

Type of gene	Category	Group of genes	Gene name	No. of species	Gene product
CORE	Chloroplast Envelope membrane protein	Cytochrome b6_f	petA	74	component of cytochrome b6/f complex
CORE			petB	74	cytochrome b6
CORE			petD	74	cytochrome b6/f complex subunit IV
CORE			petG	74	cytochrome b6/f complex subunit V
CORE			petL	74	cytochrome b6/f complex subunit VI
CORE			petN	74	cytochrome b6/f complex subunit VIII
CORE	Photosynthesis	ATP synthase	atpA	74	ATP synthase CF1 alpha subunit
CORE			atpB	74	ATP synthase CF1 beta subunit
CORE			atpE	74	ATP synthase CF1 epsilon subunit
CORE			atpF	74	ATP synthase CF0 subunit I
CORE			atpH	74	ATP synthase CF0 subunit III
CORE			atpI	74	ATP synthase CF0 subunit IV
CORE		NADH oxidoreductase	ndhA	74	NADH-plastoquinone oxidoreductase subunit 1
CORE			ndhB	74	NADH-plastoquinone oxidoreductase subunit 2
CORE			ndhC	74	NADH-plastoquinone oxidoreductase subunit 3
CORE			ndhD	74	NADH-plastoquinone oxidoreductase subunit 4
CORE			ndhE	74	NADH-plastoquinone oxidoreductase subunit 4L
CORE			ndhF	74	NADH-plastoquinone oxidoreductase subunit 5
CORE			ndhG	74	NADH-plastoquinone oxidoreductase subunit 6
CORE			ndhH	74	NADH-plastoquinone oxidoreductase subunit 7
CORE			ndhI	74	NADH-plastoquinone oxidoreductase subunit I
CORE			ndhJ	74	NADH-plastoquinone oxidoreductase subunit J
CORE			ndhK	74	NADH-plastoquinone oxidoreductase subunit K
CORE		Photosystem I	psaA	74	photosystem I P700 chlorophyll a apoprotein A1
CORE			psaB	74	photosystem I P700 chlorophyll a apoprotein A2
CORE			psaC	74	photosystem I iron-sulfur center
CORE			psaI	74	PSI reaction centre subunit VIII
CORE		Photosystem II	psaJ	74	PSI reaction centre subunit IX
CORE			psbA	74	photosystem II P680 reaction center D1 protein
CORE			psbB	74	photosystem II CP47 chlorophyll apoprotein
CORE			psbC	74	photosystem II CP43 chlorophyll apoprotein
CORE			psbD	74	photosystem II P680 reaction center D2 protein
CORE			psbE	74	photosystem II cytochrome b559 alpha subunit
CORE			psbF	74	photosystem II cytochrome b559 beta subunit
CORE			psbH	74	photosystem II phosphoprotein
CORE			psbI	74	photosystem II protein I
CORE			psbJ	74	photosystem II protein J
CORE			psbK	74	photosystem II protein K
CORE			psbL	74	photosystem II protein L
CORE			psbM	74	photosystem II protein M
ACCESSORY			psbN	63	photosystem II protein N
CORE			psbT	74	photosystem II protein T
CORE			psbZ	74	photosystem II subunit Z
CORE	Transcription and translation	Large ribosomal subunit	rpl14	74	50S ribosomal protein L14
ACCESSORY			rpl16	73	50S ribosomal protein L16
ACCESSORY			rpl2	72	ribosomal protein L2
ACCESSORY			rpl20	72	ribosomal protein L20
CORE			rpl22	74	50S ribosomal protein L22
CORE			rpl23	74	50S ribosomal protein L23
CORE			rpl33	74	50S ribosomal protein L33
CORE			rpl36	74	50S ribosomal protein L36
CORE		RNA Polymerase	rpoA	74	RNA polymerase alpha subunit
CORE			rpoB	74	RNA polymerase beta subunit
CORE			rpoC1	74	RNA polymerase beta' subunit-1
CORE			rpoC2	74	RNA polymerase beta subunit-2
CORE		Small ribosomal subunit	rps11	74	30S ribosomal protein S11
CORE			rps12	74	30S ribosomal protein S12
CORE			rps14	74	30S ribosomal protein S14
CORE			rps15	74	30S ribosomal protein S15
ACCESSORY			rps16	73	ribosomal protein S16
CORE			rps18	74	30S ribosomal protein S18
CORE			rps19	74	30S ribosomal protein S19
CORE			rps2	74	30S ribosomal protein S2
CORE			rps3	74	30S ribosomal protein S3
CORE			rps4	74	30S ribosomal protein S4
CORE			rps7	74	30S ribosomal protein S7
CORE			rps8	74	30S ribosomal protein S8
ACCESSORY		Translation initiation factor	infA	67	translation initiation factor IF-1
ACCESSORY	Unknown	Conserved open reading frame	ycf1	72	photosystem I assembly protein Ycf1
ACCESSORY			ycf15	51	hypothetical chloroplast RF15
CORE			ycf2	74	photosystem I assembly protein Ycf2
CORE			ycf3	74	photosystem I assembly protein Ycf3
CORE			ycf4	74	photosystem I assembly protein ycf4
CORE	Other genes	Subunit Acetyl- CoA-Carboxylate	accD	74	acetyl-CoA carboxylase carboxyltransferase subunit beta
CORE		Cytochrome biogenesis protein	ccsA	74	cytochrome c-type biogenesis protein CcsA
CORE		Envelope membrane protein	cemA	74	chloroplast envelope membrane protein
CORE		ATP-dependent protease subunit gene	clpP	74	ATP-dependent Clp protease
CORE			clpP1	74	ATP-dependent Clp protease proteolytic subunit 1
CORE		Maturase	matK	74	Maturase K
ACCESSORY		Photosystem biogenesis factor	pbf1	11	photosystem biogenesis factor 1
CORE		Ribulose subunit gene	rbcl	74	large subunit of ribulose-1