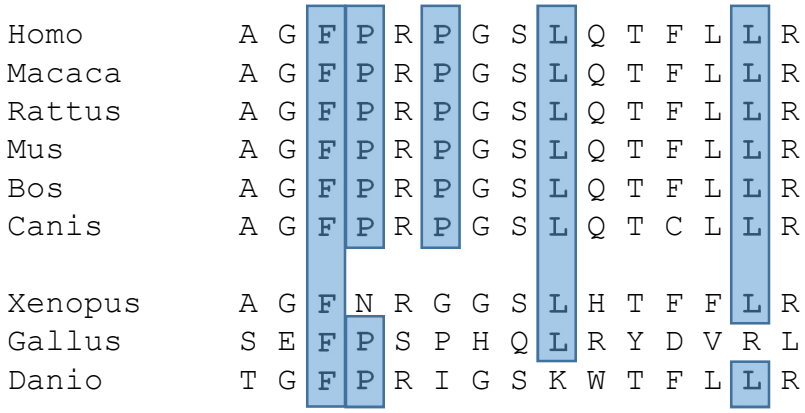
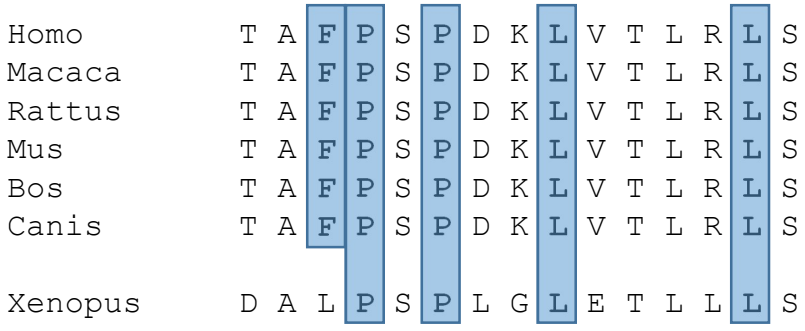


I **LING04**



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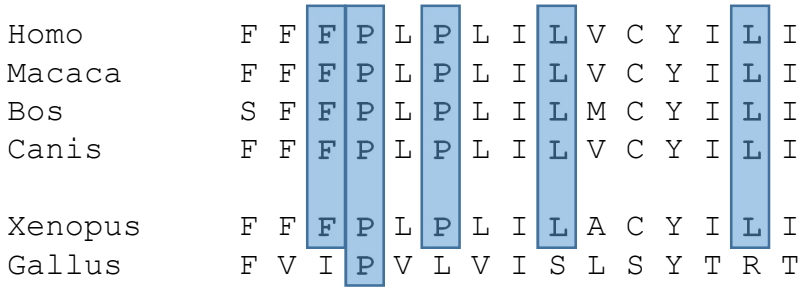
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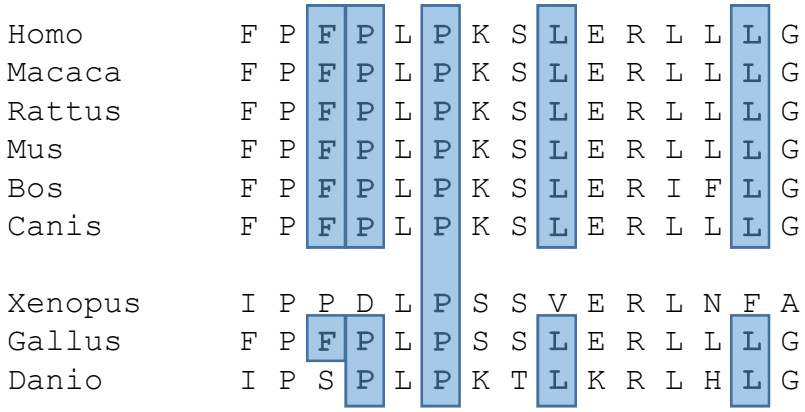
Bos S F F P L P L I L M C Y I L I
Canis F F F P L P L I L V C Y I L I
Xenopus F F F P L P L I L A C Y I L I
Gallus F V I P V L V I S L S Y T R T

K **OMD**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Mus F P F P L P K S L E R L L L G
Bos F P F P L P K S L E R I F L G
Canis F P F P L P K S L E R L L L G
Xenopus I P P D L P S S V E R L N F A
Gallus F P F P L P S S L E R L L L G
Danio I P S P L P K T L K R L H L G

L **UBE2F**

M **VCAM1**