Appendix of the manuscript entitled:

The key protein of endosomal mRNP transport Rrm4 binds translational landmark sites of cargo mRNAs

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Appendix Table S1: *U. maydis* strains used in this study.
eGfp, enhanced Gfp. UMa, internal reference number.

Strain	Relevant genotype	Short description	Reference	UMa
AB33	*a2 Pnar:bW2bE1*	expression of active b heterodimer under control of the P_{nar1} promoter; strain grows filamentously upon changing the nitrogen source	Brachmann et al., 2001	133
AB33rrm4Δ	*rrm4Δ*	carries a deletion of *rrm4*	Becht et al., 2006	273
AB33rrm4G	*rrm4G*	expresses Rrm4 C-terminally fused to eGFP	Becht et al., 2006	274
AB33pab1G	*pab1G*	expresses Pab1 C-terminally fused to eGfp	König et al., 2009	389
AB33grp1Δ	*grp1Δ*	carries a deletion of *grp1*	This study	380
AB33grp1G	*grp1G*	expresses Grp1 C-terminally fused to eGfp	This study	911
AB33rrm4tR/grp1G	*grp1G/rrm4Δ*	co-expresses Rrm4 C-terminally fused to tagRfp and Grp1 C-terminally fused to eGfp	This study	2169
AB33pab1mC/grp1G	*pab1mC/grp1G*	co-expresses Pab1 C-terminally fused to mCherry and Grp1 C-terminally fused to eGfp	This study	2200
AB33pab1mC/rrm4G	*pab1mC/rrm4G*	co-expresses Pab1 C-terminally fused to mCherry and Rrm4 C-terminally fused to eGfp	König et al., 2009	554
AB33rrm4G/grp1Δ	*rrm4G/grp1Δ*	expresses Rrm4 C-terminally fused to eGfp and carries a *grp1* deletion	This study	880
AB33grp1G/rrm4Δ	*grp1G/rrm4Δ*	expresses Grp1 C-terminally fused to eGfp and carries a *rrm4* deletion	This study	1050
AB33pab1G/rrm4Δ	*pab1G/rrm4Δ*	expresses Pab1 C-terminally fused to eGfp and carries a *rrm4* deletion	König et al., 2009	472
AB33gfp	*gfp*	expresses *gfp* under control of the constitutive P_{tef}-promotor. The *gfp* construct is integrated ectopically into the *ipS*-locus.	Koepke et al., 2011	487
AB33rrm4mR123tR/grp1G	*grp1G/rrm4Δ*	co-expresses Rrm4mR123 C-terminally fused to tagRfp and Grp1 C-terminally fused to eGfp	This study	2012
AB33rrm4mR123tR/pab1G	*pab1G/rrm4Δ*	co-expresses $Rrm4^{mR123}$ C-terminally fused to tagRfp and Pab1 C-terminally fused to eGfp	This study	1200
AB33 rrm4G/pab1mC/grp1Δ	*rrm4GT/pab1mC/grp1Δ*	co-expresses Rrm4 C-terminally fused to eGfp-tandem affinity purification tag and Pab1 C-terminally fused to mCherry, while carrying a *grp1* deletion	This study	2156

Appendix Table S2: *U. maydis* strains generated in this study.
UMa and pUMa, internal reference numbers for strains and plasmids, respectively.

Strain	UMa	Relevant genotype	Transformed plasmid	Locus	Progenitor strain
AB33grp1Δ	380	*grp1Δ*	pGrp1Δ-HygR (pUMa 848)	*grp1*	AB33
AB33grp1G	911	*grp1G*	pGrp1G-NatR (pUMa 1595)	*grp1*	AB33
AB33rrm4tR/grp1G	2169	*rrm4tR/grp1G*	pRrm4tR_G418R (pUMa 3004)	*rrm4*	AB33grp1G/rrm4Δ
AB33pab1mC/grp1G	2200	*pab1mC/grp1G*	pPab1mC_HygR (pUMa1208)	*pab1*	AB33grp1G
AB33rrm4G/grp1Δ	880	*rrm4G/grp1Δ*	pGrp1Δ-HygR (pUMa848)	*grp1*	AB33rrm4G
AB33grp1G/rrm4Δ	1050	*grp1G/rrm4Δ*	pRrm4Δ-HygR (pUMa1391)	*rrm4*	AB33grp1G
AB33rrm4mR123tR/grp1G	2012	*rrm4mR123tR/grp1G*	pRrm4mR123tR_G418R (pUMa2849)	*rrm4*	AB33grp1G/rrm4Δ
AB33rrm4mR123tR/pab1G	1200	*rrm4mR123tR/pab1G*	pRrm4mR123tR_G418R (pUMa2849)	*rrm4*	AB33pab1G
AB33 rrm4G/pab1mC/grp1Δ	2156	*rrm4G/grp1Δ/pab1mC*	pPab1mC-G418R (pUMa3052)	*pab1*	AB33 rrm4G/grp1Δ

Appendix Table S3: Plasmids generated in this study for *U. maydis*.
pUMa, internal plasmid reference number.

Plasmid	pUMa	Resistance cassette	Short description
pGrp1Δ-HygR	pUMa 848	HygR (SfiI-insert of MF1hs)	Plasmid for generating deletion mutants of *grp1*. The hygromycin resistance cassette is flanked by the regions 0.9 kb upstream and 0.8 kb downstream of *grp1*. The flanking regions were amplified by PCR (UF: oSL217 ATGGTCTCGACTTGCGCG, oSL218 ttcggccatctaggccACGTAAACTTTGGCGGCC), (DF: oSL219, oSL220) using UM521 wild type DNA.
pGrp1G-NatR	pUMa 1595	NatR (SfiI-insert of pMF5-1n)	Plasmid for generating eGfp-fusions of *grp1*. The eGfp cassette, containing the T_{nos} terminator and the nourseothricin resistance cassette is flanked by a 2.3 kb upstream region, containing the entire *grp1* ORF, and a 0.8 kb downstream region. Both regions were amplified by PCR using genomic UM521 wild type DNA as template (UF: oSL865 GTCATTTAAATGGTCTCGACTTGCGCG, oSL863 CCATGGTGGCCGCGTTGGCCGCCTGGCTCTGTCCGTTGTATC; 2.3 kb); DF (oSL864 TGAGGCCTGAGTGGCCACGACTCTTGTCGGGGC, oSL866 GCTATTTAAATGTAGCGTTGCCACTCAGC; 0.8 kb).
pRrm4tR_G418R	pUMa 3004	G418R (SfiI-insert of pMF1-g)	Plasmid for generating tagRfp-3x myc tag fusions of tagRfp of *rrm4*. The tagRfp cassette contains the T_{nos} terminator and a G418 resistance cassette. It is flanked by a 3.2 kb upstream region, containing the entire 2.4 kb *rrm4* ORF, and the 2 kb immediately downstream of *rrm4*. The plasmid is a derivate of pRrm4G-NatR (Becht et al., 2006), with eGfp being exchanged for tagRfp.
pRrm4mR123tR_G418R	pUMa2849		Plasmid for generating tagRfp-3x myc tag fusions of $rrm4^{mR123}$. pRrm4tR_G418R, but carrying mutations in the RNP1 region of each RRM.
pPab1mK-G418R	pUMa3052		Plasmid for generating $mKate_2$-HA tag fusions of *pab1*. The mKate2 cassette contains the T_{nos} terminator and a G418 resistance cassette. The cassette is flanked by a 3 kb upstream region, containing the 2 kb *pab1* ORF, and the 1 kb downstream of *pab1*. The plasmid is a derivate of pPab1G-NatR (König et al., 2009).

Appendix Table S4: Plasmids used for yeast three-hybrid system.
pUMa, internal plasmid reference number.

Plasmid	pUMa	Gene	Short description
pACTII-Ade	399		Plasmid for the expression of hybrid proteins. Contains a Gal4 activation domain, to which sequences of interest can be fused. For positive selection this plasmid carries the *LEU2* and *ADE2* auxotrophy markers. Served as vector control
pRrm4-Gfp-pACTII-Ade	427	*rrm4*	Plasmid for expressing an Rrm4 hybrid protein, fused N-terminally to a Gal4 activation domain and C-terminally to eGfp. The plasmid is derived from pACTII-Ade (König et al., 2007).
pIII MS2-5	494		Plasmid for expressing RNA-hybrids. Contains a *RPR1* leader, followed by two MS2 coat protein binding sites, a junk sequence flanked by a ClaI & AscI restriction sites, and a *RPR1* terminator. For positive selection this plasmid carries the *URA3* auxotrophy marker. Sequences can be cloned via the ClaI/ AscI restriction sites. Served as vector control.
pRrm4-mR3-Gfp-pACTII-Ade	526	*rrm4*	Plasmid for expressing the Rrm4^{mR3} hybrid protein. Similar to pRrm4-gfp-pACTII-Ade, but carries a mutation in the RNP1 region of RRM3 (König et al., 2007)
pIII-MS2-5-Sel13	550		Plasmid for expressing the RNA-hybrid containing the SELEX aptamer A1. SELEX library sequences were inserted into pIII MS2-4 via ClaI/AscI (König et al., 2007).
pRrm4-mR1-Gfp-pACTII-Ade	581	*rrm4*	Plasmid for expressing the Rrm4^{mR1} hybrid protein. Similar to pRrm4-gfp-pACTII-Ade, but carries a mutation in the RNP1 region of RRM1 (König et al., 2007).
pRrm4-mR12-Gfp-pACTII-Ade	591	*rrm4*	Plasmid for expressing the Rrm4^{mR12} hybrid protein. Similar to pRrm4-gfp-pACTII-Ade, but carries mutations in the RNP1 regions of RRM1 and RRM2.
pRrm4-mR2-Gfp-pACTII-Ade	594	*rrm4*	Plasmid for expressing the Rrm4^{mR2} hybrid protein. Similar to pRrm4-gfp-pACTII-Ade, but carries a mutation in the RNP1 region of RRM2 (König et al., 2007)
pIII MS2-5 A1- mUAUG	1937		Plasmid for expressing the RNA-hybrid containing SELEX aptamer A1^{mUAUG}. TATGC was mutated to TCTCA by inverse PCR using oligos oRL750 GTGTGAAAGATCCGAAGTTTCTCACGGCACGCGCTGGCGCTG & oRL751 CAGCGCCAGCGCGTGCCGTGAGAAACTTCGGATCTTTCACAC and pIII-MS2-5-Sel13 as template.