

TC Code	TC Class Description	FAMILY	FAM#	Protein Description	Total Genes	ATH1 Chip	Start Row
TOTALS					1751	1511	
1.A.1	Voltage-gated Ion Chanr	VIC			36	34	2
1.A.1	Voltage-gated Ion Channe	VIC	30	putative outward rectifying potassium channel, KCO	6	5	2
1.A.1	Voltage-gated Ion Channe	VIC	114	stelar potassium outward rectifying channel, AKT, KAT, SPIK,	9	9	8
1.A.1	Voltage-gated Ion Channe	VIC	156	putative cyclic nucleotide and calmodulin-regulated ion channel,	20	19	17
1.A.1	Voltage-gated Ion Channe	VIC	702	Singleton, two pore Ca2+-channel, TPC1	1	1	37
1.A.10	Glutamate-gated Ion Ch	GIC	103	glutamate receptor, GLR	20	19	38
1.A.11	Chloride Channel	CIC			7	7	58
1.A.11	Chloride Channel	CIC	206	voltage-gated chloride channel protein, CLC-e and f	2	2	58
1.A.11	Chloride Channel	CIC	217	chloride channel, CLC-a,b,c,d	5	5	60
1.A.15^a	Putative Non-selective C	NSCC2		translocation protein-related	1	1	65
1.A.18	Chloroplast Envelope A	Tic110		chloroplast inner envelope translocon component, Tic110	1	1	66
1.A.20	gp91phox Phagocyte NA	cytB			18	13	67
1.A.20	gp91phox Phagocyte NA	cytB	74	respiratory burst oxidase (NADPH oxidase) family; gp91phox Ph	10	10	67
1.A.20	gp91phox Phagocyte NA	cytB	123	ferric reductase-like transmembrane component family, FRO	8	3	77
1.A.23^a	Putative Small Conduct	MscS			11	7	85
1.A.23 ^a	Putative Small Conductan	MscS	454	mechanosensitive (MS) ion channel domain protein	7	4	85
1.A.23 ^a	Putative Small Conductan	MscS	454.1	mechanosensitive (MS) ion channel domain protein	2	2	92
1.A.23 ^a	Putative Small Conductan	MscS	454.2	mechanosensitive (MS) ion channel domain protein	2	1	94
1.A.35	CorA Metal Ion Transpor	MIT		putative Mg2+ magnesium transporter, MGT	11	9	96
1.A.4^a	Putative Transient Rece	TRP-CC			41	28	107
1.A.4 ^a	Putative Transient Recept	TRP-CC	11	ankyrin repeat protein family	8	6	107
1.A.4 ^a	Putative Transient Recept	TRP-CC	372	ankyrin repeat family protein	11	8	115
1.A.4 ^a	Putative Transient Recept	TRP-CC	388	ankyrin repeat protein family	6	3	126
1.A.4 ^a	Putative Transient Recept	TRP-CC	394	ankyrin repeat protein family	4	2	132
1.A.4 ^a	Putative Transient Recept	TRP-CC	494	ankyrin repeat protein family	7	4	136
1.A.4 ^a	Putative Transient Recept	TRP-CC		ankyrin-repeat protein	5	5	143
1.A.8	Major Intrinsic Protein	MIP			38	32	148
1.A.8	Major Intrinsic Protein	MIP	349	putative SIP 1a, 1b, 2	3	3	148
1.A.8	Major Intrinsic Protein	MIP	622	TIP, NIP, PIP	35	29	151
1.B.29	Plastid Outer Envelope P	CSC		plastid outer envelope porin, putative; 10 beta sheet regions	2	2	186
1.B.33	Outer Membrane Protein	OmpLP	107	spot 3 protein and vacuolar sorting receptor, ELP	7	6	188
1.B.8	Mitochondrial and Plasti	MPP		porin, putative; 8-18 beta sheet regions	6	6	195
2.A.1	Major Facilitator Superfa	MFS			128	112	201
2.A.1.1	Sugar Porter	MFS	44.1	monosaccharide-proton symporter, STP	14	14	201
2.A.1.1	Sugar Porter	MFS	44.2	putative polyol (linear)-proton symporter, PLT	6	5	215
2.A.1.1	Sugar Porter	MFS	44.3	putative inositol/polyol (cyclic)-proton symporter, INT	4	4	221
2.A.1.1	Sugar Porter	MFS	44.4	glucose transporter family protein, xylose transporter homolog	3	3	225
2.A.1.1	Sugar Porter	MFS	44.5	glucose transporter family protein, AtERD6 homolog, ERD & SFI	19	16	228
2.A.1.1	Sugar Porter	MFS	44.6	putative plastidic glucose translocator; AtpGlcT	4	4	247
2.A.1.1	Sugar Porter	MFS	104	putative monosaccharide transporter, large central loop AZT	3	3	251

2.A.1.14	Anion:Cation Symporter	MFS	420	putative anion transporter; Na ⁺ -dependent inorganic Pi cotransp	6	6	254
2.A.1.19	Organic Cation Transporter	MFS	64	sugar transporter family, organic cation transporter-related	7	7	260
2.A.1.2	Drug:H ⁺ Antiporter-1 (12)	MFS	81	bacterial efflux transport-related	3	3	267
2.A.1.2	Drug:H ⁺ Antiporter-1 (12)	MFS	613	putative metal-tetracycline exchanger TCR1	3	3	270
2.A.1.2 ^a	Putative Drug:H ⁺ Antiport	MFS	179	expressed protein	3	3	273
2.A.1.4	Organophosphate:Pi Antiporter	MFS	88	glycerol-3-phosphate transporter (glycerol 3-phosphate permeas	5	5	276
2.A.1.40	Purine Transporter, AzgA	MFS	611	xanthine/uracil permease family protein	2	2	281
2.A.1.49	The Endosomal Spinster F	MFS	474	membrane protein-related	3	1	283
2.A.1.49 ^a	The Endosomal Spinster F	MFS	231	carbohydrate transporter/sugar porter/transporter	4	4	286
2.A.1.8	Nitrate/Nitrite Porter	MFS	162	putative high-affinity nitrate transporter NRT	7	7	290
2.A.1.9	Phosphate: H ⁺ Symporter	MFS	505	high-affinity phosphate transporter PHT	11	7	297
2.A.1.x ^a	Putative Major Facilitator	MFS	148	nodulin-like anion transport proteins	18	14	308
2.A.1.y ^a	Putative Major Facilitator	MFS	165	SPX (SYG1/Pho81/XPR1) domain protein	3	1	326
2.A.12	ATP:ADP Antiporter	AAA	141	plastidic ATP/ADP transporter AATP	2	1	329
2.A.16	Telurite-resistance/Dicar	TDT	642	C4-dicarboxylate transporter/malic acid transport protein fa	4	4	331
2.A.17	Proton-dependent Oligo	POT			52	50	335
2.A.17	Proton-dependent Oligope	POT	93	proton-dependent oligopeptide transport (POT) protein family; sin	51	49	335
2.A.17	Proton-dependent Oligope	POT	709	Singleton, proton-dependent oligopeptide transport (POT) protei	1	1	386
2.A.18	Amino Acid/Auxin Permea	AAAP			46	41	387
2.A.18	Amino Acid/Auxin Permea	AAAP	182	auxin permease AUX1 family	4	4	387
2.A.18	Amino Acid/Auxin Permea	AAAP	245	amino acid transporter family	5	5	391
2.A.18	Amino Acid/Auxin Permea	AAAP	487	amino acid permeases LHT, AAP, ProT	23	22	396
2.A.18	Amino Acid/Auxin Permea	AAAP	569	amino acid transporter family	10	7	419
2.A.18	Amino Acid/Auxin Permea	AAAP	659	amino acid transporter protein; aromatic and neutral amino acids	4	3	429
2.A.19	Ca²⁺:Cation Antiporter	CaCA			12	11	433
2.A.19	Ca ²⁺ :Cation Antiporter	CaCA	195	Ca ²⁺ /H ⁺ antiporter/cation exchanger, CaCA subfamily CAX	6	5	433
2.A.19	Ca ²⁺ :Cation Antiporter	CaCA	648	putative proton-cation antiporter, CaCA subfamily CAX	5	5	439
2.A.19	Ca ²⁺ :Cation Antiporter	CaCA	706	Singleton, magnesium-proton exchanger, CaCA subfamily MHX	1	1	444
2.A.2	Glycoside-Pentoside-He	GPH			11	10	445
2.A.2	Glycoside-Pentoside-Hexi	GPH	439	sucrose-proton symporter/sucrose transporter SUC	9	9	445
2.A.2	Glycoside-Pentoside-Hexi	GPH	686	lactose permease-related	2	1	454
2.A.20	Inorganic Phosphate Tra	PIT	695	Singleton, low-affinity phosphate transporter PHT2.1	1	1	456
2.A.21	Solute:Sodium Symport	SSS	691	Singleton, high affinity urea/H⁺ symporter DUR3	1	1	457
2.A.28	Bile Acid:Na⁺ Symporte	BASS	672	bile acid:sodium symporter family	5	5	458
2.A.29	Mitochondrial Carrier	MC			60	58	463
2.A.29	Mitochondrial Carrier	MC	118	putative mitochondrial carrier	3	3	463
2.A.29	Mitochondrial Carrier	MC	168	mitochondrial carrier protein family	2	2	466
2.A.29	Mitochondrial Carrier	MC	189	putative mitochondrial dicarboxylate transporter UCP & DTC	8	7	468
2.A.29	Mitochondrial Carrier	MC	190	putative mitochondrial adenylate translocator AAC	5	5	476
2.A.29	Mitochondrial Carrier	MC	276	adenylate translocator (brittle-1)-like family	16	15	481
2.A.29	Mitochondrial Carrier	MC	386	mitochondrial carrier protein family; peroxisomal Ca-dependent s	9	9	497
2.A.29	Mitochondrial Carrier	MC	596	mitochondrial phosphate transporter PHT3	3	3	506
2.A.29	Mitochondrial Carrier	MC	676	putative mitochondrial carrier	3	3	509

2.A.29	Mitochondrial Carrier	MC	687	putative mitochondrial carrier	2	2	512
2.A.29	Mitochondrial Carrier	MC	697	Singleton, mitochondrial arginine-ornithine translocator AtmBAC	3	3	514
2.A.29	Mitochondrial Carrier	MC	698	putative mitochondrial carrier	4	4	517
2.A.29	Mitochondrial Carrier	MC		mitochondrial carrier protein family	1	1	521
2.A.29	Mitochondrial Carrier	MC		mitochondrial succinate/fumarate translocator AtmSFC1	1	1	522
2.A.3	Amino Acid-Polyamine-C	APC			15	14	523
2.A.3.3	Cationic Amino Acid Trans	APC	108	putative cationic amino acid transporter CAT	9	8	523
2.A.3.4	Amino Acid/Choline Trans	APC	703	Singleton, amino acid permease family	1	1	532
2.A.3.8	L-type Amino Acid Transp	APC	16	putative neutral amino acid transport protein LAT	5	5	533
2.A.30	Cation-Chloride Cotrans	CCC	395	putative cation-chloride co-transporter	1	0	538
2.A.31	Anion Exchanger	AE	78	putative boron transporter BOR	7	6	539
2.A.36	Monovalent Cation:Prot	CPA1			8	8	546
2.A.36	Monovalent Cation:Proton	CPA1	85	putative sodium proton exchanger NHX	2	2	546
2.A.36	Monovalent Cation:Proton	CPA1	155	sodium proton exchanger/antiporter NHX	4	4	548
2.A.36	Monovalent Cation:Proton	CPA1	479	putative sodium proton antiporter NHX/SOS	2	2	552
2.A.37	Monovalent Cation:Prot	CPA2			34	30	554
2.A.37	Monovalent Cation:Proton	CPA2	66	putative cation-proton exchanger, CHX	28	24	554
2.A.37	Monovalent Cation:Proton	CPA2	344	putative potassium efflux antiporter, KEA	3	3	582
2.A.37	Monovalent Cation:Proton	CPA2	463	putative potassium efflux antiporter, KEA	3	3	585
2.A.38	K+ Transporter	Trk	731	Singleton, sodium uptake transporter HKT	1	1	588
2.A.39	Nucleobase:Cation Sym	NCS1	U06	permease, cytosine/purines, uracil, thiamine, allantoin famil	1	1	589
2.A.4	Cation Diffusion Facilita	CDF			12	12	590
2.A.4	Cation Diffusion Facilitato	CDF	31	cation efflux family protein MTP	5	5	590
2.A.4	Cation Diffusion Facilitato	CDF	232	putative metal tolerance protein MTP	6	6	595
2.A.4	Cation Diffusion Facilitato	CDF	721	Singleton, cation efflux family protein CDF5	1	1	601
2.A.40	Nucleobase:Cation Sym	NCS2	76	putative nucleobase ascorbate transporter NAT	12	11	602
2.A.42	Hydroxy/Aromatic Amin	HAAAP	724	Singleton, tryptophan/tyrosine permease family	2	2	614
2.A.43	Lysosomal Cystine Tran	LCT			6	4	616
2.A.43	Lysosomal Cystine Transp	LCT	412	PQ-loop transmembrane protein family	3	2	616
2.A.43	Lysosomal Cystine Transp	LCT	412.1	PQ-loop transmembrane protein family	2	1	619
2.A.43	Lysosomal Cystine Transp	LCT	412.2	PQ-loop transmembrane protein family	1	1	621
2.A.47	Divalent Anion:Na+ Sym	DASS			15	14	622
2.A.47	Divalent Anion:Na+ Symp	DASS	476	plastidic 2-oxoglutarate/malate translocator AtDiT	3	3	622
2.A.47	Divalent Anion:Na+ Symp	DASS		Singleton, tonoplast dicarboxylate transporter AttDT	1	1	625
2.A.47.2 ^a	Putative Inorganic Phosph	DASS	98	unknown, PHO1-homolog, EXS (ERD1/XPR1/SYG1) family	11	10	626
2.A.49	Ammonium Transporter	Amt			6	5	637
2.A.49	Ammonium Transporter	Amt	186	high-affinity ammonium transporter AMT1.x	5	4	637
2.A.49	Ammonium Transporter	Amt	710	Singleton, ammonium transporter AMT2.1	1	1	642
2.A.5	Zinc (Zn2+)-Iron (Fe2+) F	ZIP			17	16	643
2.A.5	Zinc (Zn2+)-Iron (Fe2+) P	ZIP	61	putative zinc/iron metal transporter ZIP & IRT	13	12	643
2.A.5	Zinc (Zn2+)-Iron (Fe2+) P	ZIP	681	zinc transporter ZIP	2	2	656
2.A.5	Zinc (Zn2+)-Iron (Fe2+) P	ZIP	U04	metal transporter family	1	1	658
2.A.5 ^a	Putative Zinc (Zn2+)-Iron	ZIP	U03	metal transporter family	1	1	659

2.A.53	Sulfate Permease	SulP			14	14	660
2.A.53	Sulfate Permease	SulP	33	putative sulfate transporter Sultr	12	12	660
2.A.53	Sulfate Permease	SulP	263	putative sulfate transporter Sultr5.x	2	2	672
2.A.55	Metal Ion (Mn²⁺-iron) Tra	Nramp			7	7	674
2.A.55	Metal Ion (Mn ²⁺ -iron) Tra	Nramp	110	putative ion metal transporter NRAMP	6	6	674
2.A.55	Metal Ion (Mn ²⁺ -iron) Tra	Nramp	705	Singleton, ethylene/stress response transducer EIN2, similar to h	1	1	680
2.A.57	Equilibrative Nucleoside	ENT	490	proton-dependent concentrative adenosine transporter ENT	8	4	681
2.A.6	Resistance-Nodulation-(RND	627	patched protein family; Niemann-Pick C disease protein	2	2	689
2.A.62	NhaD Na⁺:H⁺ Antiporter	NhaD	35	putative sodium-proton antiporter, NHD	2	2	691
2.A.64	Twin Arginine Targeting	Tat	U08	plastidic pH-dependent protein transporter, thylakoid memb	1	1	693
2.A.66	Multidrug/Oligosacchari	MATE			57	52	694
2.A.66	Multidrug/Oligosaccharidy	MATE	17	putative MATE-related efflux carrier DTX	51	46	694
2.A.66	Multidrug/Oligosaccharidy	MATE	365	putative MATE-related efflux carrier DTX	2	2	745
2.A.66	Multidrug/Oligosaccharidy	MATE	513	putative MATE-related efflux carrier DTX	4	4	747
2.A.67	Oligopeptide Transporte	OPT			18	17	751
2.A.67	Oligopeptide Transporter	OPT	54	putative Fe(III)-phytosiderophore uptake mediator YSL	9	8	751
2.A.67	Oligopeptide Transporter	OPT	246	oligopeptide transporter; ISP4-like family OPT	9	9	760
2.A.69	Auxin Efflux Carrier	AEC			15	13	769
2.A.69	Auxin Efflux Carrier	AEC	134	auxin transporter PIN	6	6	769
2.A.69	Auxin Efflux Carrier	AEC	656	auxin efflux carrier protein family PIN	2	2	775
2.A.69 ^a	Putative Auxin Efflux Carri	AEC	334	auxin efflux carrier protein family	7	5	777
2.A.7	Drug/Metabolite Transpc	DMT			127	103	784
2.A.7.11	UDP-Galactose:UMP Anti	DMT	497	UDP-galactose/UDP-glucose transporter UTr	4	4	784
2.A.7.11	UDP-Galactose:UMP Anti	DMT	585	putative UDP-galactose/UDP-glucose transporter UTr	2	2	788
2.A.7.12	CMP-Sialate:CMP Antipor	DMT	269	putative UDP-galactose/UDP-glucose transporter UTr	2	2	790
2.A.7.12	CMP-Sialate:CMP Antipor	DMT	493	nucleotide-sugar transporter family	2	1	792
2.A.7.12 ^a	Putative CMP-Sialate:CM	DMT		Singleton, nucleotide-sugar transporter family	1	1	794
2.A.7.13	GDP-Mannose:GMP Antip	DMT	385	golgi-associated GDP-mannose transporter GONST	2	2	795
2.A.7.13	GDP-Mannose:GMP Antip	DMT	530	putative phosphate translocator-homolog, NST-group GONST	2	2	797
2.A.7.14	Plant Organocation Perme	DMT	109	putative purine permease PUP	19	11	799
2.A.7.15 ^a	Putative UDP-glucuronate	DMT	500	putative phosphate translocator-homolog, KT-group UDP-GalT	9	8	818
2.A.7.15 ^a	Putative UDP-glucuronate	DMT	U28	UDP-sugar transporter-related	1	1	827
2.A.7.19	The Nucleobase Uptake T	DMT	436	ureide permease; Allantoin permease, may also transport uracil	5	4	828
2.A.7.4	Plant Drug/Metabolite Exp	DMT	367	nodulin MtN21 family protein	4	3	833
2.A.7.4	Plant Drug/Metabolite Exp	DMT	679	nodulin MtN21 family protein	43	35	837
2.A.7.9	Triose-phosphate Transpc	DMT	452	GPT, TPT, PPT, XPT phosphate translocators	9	6	880
2.A.7.9 ^a	Putative Triose-phosphate	DMT	507	putative phosphate translocator-homolog	17	16	889
2.A.7.9 ^a	Putative Triose-phosphate	DMT		triose phosphate/phosphate translocator-related	1	1	906
2.A.7.x ^a	Putative Drug/Metabolite	DMT	541	putative phosphate translocator-homolog, KT-group	2	2	907
2.A.7.y ^a	Putative Drug/Metabolite	DMT	685	membrane protein	2	2	909
2.A.71	Folate-Biopterin Transpc	FBT			9	6	911
2.A.71	Folate-Biopterin Transpor	FBT	95	integral membrane / transporter family	4	3	911
2.A.71	Folate-Biopterin Transpor	FBT	192	integral membrane / transporter family	5	3	915

2.A.72	K+ Uptake Permease	KUP	111	putative potassium transporter KUP	13	13	920
2.A.82^a	Putative Organic Solute	OST	133	expressed protein	3	3	933
2.A.84	Chloroplast Maltose Exp	MEX	A01	root cap 1 protein / maltose excess 1 protein AtRCP1/AtMEX	1	1	936
2.A.85	Aromatic Acid Exporter	ArAE	A02	similar to aluminum-activated malate transporter	13	7	937
2.A.9	Cytochrome Oxidase Bi	Oxa1			7	6	950
2.A.9	Cytochrome Oxidase Biog	Oxa1		factor for promoting protein insertion into membranes Oxa	6	6	950
2.A.9 ^a	Putative Cytochrome Oxid	Oxa1		unknown protein	1	0	956
3.A.1	ATP-binding Cassette S	ABC			107	93	957
3.A.1.201	Multidrug Resistance Exp	ABC	102	putative multidrug-resistance protein, P-glycoprotein PGP/MDR	24	20	957
3.A.1.203	Peroxisomal Fatty Acyl C	ABC		Singleton, putative ABC porter, fatty acid beta-oxidation AtPXA1,	1	1	981
3.A.1.205	Pleiotropic Drug Resistanc	ABC	5	putative white-brown complex homolog, ABC transporter WBC	26	26	982
3.A.1.205	Pleiotropic Drug Resistanc	ABC	143	pleiotropic drug resistance ABC transporter PDR	15	11	1008
3.A.1.205	Pleiotropic Drug Resistanc	ABC	157	putative white-brown complex homolog, ABC transporter WBC	2	2	1023
3.A.1.205	Pleiotropic Drug Resistanc	ABC		putative non-intrinsic ABC transporter NAP12	1	1	1025
3.A.1.205 ^a	Putative Pleiotropic Drug	ABC	5	ABC transporter-related	1	1	1026
3.A.1.208	Conjugate Transporter	ABC	675	multidrug-resistance related protein, ABC transporter MRP	15	12	1027
3.A.1.208	Conjugate Transporter	ABC	A03	expressed protein	1	1	1042
3.A.1.209	MHC Peptide Transporter	ABC	102	putative ABC transporter TAP	2	2	1043
3.A.1.209	MHC Peptide Transporter	ABC	675	non-intrinsic ABC protein NAP5	1	1	1045
3.A.1.209	MHC Peptide Transporter	ABC	A04	putative SMC2-like condensin, TITAN 3	2	2	1046
3.A.1.209	MHC Peptide Transporter	ABC		Singleton, putative peroxisomal ABC transporter PMP1	1	1	1048
3.A.1.210	Heavy Metal Transporter	ABC	102	mitochondrial ABC transporter STA/ATM	3	2	1049
3.A.1.211	Cholesterol/Phospholipid/	ABC	320	putative ABC transporter ATH	3	2	1052
3.A.1.211	Cholesterol/Phospholipid/	ABC	321	putative ABC transporter ATH & AOH1	9	8	1055
3.A.10	H+-translocating Pyroph	H+-PPase	23	vacuolar proton-translocating pyrophosphatase AVP	3	3	1064
3.A.2	H+ or Na+-translocating	F-ATPase			29	26	1067
3.A.2	H+ or Na+-translocating F	F-ATPase	283	integral V0-ATPase VHA-a	3	3	1067
3.A.2	H+ or Na+-translocating F	F-ATPase	289	integral V0-ATPase VHA-e; V1-V0 bridge, contact subunit VHA-f	3	3	1070
3.A.2	H+ or Na+-translocating F	F-ATPase	411	integral proton translocating V0-ATPase subunit VHA	9	7	1073
3.A.2	H+ or Na+-translocating F	F-ATPase	A05	ATP synthase alpha chain	1	1	1082
3.A.2	H+ or Na+-translocating F	F-ATPase		V1-ATPase subunits VHA	13	12	1083
3.A.3	P-type ATPase	P-ATPase			48	46	1096
3.A.3	P-type ATPase	P-ATPase	38	putative plasma membrane P3A-type H+-ATPase AHA	12	12	1096
3.A.3	P-type ATPase	P-ATPase	212	putative Ca2+-transporting P2B-type ATPase ACA	11	11	1108
3.A.3	P-type ATPase	P-ATPase	277	putative Cu2+-transporting P1B-type ATPase HMA	4	3	1119
3.A.3	P-type ATPase	P-ATPase	469	putative Ca2+-transporting P2A-type ATPase ECA	4	3	1123
3.A.3	P-type ATPase	P-ATPase	616	putative Zn2+/Co2+/Cd2+/Pb2+-transporting P1B-type ATPase f	1	1	1127
3.A.3	P-type ATPase	P-ATPase	620	putative Zn2+/Co2+/Cd2+/Pb2+-transporting P1B-type ATPase f	3	3	1128
3.A.3	P-type ATPase	P-ATPase	668	putative aminophospholipid translocase, P4-type ATPase ALA	12	12	1131
3.A.3	P-type ATPase	P-ATPase	723	Singleton, putative P5-type ATPase AtP5	1	1	1143
3.A.5	General Secretory Pathw	IISP			5	5	1144
3.A.5	General Secretory Pathw	IISP	3	protein transport protein sec61, putative	3	3	1144
3.A.5	General Secretory Pathw	IISP	719	preprotein translocase secY subunit, chloroplast AtCpSecY	2	2	1147

3.A.8	Mitochondrial Protein Tr	MPT				10	9	1149
3.A.8	Mitochondrial Protein Trar	MPT	287	mitochondrial import inner membrane translocase subunit Tim17		2	1	1149
3.A.8	Mitochondrial Protein Trar	MPT	427	mitochondrial inner membrane translocase component TIM17		3	3	1151
3.A.8	Mitochondrial Protein Trar	MPT	649	mitochondrial import inner membrane translocase subunit Tim17		2	2	1154
3.A.8	Mitochondrial Protein Trar	MPT		mitochondrial inner membrane translocase component TIM23		3	3	1156
3.A.9	Chloroplast Envelope Pr	CEPT				5	5	1159
3.A.9	Chloroplast Envelope Prof	CEPT	A06	chloroplast inner envelope translocon component Tic55		3	3	1159
3.A.9	Chloroplast Envelope Prof	CEPT	A07	chloroplast inner envelope translocon component Tic20		2	2	1162
3.D.1	Proton-translocating NA	NDH	A08	NADH-ubiquinone oxidoreductase, putative		1	0	1164
3.D.3	Proton-translocating Qu	QCR	A09	cytochrome b (MTCYB) (COB) (CYTB)		2	2	1165
5.B.2	Eukaryotic Cytochrome	Cytb561	A10	cytochrome B561 family		4	4	1167
8.A.5.1	K+ Transport/Nucleotide	VIC-Beta		aldo/keto reductase family protein		18	16	1171
9.A.1	Phospholipid Importer	PLI	A11	membrane protein common family		5	5	1189
9.A.12	Copper Transporter-2	Ctr2	535	copper transporter COPT		6	4	1194
9.A.23	Ferroportin	FP	456	ferroportin-related		3	3	1200
9.A.5	Peroxisomal Protein Imp	PPI				5	5	1203
9.A.5	Peroxisomal Protein Impo	PPI	A12	RING-domain protein with domain similar to region of peroxisom		1	1	1203
9.A.5	Peroxisomal Protein Impo	PPI	A13	Pex2/Pex12 N-terminal domain-containing protein		1	1	1204
9.A.5 ^a	Putative Peroxisomal Prot	PPI	198	putative RING-domain protein		2	2	1205
9.A.5 ^a	Putative Peroxisomal Prot	PPI	U29	zinc finger (C3HC4-type RING finger) family protein		1	1	1207
9.A.6	ATP Exporter	ATP-E	A14	putative phosphatidylinositolglycan class N short form		1	1	1208
9.B.11	Putative ER-chloroplast	ECLT	A15	permease-like protein, part of ER-to-thylakoid lipid transfer		1	1	1209
9.B.12	(Salt or Low Temperatur	SHP		hydrophobic protein (low temperature and salt responsive p		8	7	1210
9.B.17	Putative Fatty Acid Tran	FAT		putative FAT family proteins At4CL1-3 & AAE11-12		28	27	1218
9.B.24	Testis-Enhanced Gene T	TEGT	384	putative Bax inhibitor-1		3	3	1246
9.B.25	YbbM Family	YbbM	U07	ABC transporter-like protein, phloem-localized; aluminum re		1	1	1249
9.B.26	PF27 protein	PF27	421	expressed PF27 protein		5	4	1250
9.B.27^a	Putative YdjX-Z Family	YdjX-Z				7	7	1255
9.B.27 ^a	Putative YdjX-Z Family	YdjX-Z	73	expressed protein		3	3	1255
9.B.27 ^a	Putative YdjX-Z Family	YdjX-Z	286	expressed protein		4	4	1258
9.B.37^a	Putative HlyC/CorC (HC	HCC				9	9	1262
9.B.37 ^a	Putative HlyC/CorC (HCC	HCC	57	CBS domain-containing protein-related		7	7	1262
9.B.37 ^a	Putative HlyC/CorC (HCC	HCC	57.1	CBS/transporter associated domain-containing protein		2	2	1269
	Putative ADIPOR-like Receptor Fan		658	expressed protein; hemolysin-III homolog, adiponectin rece		7	5	1271
	Putative G-protein-coupled Serpent		U26	seven transmembrane MLO protein [Devoto, JBC 1999 & J M		15	15	1278
	Putative Olfactory Receptor		359	expressed protein; extracellular ligand-gated ion channel ac		6	6	1293
	Unclassified					454	365	1299