

Table S1: Gene and RBP numbers of selected species. Supports Fig. 1.

Species	Gene number	Number of RBPs	RBPs/ gene
<i>S. cerevisiae</i> (nucleus)	6275 §	1273 (Hentze et al., 2018)	0.20
<i>S. cerevisiae</i> (mitochondria)	35 (Malina et al., 2018)	210 ¥	6.00
<i>C. elegans</i> (nucleus)	20512 (Spieth et al., 2014)	593 (Hentze et al., 2018)	0.03
<i>Drosophila</i> (nucleus)	13601 (Adams et al., 2000)	777 (Hentze et al., 2018)	0.06
<i>M. musculus</i> (nucleus)	46206 (Bult et al., 2016)	1914 (Hentze et al., 2018)	0.04
<i>M. musculus</i> (mitochondria)	73 (Bibb et al., 1981)	71 #	0.97
<i>H. sapiens</i> (nucleus)	46880 §	1393 (Hentze et al., 2018)	0.04
<i>H. sapiens</i> (mitochondria)	73 (Anderson et al., 1981)	71 #	0.97
<i>A. thaliana</i> (nucleus)	25500 (Project, 2000)	719 (Hentze et al., 2018)	0.03
<i>A. thaliana</i> (chloroplast)	117 (Ahmad et al., 2015)	179&	1.53
<i>A. thaliana</i> (mitochondria)	57 (Unseld et al., 1997)	376&	6.60
<i>C. reinhardtii</i> (chloroplast)	120 (Maul et al., 2002)	138£	1.15

§ saccharomyces Genome database; <https://www.yeastgenome.org/>

¥ according to EMBL RBPbase; <https://rbpbase.shiny.embl.de/>

mitocharta 3.0; GO category “RNA metabolism” (Rath et al., 2021)

§ Statistics about the current GENCODE Release (version 37) of the human genome. Available online: <https://www.gencodegenes.org/human/stats.html> (accessed on 22 July 2022).

& see Table 1

£ In *Chlamydomonas*, no comparable analysis to detect the total number of RBPs has been conducted. However, only based on the most prominent families of RNA binding proteins in the alga, i.e. PPRs, OPRs and TPR-HAT proteins, the ratio for RBS/gene is roughly estimated to be > 1.15 for the chloroplast (Tourasse et al., 2013; Bohne et al., 2016; Cerutti, Bohne, Rochaix, Vallon, unpublished data).

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Table S2: PPR proteins involved in plant organellar RNA splicing. Supports chapter 4.1.

PPR Name [§]	Intron [§]	Reference
AtABO5	<i>nad2i3</i>	(Liu et al., 2010)
AtBIR6	<i>nad7i1</i>	(Koprivova et al., 2010)
ZmDEK2	<i>nad1i1</i>	(Qi et al., 2017)
ZmDEK35	<i>nad4i1</i>	(Chen et al., 2017)
ZmDEK37	<i>nad2i1</i>	(Dai et al., 2018)
ZmDEK41 / ZmDEK43/OsPPR5	<i>nad4i3</i>	(Zhu et al., 2019) / (Ren et al., 2020) / (Zhang et al., 2021a)
ZmEMP8	<i>nad1i4, nad4i1</i>	(Sun et al., 2018)
ZmEMP11	<i>nad1</i>	(Ren et al., 2017)
ZmEMP12	<i>nad2</i>	(Sun et al., 2019)
ZmEMP16	<i>nad2i4</i>	(Xiu et al., 2016)
ZmEMP32	<i>nad7i2</i>	(Yang et al., 2021)
ZmEMP602 / ZmEMP24	<i>nad4i1,3</i>	(Ren et al., 2019) / (Xiu et al., 2020)
ZmEMP25	<i>nad5i1,2,3</i>	(Xiu et al., 2020)
ZmEMP603	<i>nad1i2</i>	(Fan et al., 2021)
OsFLO10	<i>nad1i1</i>	(Wu et al., 2019)
AtMID1	<i>nad2i1</i>	(Zhao et al., 2020)
AtMISF2 / ZmEMP10	<i>nad2i1</i>	(Nguyen et al., 2022) / (Cai et al., 2017)
AtMISF26	<i>nad2i3</i>	(Wang et al., 2018a)
AtMISF68	<i>nad2i2, nad4i1</i>	(Wang et al., 2018a)
AtMISF74	<i>nad1i4, nad2i4</i>	(Wang et al., 2018a)

AtMTL1	<i>nad7i2</i>	(Haïli et al., 2016)
OsNBL3	<i>nad5i4</i>	(Qiu et al., 2021)
AtOTP43	<i>nad1i1</i>	(Falcon de Longevialle et al., 2007)
AtOTP439	<i>nad5i2</i>	(Colas des Francs-Small et al., 2014)
ZmPPR101	<i>nad5i1, nad5i2</i>	(Yang et al., 2020a)
ZmPPR14	<i>nad2i3, nad7i1, nad7i2</i>	(Wang et al., 2020a)
ZmPPR18	<i>nad4i1</i>	(Liu et al., 2020)
ZmPPR20	<i>nad2i3</i>	(Yang et al., 2020b)
PpPPR_43	<i>cox1i3</i>	(Ichinose et al., 2012)
ZmPPR231	<i>nad2i3, nad5</i>	(Yang et al., 2020a)
ZmPPR278	<i>nad2i4, nad5i1i4</i>	(Yang et al., 2022a)
ZmPPR-SMR1	<i>many</i>	(Cao et al., 2022)
OsRL1	<i>nad4i1</i>	(Wu et al., 2020)
AtRTP7	<i>nad7i1</i>	(Yang et al., 2022b)
AtSLO3	<i>nad7i2</i>	(Hsieh et al., 2015)
AtSLO4	<i>nad2i1</i>	(Weißenberger et al., 2017)
ZmSMK9	<i>nad5</i>	(Pan et al., 2019)
ZmSPR2	<i>many</i>	(Cao et al., 2022)
AtTANG2/ZmEMP25/OsPPR939	<i>nad5</i>	(Colas des Francs-Small et al., 2014) / (Xiu et al., 2020) / (Zheng et al., 2021)
OsCDE4	<i>rpl2, ndhA, ndhB</i>	(Liu et al., 2021)
AtECD2	<i>ndhA, rps12-2, clpP-2, ycf3-1</i>	(Wang et al., 2021)
AtEMB1270	<i>ndhA, ndhB, clpP-2, ycf3-1</i>	(Zhang et al., 2021b)
AtEMB2654 / ZmEMB-7L	<i>rps12-1 / atpF, rpl2, ndhA, ndhB, rps12-1, ycf3-2</i>	(Lee et al., 2019; Aryamanesh et al., 2017) / (Yuan et al., 2019)
AtOTP51 / OsOTP51	<i>atpF, ycf3-2 / atpF, petB, rps16, ndhA, ycf3-2</i>	(de Longevialle et al., 2008) / (Ye et al., 2012)
AtOTP70	<i>rpoC1</i>	(Chateigner-Boutin et al., 2011)
AtPBF2	<i>ycf3-1</i>	(Wang et al., 2020b)
AtPDM1	<i>ndhA, trnK</i>	(Zhang et al., 2015)
AtPDM3	<i>ndhB, trnA, clpP-1</i>	(Zhang et al., 2017)
AtPDM4	<i>petB, petD, ndhA, clpP-1, ycf3-1</i>	(Wang et al., 2020c)
OsPGL12	<i>ndhA</i>	(Chen et al., 2019)

ZmPPR4 / AtPPR4 / OsPPR4	<i>rps12-2</i> / <i>ndhA</i> , <i>ndhB</i> , <i>rps12-1</i> , <i>rps12-2</i> / <i>rps12-1</i> , <i>rps12-2</i> , <i>ndhA</i> , <i>atpF</i> , <i>petB</i>	(Schmitz-Linneweber et al., 2006) / (Tadini et al., 2018; Lee et al., 2019) / (Lee et al., 2019)
ZmPPR5	<i>trnG</i>	(Beick et al., 2008)
OsPPR6	<i>ycf3-1</i>	(Tang et al., 2017)
PpPPR_38	<i>clpP</i>	(Hattori et al., 2007)
PpPPR66 / AtPPR66	<i>ndhA</i> / <i>ndhA</i>	(Ito et al., 2018) / (Ito et al., 2018)
ZmPPR467	<i>rpl2</i> , <i>atpF</i> , <i>ndhA</i> , <i>ndhB</i> , <i>ycf3-2</i>	(Zhao et al., 2021)
OsSLA4	<i>atpF</i> , <i>rpl2</i> , <i>petB</i> , <i>rpl16</i> , <i>ndhA</i> , <i>trnG</i> , <i>rps12-2</i>	(Wang et al., 2018b)
OsSLC1	<i>rps16</i>	(Lv et al., 2020)
AtSOT5	<i>rpl2</i> , <i>trnK</i>	(Huang et al., 2018)
OsWSL	<i>rpl2</i>	(Tan et al., 2014)
OsWSL4	<i>atpF</i> , <i>rpl2</i> , <i>ndaH</i> , <i>rps12-2</i>	(Wang et al., 2017)
OsWSL5	<i>rpl2</i> , <i>rps12-1</i>	(Liu et al., 2018)
ZmTha8 / AtTHA8	<i>trnA</i> , <i>ycf3-1</i> / <i>trnA</i> , <i>ycf3-1</i>	(Khrouchtchova et al., 2012)

§ grey shading = mitochondrial PPR protein splicing factor; green shading = chloroplast PPR protein splicing factor

§ green chloroplast gene names = experimental support for PPR-RNA interaction

References for Suppl. Tab. 2

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