Table 3. Cytoplasmic proteins observed in the extracellular fractions of S. coelicolor identified by either two-dimensional gel electrophoresis and/or multidimensional protein identification technology

SCO01682DPossible regulatoSCO01792DPutative zinc-con dehydrogenaseSCO01802DConserved hypoth	
SCO01682DPossible regulatoSCO01792DPutative zinc-con dehydrogenaseSCO01802DConserved hypoth	
SCO0179 2D Putative zinc-con dehydrogenase SCO0180 2D Conserved hypotl	
SCO0180 dehydrogenase Conserved hypoti	1441111115
SCO0180 2D Conserved hypothesis (SCO0180) 2D Conserved hypothesis (SCO0180	J
	hetical protein
SCJ1.29c	1
SCO0199 2D Putative alcohol of	dehydrogenase
SCO0204 2D Putative luxR fan	
component respo	nse regulator
SCO0260 2D and MudPIT ( $\Delta tatC$ ) Conserved hypothesis	hetical protein
SCO0379 <sup>†</sup> 2D and MudPIT (Mutual) Catalase (EC 1.1	1.1.6)
SCO0400 2D Putative epimeras	se
SCO0492 MudPIT ( $\Delta tatC$ ) Putative peptide s	synthetase
SCO0499 <sup>†</sup> MudPIT ( $\Delta tatC$ ) Putative formyltr	
SCO0525 MudPIT ( $\Delta tatC$ ) Conserved hypothesis ( $\Delta tatC$ )	
SCF11.05	1
SCO0527 2D and MudPIT (mutual) Cold shock prote	in
SCO0570 MudPIT ( $\Delta tatC$ ) 50S ribosomal pr	
SCO0592 2D Hypothetical prot	
SCO0596 2D Putative DNA-bit	
SCO0597 2D Conserved hypothesis (SCO0597)	
SCF55.21c	ī
SCO0640 MudPIT ( $\Delta tatC$ ) Conserved hypothesis	hetical protein
SCF56.24c	1
SCO0641 MudPIT (mutual) Tellurium resistat	nce protein
SCO0682 MudPIT (M145) Hypothetical prot	
SCO0714 2D Putative oxidored	
SCO0740 2D Putative hydrolas	se
SCO0741 2D Putative oxidored	
SCO0788 MudPIT (mutual) Hypothetical prot	tein 3SCF60.20c
	membrane protein.
SCO0852 2D and MudPIT ( $\Delta tatC$ ) Putative aldolase	
SCO0870 MudPIT (M145) Putative two-com	nponent system
response regulato	
SCO0884 MudPIT ( $\Delta tatC$ ) Probable oxidore	ductase
SCO0885 MudPIT (Δ <i>tatC</i> ) Thioredoxin	
SCO0906 2D Hypothetical prot	tein SCM1.39c
SCO0945 2D Putative formami	
DNA glycosylase	1 2
SCO0975 MudPIT (M145) 6-phosphoglucon	
dehydrogenase	
SCO0977 MudPIT (mutual) Conserved hypothesis	hetical protein
SCO0999 MudPIT (mutual) Superoxide dismi	*
SCO1081 2D and MudPIT ( $\Delta tatC$ ) Putative electron	
flavoprotein, alph	na subunit
SCO1082 MudPIT (Δ <i>tatC</i> ) Putative electron	
flavoprotein, beta	a subunit
SCO1085 MudPIT ( $\Delta tatC$ ) Putative acyltrans	
SCO1116 MudPIT (mutual) Hypothetical prot	
SCO1123 2D and MudPIT (Δ <i>tatC</i> ) Hypothetical prot	
	A dehydrogenase
SCO1199 MudPIT ( $\Delta tatC$ ) Putative oxidored	

SCO1337	MudPIT (M145)	Putative oxidoreductase
SCO1384	2D and MudPIT (mutual)	Conserved hypothetical protein
SCO1390	MudPIT (mutual)	Putative PTS system sugar
		phosphotransferase component IIA
SCO1391	MudPIT (M145)	Phosphoenolpyruvate-protein
		phosphotransferase
SCO1438	2D	ATP phosphoribosyltransferase
SCO1453	MudPIT ( $\Delta tatC$ )	Hypothetical protein
SCO1462	MudPIT (M145)	Hypothetical protein SCL6.19c
SCO1476	2D	S-adenosylmethionine synthetase
SCO1480	MudPIT (mutual)	Conserved hypothetical protein
SCO1489	2D	Putative DNA-binding protein
SCO1496	2D	Chorismate synthase
SCO1505	MudPIT (mutual)	30S ribosomal protein S4
SCO1508	2D	Histidyl tRNA synthetase
SCO1569	MudPIT ( $\Delta tatC$ )	Putative oxidoreductase
SCO1594	MudPIT (mutual)	Putative phenylalanyl-tRNA
	, , ,	synthetase beta chain
SCO1598	MudPIT (M145)	50S ribosomal protein L20
SCO1600	MudPIT (M145)	Putative translation initiation factor
		IF-3
SCO1620	MudPIT ( $\Delta tatC$ )	Glycine betaine transport system
		permease protein
SCO1623	MudPIT (M145)	Conserved hypothetical protein
		SCI41.06
SCO1626	MudPIT (mutual)	Putative cytochrome P450
SCO1628	MudPIT (M145)	Conserved hypothetical protein
SCO1643	MudPIT (mutual)	20S proteasome alpha-subunit
SCO1644	MudPIT (mutual)	20S proteasome beta-subunit
		precursor
SCO1646	MudPIT (mutual)	Hypothetical protein
SCO1651	MudPIT (M145)	Conserved hypothetical protein SCI41.34c
SCO1654	2D	Putative two-component response
		regulator
SCO1766	MudPIT (M145)	Putative glycohydrolase
SCO1767	2D	Putative DNA hydrolase
SCO1773	2D	Putative L-alanine dehydrogenase
SCO1775	2D	Conserved hypothetical protein
SCO1788	MudPIT (mutual)	Conserved hypothetical protein
SCO1794	2D and MudPIT (M145)	Conserved hypothetical protein
SCO1809	MudPIT (mutual)	Conserved hypothetical protein
SCO1839	MudPIT (mutual)	Putative transcriptional regulator
SCO1870	MudPIT (M145)	Hypothetical protein SCI39.17c
SCO1921	MudPIT (mutual)	Putative aminotransferase
SCO1922	MudPIT (mutual)	Putative ABC transporter ATP- binding subunit
SCO1923	MudPIT (mutual)	Putative dioxygenase ferredoxin subunit
SCO1935	2D	Transketolase A
SCO1936	MudPIT (mutual)	Putative transaldolase
SCO1937	2D	Putative glucose-6-phosphate 1-dehydrogenase
SCO1945 <sup>†</sup>	2D and MudPIT (mutual)	Triosephosphate isomerase
SCO1946	2D and MudPIT (mutual)	Phosphoglycerate kinase
SCO1947 <sup>†</sup>	2D and MudPIT (mutual)	Glyceraldehyde-3-phosphate
SCO1998	2D and MudPIT (mutual)	dehydrogenase 30S ribosomal protein S1
3001778	2D and Mudrii (mulual)	303 Hoosomai protein 31

SCO2011	M IDIT (M145)	D-4-4i11-1-1-iii-1
SCO2011	MudPIT (M145)	Putative branched chain amino acid transport ATP-binding protein
SCO2012	MudPIT (mutual)	Putative branched chain amino acid
5002012	Widdi II (mutuai)	transport ATP-binding protein
SCO2039	MudPIT (M145)	Indoleglycerol phosphate synthase
SCO2045	2D	Conserved hypothetical protein
SCO2050	MudPIT (M145)	Phosphoribosylformimino-5-
		aminoimidazole carboxamide
		ribotide isomerase
SCO2077	MudPIT (ΔtatC)	Hypothetical protein
SCO2105	MudPIT (ΔtatC)	Putative transcriptional regulatory
		protein
SCO2126	MudPIT ( $\Delta tatC$ )	Glucokinase
SCO2149	MudPIT (M145)	Rieske iron-sulfur protein
SCO2167	MudPIT ( $\Delta tatC$ )	Hypothetical protein
SCO2168	MudPIT ( $\Delta tatC$ )	Hypothetical protein
SCO2180 <sup>†</sup>	2D and MudPIT (mutual)	Putative dihydrolipoamide
		dehydrogenase
SCO2181	2D and MudPIT (M145)	Putative dihydrolipoamide
		succinyltransferase
SCO2183	MudPIT ( $\Delta tatC$ )	Putative pyruvate dehydrogenase E1
222 <b>2</b> 122 <sup>†</sup>	AD 116 1DVE ( 1)	component
SCO2198 <sup>†</sup>	2D and MudPIT (mutual)	Glutamine synthetase I
SCO2206	MudPIT (M145)	ArsC, arsenate reductase
SCO2210	2D and MudPIT (M145)	Glutamine synthetase
SCO2262	2D and MudPIT (M145)	Putative oxidoreductase
SCO2265	MudPIT ( $\Delta tatC$ )	Hypothetical protein SCC75A.11c.
SCO2339	MudPIT (mutual)	Hypothetical protein
SCO2367	2D and MudPIT (mutual)	Conserved hypothetical protein
SCO2368	2D and MudPIT (mutual)	Conserved hypothetical protein
SCO2369	$MudPIT\ (\Delta tatC)$	Putative thiol-specific antioxidant protein
SCO2370	MudPIT (mutual)	Conserved hypothetical protein
SCO2380	MudPIT (ΔtatC)	Conserved hypothetical protein
	, , ,	SC4A7.08
SCO2382	MudPIT (Δ <i>tatC</i> )	Hypothetical protein SC4A7.10
SCO2389	MudPIT (mutual)	Acyl carrier protein
SCO2394	2D and MudPIT (M145)	Putative secreted protein
SCO2407	2D	Putative aldose 1-epimerase
SCO2469	MudPIT (mutual)	Putative reductase
SCO2504	2D	Glycyl-tRNA synthetase
SCO2506	MudPIT ( $\Delta tatC$ )	Putative metal transport ABC
		transporter
SCO2529	2D	Putative metalloprotease.
SCO2548	MudPIT (mutual)	Putative Hit-family protein.
SCO2554	MudPIT (M145)	DnaJ protein.
SCO2576	MudPIT ( $\Delta tatC$ )	Phosphoglycerate mutase
SCO2582	MudPIT (mutual)	Conserved hypothetical protein SCC123.20.
SCO2596	MudPIT (mutual)	50S ribosomal protein L27
SCO2597	MudPIT (M145)	Ribosomal protein L21
SCO2612	2D and MudPIT (M145)	Nucleoside diphosphate kinase
SCO2627	MudPIT (ΔtatC)	Putative sugar-phosphate isomerase
SCO2633	2D and MudPIT (mutual)	Superoxide dismutase [Fe-Zn] (EC
		1.15.1.1)
SCO2634	MudPIT (mutual)	Conserved hypothetical protein SC8E4A.04c

SCO2643 <sup>†</sup>	MudPIT (mutual)	Aminopeptidase N
SCO2696	MudPIT (M145)	Putative 2-hydroxyacid-family
	, ,	dehydrogenase
SCO2736 <sup>†</sup>	MudPIT (mutual)	Citrate synthase.
SCO2822	2D and MudPIT (M145)	Putative decarboxylase
SCO2849	MudPIT (M145)	Conserved hypothetical protein SCE20.23.
SCO2901	2D and MudPIT (mutual)	Hypothetical protein
SCO2902	2D	Conserved hypothetical protein
SCO2904	2D and MudPIT (mutual)	Putative ribonuclease PH
SCO2905	MudPIT (mutual)	Hypothetical protein
SCO2911	MudPIT (mutual)	Conserved hypothetical protein
SCO2950	MudPIT (mutual)	DNA-binding protein Hu (hs1)
SCO2951	2D and MudPIT (mutual)	Putative malate oxidoreductase
SCO2999	MudPIT (Δ <i>tatC</i> )	Conserved hypothetical protein
SCO3023	MudPIT (M145)	Adenosylhomocysteinase
SCO3027	MudPIT (mutual)	Hypothetical protein SCD84.08c
SCO3096 <sup>†</sup>	2D and MudPIT (mutual)	Enolase
SCO3122	MudPIT (M145)	Putative nucleotidyltransferase
SCO3123 <sup>†</sup>	MudPIT ( $\Delta tatC$ )	Ribose-phosphate
		pyrophosphokinase
SCO3124	MudPIT (mutual)	Ribosomal L25p family protein
SCO3127	MudPIT (mutual)	Phosphoenolpyruvate carboxylase
SCO3182	MudPIT (M145)	UTP-glucose-1-phosphate
		uridylyltransferase
SCO3187	MudPIT (ΔtatC)	Conserved hypothetical protein SCE22.04
SCO3303	MudPIT ( $\Delta tatC$ )	Putative lysyl-tRNA synthetase
SCO3304	MudPIT ( $\Delta tatC$ )	Putative arginyl-tRNA synthetase
SCO3328	MudPIT (M145)	Hypothetical protein
SCO3337	2D	Pyrroline-5-carboxylate reductase
SCO3345	2D	Dihydroxy acid dehydratase
SCO3373	MudPIT (M145)	Putative Clp-family ATP-binding protease
SCO3407	2D	Conserved hypothetical protein
SCO3409	MudPIT (mutual)	Putative inorganic pyrophosphatase
SCO3425	MudPIT (M145)	Putative 30S ribosomal protein S18
SCO3427	MudPIT (M145)	Putative 50S ribosomal protein L31
SCO3429	MudPIT (mutual)	Putative 50S ribosomal protein L28
SCO3438	MudPIT (M145)	Hypothetical protein
SCO3443	2D	Putative pyridine nucleotide- disulphide oxidoreductase
SCO3463	MudPIT (M145)	Putative phosphorylase
SCO3490	2D	Transposase
SCO3549	MudPIT (M145)	Putative anti-sigma factor antagonist
SCO3549	2D and MudPIT ( $\Delta tatC$ )	putative anti-sigma factor antagonist
SCO3569	MudPIT (mutual)	Putative endonuclease
SCO3571	2D	Putative transcriptional regulator
SCO3575	MudPIT (M145)	Conserved hypothetical protein
SCO3617	MudPIT (M145)	Hypothetical protein
SCO3622	2D	Putative aminotransferase
SCO3629	2D and MudPIT (M145)	Adenylosuccinate synthetase
SCO3647	2D and MudPIT (M145)	Conserved hypothetical protein
SCO3649 <sup>†</sup>	2D and MudPIT (mutual)	Putative fructose 1,6-bisphosphate aldolase
SCO3659	MudPIT ( $\Delta tatC$ )	Hypothetical protein
SCO3661	MudPIT (M145)	ATP-dependent protease ATP-

		binding subunit
SCO3671	MudPIT (mutual)	Heat shock protein 70
SCO3771	MudPIT (mutual)	Cold-shock protein
SCO3734	MudPIT (M145)	Hypothetical protein
SCO3748	MudPIT (mutual)	Cold shock protein
SCO3746	2D and MudPIT (mutual)	Conserved hypothetical protein
SCO3790 <sup>†</sup>	2D	Conserved hypothetical protein
SCO3790 <sup>†</sup>	MudPIT (mutual)	Putative methionyl tRNA synthetase
SCO3792 SCO3793	MudPIT (M145)	Conserved hypothetical protein
SCO3823	2D	Putative quinone oxidoreductase
SCO3823 SCO3834	MudPIT (mutual)	Putative 3-Hydroxyacyl-CoA
	, ,	dehydrogenase
SCO3877	MudPIT ( $\Delta tatC$ )	Putative 6-phosphogluconate dehydrogenase
SCO3878	MudPIT (mutual)	DNA polymerase III, beta chain
SCO3889	MudPIT (mutual)	Thioredoxin
SCO3890	MudPIT (M145)	Thioredoxin reductase (NADPH)
SCO3899	2D and MudPIT (M145)	Hypothetical protein
SCO3906	MudPIT (mutual)	Putative 30S ribosomal protein S6
SCO3907	2D and MudPIT (M145)	Putative single-strand DNA-binding protein
SCO3909	MudPIT (mutual)	50S ribosomal protein L9
SCO3913	2D	Conserved hypothetical protein
SCO3917	MudPIT (M145)	Conserved hypothetical protein
SCO3920	MudPIT ( $\Delta tatC$ )	Putative cystathionine/methionine
		gamma-synthase/lyase
SCO3956	MudPIT ( $\Delta tatC$ )	Putative ABC transporter ATP-
	( )	binding protein
SCO3974	MudPIT ( $\Delta tatC$ )	Hypothetical protein
SCO4036	MudPIT (mutual)	Hypothetical protein
SCO4039	MudPIT (mutual)	Hypothetical protein 2SCD60.05c
SCO4041	MudPIT (M145)	Putative uracil
		phosphoribosyltransferase
SCO4043	MudPIT ( $\Delta tatC$ )	Conserved hypothetical protein
SCO4048	MudPIT (M145)	Conserved hypothetical protein
SCO4068	2D	Phosphoribosylamine-glycine ligase (EC 6.3.4.13)
SCO4086	MudPIT (M145)	Amidophosphoribosyltransferase
SCO4087	2D and MudPIT (mutual)	Phosphoribosylformylglycinamidine
CCO 4000 <sup>†</sup>	MadDIT (Accept	cyclo-ligase
SCO4089 <sup>†</sup>	MudPIT ( $\Delta tatC$ )	Valine dehydrogenase (EC 1.4.1)
SCO4091	MudPIT (mutual)	Putative DNA-binding protein
SCO4109	2D and MudPIT (mutual)	Putative oxidoreductase
SCO4164	MudPIT (mutual)	Putative thiosulfate sulfurtransferase
SCO4165	MudPIT (mutual)	Conserved hypothetical protein
SCO4173	MudPIT ( $\Delta tatC$ )	Hypothetical protein SCD66.10c
SCO4175	2D and MudPIT ( $\Delta tatC$ )	Hypothetical protein SCD66.12c
SCO4199	MudPIT (M145)	Hypothetical protein
SCO4228	2D	Putative phosphate transport system regulator
SCO4240	2D	ABC transporter ATP-binding protein
SCO4246	MudPIT (M145)	Hypothetical protein SCD8A.19c
SCO4240 SCO4277	2D and MudPIT (mutual)	Putative tellurium resistance protein
SCO4277 SCO4294	MudPIT (ΔtatC)	Conserved hypothetical protein
SCO4294 SCO4295	MudPIT (M145)	Cold shock protein
SCO4296	2D and MudPIT (mutual)	Chaperonin 2
SCO4296 SCO4366 <sup>†</sup>	2D and MudPIT (Mutual)  2D and MudPIT (M145)	Putative phosphoserine
SCU4300°	2D and Mudrii (M143)	rutative phosphoseime

	T	
0001111	16 IDIT ( ) 1	Aminotransferase
SCO4411	MudPIT (mutual)	Putative calcium binding protein
SCO4441	2D	Putative DNA-binding protein
SCO4505	2D and MudPIT (mutual)	Cold shock protein
SCO4509	MudPIT (mutual)	Hypothetical protein SCD35.16
SCO4580	MudPIT (mutual)	Putative fumarylacetoacetase
SCO4614	2D and MudPIT (mutual)	Conserved hypothetical protein
SCO4645	MudPIT (mutual)	Aspartate aminotransferase
SCO4649	MudPIT (mutual)	50S ribosomal protein L1
SCO4652	2D and MudPIT (mutual)	50S ribosomal protein L10
SCO4653	MudPIT (mutual)	50S ribosomal protein L7/L12
SCO4655	MudPIT (ΔtatC)	DNA-directed RNA polymerase
	(=::::0)	beta' chain (fragment)
SCO4659	MudPIT (mutual)	30S ribosomal protein S12
SCO4660	MudPIT (mutual)	30S ribosomal protein S7
SCO4662	2D and MudPIT (mutual)	Elongation factor TU-1
SCO4602 SCO4675	MudPIT (mutual)	Conserved hypothetical protein
SC040/3	MudP11 (mutuai)	SCD40A.21c
SCO4697	M. ADIT (master of)	
SCO4687	MudPIT (mutual)	Hypothetical protein SCD31.12c
SCO4701	MudPIT (M145)	30S ribosomal protein S10
SCO4702	MudPIT (mutual)	50S ribosomal protein L3
SCO4703	2D and MudPIT (mutual)	50S ribosomal protein L4
SCO4704	MudPIT (mutual)	50S ribosomal protein L23
SCO4705	MudPIT (mutual)	50S ribosomal protein L2
SCO4706	MudPIT (mutual)	30S ribosomal protein S19
SCO4707	MudPIT (M145)	50S ribosomal protein L22
SCO4709	MudPIT (M145)	50S ribosomal protein L16
SCO4710	MudPIT (M145)	50S ribosomal protein L29
SCO4711	MudPIT (M145)	30S ribosomal protein S17
SCO4713	MudPIT (mutual)	50S ribosomal protein L24
SCO4714	MudPIT (M145)	50S ribosomal protein L5
SCO4716	MudPIT (mutual)	30S ribosomal protein S8
SCO4717	MudPIT (mutual)	50S ribosomal protein L6
SCO4718	MudPIT (mutual)	50S ribosomal protein L18
SCO4719	MudPIT (mutual)	30S ribosomal protein S5
SCO4719 SCO4720	MudPIT (mutual)	50S ribosomal protein L30
SCO4720 SCO4721	MudPIT (mutual)	50S ribosomal protein L15
		1
SCO4723	MudPIT (M145)	Adenylate kinase
SCO4725	MudPIT (mutual)	Translational initiation factor IF1
SCO4726	MudPIT (M145)	50S ribosomal protein L36
SCO4727	MudPIT (mutual)	30S ribosomal protein S13
SCO4729	2D and MudPIT (mutual)	DNA-directed RNA polymerase
		alpha chain
SCO4730	MudPIT (mutual)	50S ribosomal protein L17
SCO4734	MudPIT (mutual)	50S ribosomal protein L13
SCO4735	MudPIT (mutual)	30S ribosomal protein S9
SCO4761	2D and MudPIT (mutual)	10 kD chaperonin cpn10
SCO4762	MudPIT (mutual)	60 kD chaperonin cpn60
SCO4770	2D and MudPIT (M145)	Inosine 5' monophosphate
		dehydrogenase
SCO4771 <sup>†</sup>	2D	Putative inosine-5'-monophosphate
= = · · · =		dehydrogenase
SCO4800	MudPIT (Δ <i>tatC</i> )	Isobutiryl CoA mutase, small
2201000		subunit
SCO4808	MudPIT (mutual)	Succinyl-CoA synthetase beta chain
SCO4809 <sup>†</sup>	MudPIT (mutual)	Succinyl-CoA synthetase beta chain  Succinyl CoA synthetase alpha
SCU4007	widdfii (iiidddi)	chain
CCO4914	M., dDIT (M145)	
SCO4814	MudPIT (M145)	Bifunctional purine biosynthesis

		protein
SCO4824	2D and MudPIT (mutual)	Bifunctional protein
		(methylenetetrahydrofolate
		dehydrogenase and
4		methenyltetrahydrofolate cyclohydr
SCO4827 <sup>†</sup>	MudPIT (mutual)	Malate dehydrogenase
SCO4855	MudPIT (M145)	Putative succinate dehydrogenase
		iron-sulfur subunit
SCO4856	MudPIT ( $\Delta tatC$ )	Putative succinate dehydrogenase
		flavoprotein subunit
SCO4860	MudPIT (mutual)	Putative secreted hydrolase
SCO4907	2D	Transcriptional regulatory protein
SCO4921	MudPIT (M145)	Putative acyl-CoA carboxylase
		complex A subunit
SCO4932	MudPIT ( $\Delta tatC$ )	Histidine ammonia-lyase
SCO4956	MudPIT (mutual)	Putative peptide methionine
		sulfoxide reductase
SCO4958 <sup>†</sup>	2D and MudPIT (M145)	Cystathionine gamma-synthase
SCO4990	MudPIT (M145)	Conserved hypothetical protein
SCO5031	MudPIT (mutual)	Alkyl hydroperoxide reductase
	, , ,	system hypothetical protein
SCO5042	MudPIT ( $\Delta tatC$ )	Fumarate hydratase C
SCO5059	2D	Polyphosphate glucokinase
SCO5075	2D	Putative oxidoreductase
SCO5077	MudPIT (mutual)	Hypothetical protein
SCO5079	2D	Conserved hypothetical protein
SCO5101	MudPIT (M145)	Conserved hypothetical protein
SCO5102	MudPIT (mutual)	Putative mutT-like protein
SCO5135	2D and MudPIT (mutual)	Ferredoxin
SCO5145	MudPIT (mutual)	Conserved hypothetical protein
SCO5167	2D	Conserved hypothetical protein
SCO5169	MudPIT (mutual)	Putative ATP-binding protein
SCO5187	2D and MudPIT (mutual)	Putative glutaredoxin-like protein
SCO5199	$\begin{array}{c} \text{MudPIT } (\Delta tatC) \end{array}$	Conserved hypothetical protein
SCO5212 <sup>†</sup>	MudPIT (mutual)	3-phosphoshikimate 1-
5CO3212	Widdi II (Middai)	carboxyvinyltransferase
SCO5217	$MudPIT\left(\Delta tatC\right)$	Anti-sigma factor
SCO5217	2D	Putative polypeptide deformylase
SCO5221 SCO5236	MudPIT (M145)	Putative glucosamine phosphate
3CO3230	MudFII (MI143)	isomerase
SCO5249	2D	Putative nucleotide-binding protein
SCO5249 SCO5251	2D 2D	Acetyltransferase
SCO5254	2D 2D	Superoxide dismutase
		Putative malate oxidoreductase
SCO5261 SCO5262 <sup>†</sup>	MudPIT (M145)	
	MudPIT ( $\Delta tatC$ )	Putative dehydrogenase
SCO5281	MudPIT ( $\Delta tatC$ )	Putative 2-oxoglutarate
0005250	No IDITE ( ) ( )	dehydrogenase
SCO5359	MudPIT (mutual)	50S ribosomal protein L31
SCO5362	MudPIT ( $\Delta tatC$ )	Conserved hypothetical protein
SCO5370	2D	ATP synthase delta chain
SCO5371	2D	ATP synthase alpha chain
SCO5373	$MudPIT (\Delta tatC)$	ATP synthase beta chain
SCO5374	MudPIT ( $\Delta tatC$ )	ATP synthase epsilon chain
SCO5396	2D	Putative cellulose-binding protein
SCO5398	MudPIT (M145)	Conserved hypothetical protein
SCO5405	2D	Putative transcriptional regulator
SCO5444	MudPIT (ΔtatC)	Putative glycogen phosphorylase
SCO5464	MudPIT (mutual)	Possible calcium binding protein

SCO5465	MudPIT (mutual)	Conserved hypothetical protein
SCO5470	MudPIT (mutual)	Serine hydroxymethyltransferase
SCO5470	MudPIT ( $\Delta tatC$ )	Conserved hypothetical protein
SCO5514	MudPIT (mutual)	Acetolactate synthase small subunit
SCO5515	MudPIT (mutual)	Probable D-3-phosphoglycerate
5003313	ividai ii (iiiddai)	dehydrogenase
SCO5522	2D and MudPIT (M145)	3-isopropylmalate dehydrogenase
SCO5545	MudPIT (mutual)	Hypothetical protein SC1C2.26
SCO5547	2D	Glutamyl-tRNA synthetase
SCO5553	MudPIT ( $\Delta tatC$ )	3-isopropylmalate dehydratase large
5003333	Widdi II (Ziuic)	subunit
SCO5561	MudPIT (mutual)	Hypothetical protein SC7A1.05c
SCO5564	MudPIT (M145)	Putative 50S ribosomal protein L28
SCO5570	2D and MudPIT (M145)	Hypothetical protein
SCO5571	MudPIT (ΔtatC)	50S ribosomal protein L32
SCO5584	2D and MudPIT (M145)	Nitrogen regulatory protein P-II
SCO5591	MudPIT (mutual)	30S ribosomal protein S16
SCO5607	MudPIT ( $\Delta tatC$ )	Putative transcriptional regulator
SCO5624	MudPIT (M145)	30S ribosomal protein S2
SCO5651	MudPIT (M145)	Hypothetical protein SC6A9.16
SCO5655	2D	Putative aminotransferase
SCO5699	2D	Prolyl tRNA synthetase
SCO5703	2D	Hypothetical protein SC5H4.27
SCO5723	MudPIT (Δ <i>tatC</i> )	Putative regulator, BldB
SCO5736	MudPIT (mutual)	30S ribosomal protein S15
SCO5737 <sup>†</sup>	2D and MudPIT (mutual)	Guanosine pentaphosphate
		synthetase/polyribonucleotide
		nucleotidyltransferase
SCO5744	2D	Putative dihydrodipicolinate
		synthase
SCO5745	2D	Conserved hypothetical protein
		SC9A10.09
SCO5759	MudPIT ( $\Delta tatC$ )	Hypothetical protein SC7C7.14
SCO5777	MudPIT (M145)	Glutamate uptake system ATP-
		binding protein
SCO5806	MudPIT ( $\Delta tatC$ )	Conserved hypothetical protein
0.00.5000		SC4H2.27c
SCO5838	$MudPIT (\Delta tatC)$	Putative protease
SCO5841	MudPIT (mutual)	Phosphocarrier protein hpr
SCO5843	2D	Hypothetical protein SC9B10.10
SCO5853	2D	Conserved hypothetical protein
9005963	20	SC9B10.20c
SCO5862	2D MudDIT (AtatC)	Two-component regulator CutR  Conserved hypothetical protein
SCO5971	MudPIT (ΔtatC)	<u> </u>
SCO5976	MudPIT (M145)	Ornithine carbamoyltransferase
SCO5984	2D and MudDIT (mutual)	Putative acyl-CoA dehydrogenase
SCO5999 <sup>†</sup>	2D and MudPIT (mutual)	Aconitase
SCO6031	MudPIT (mutual)	Uroporphyrinogen decarboxylase
SCO6042	MudPIT ( $\Delta tatC$ )	Conserved hypothetical protein SC1B5.02
SCO6046	MudDIT (M145)	Hypothetical protein
SCO6046 SCO6061	MudPIT (M145) MudPIT (M145)	Putative oxidoreductase
SCO6061 SCO6084	2D	Putative oxidoreductase  Putative DNA polymerase
SCO6084 SCO6145	2D 2D	Hypothetical protein SC1A9.09
SCO6206	2D and MudPIT (mutual) 2D	Conserved hypothetical protein  Putative oxidoreductase
SCO6206		
SCO6283	MudPIT (M145)	Conserved hypothetical protein
SCO6324	2D	Putative hydrolase

SCO6409	MudPIT (mutual)	Methionine aminopeptidase
SCO6412	2D	Putative aminotransferase
SCO6415	2D	Putative D-hydantoinase
SCO6482	2D and MudPIT (mutual)	Conserved hypothetical protein
SCO6488	MudPIT (M145)	Putative acyl-peptide hydrolase
SCO6531	2D and MudPIT (mutual)	Putative ATP/GTP binding protein
SCO6549	MudPIT (mutual)	Hypothetical protein SC5C7.34
SCO6551	MudPIT (mutual)	Putative oxidoreductase
SCO6606	MudPIT (M145)	Conserved hypothetical protein SC1F2.03c
SCO6650	2D	Hypothetical protein SC4G2.24
SCO6658	MudPIT (M145)	6-phosphogluconate dehydrogenase
SCO6663	MudPIT (M145)	Transketolase B
SCO6753	2D	Putative nucleotide sugar-1-
		phosphate transferase
SCO6776	2D	Conserved hypothetical protein
SCO6928	2D and MudPIT ( $\Delta tatC$ )	Putative O-methyltransferase.
SCO7000 <sup>†</sup>	MudPIT (mutual)	Isocitrate dehydrogenase
SCO7072	MudPIT (M145)	Conserved hypothetical protein
SCO7271	MudPIT ( $\Delta tatC$ )	Putative ion channel subunit
SCO7286	MudPIT ( $\Delta tatC$ )	Putative oxidoreducatse
SCO7293	2D	Conserved hypothetical protein
SCO7481	2D and MudPIT (mutual)	Conserved hypothetical protein
SCO7510 <sup>†</sup>	2D and MudPIT (mutual)	Peptidyl-prolyl cis-trans isomerase
SCO7511	2D	Glyceraldehyde 3-phosphate
		dehydrogenase
SCO7647	MudPIT ( $\Delta tatC$ )	Putative calcium binding protein
SCO7654	MudPIT (M145)	Putative oxidoreductase
SCO7676	MudPIT (mutual)	Putative ferredoxin
SCO7683	MudPIT (M145)	Putative non-ribosomal peptide synthase
SCO7699	2D	Putative nucleotide-binding protein
SCO7700	2D	Putative cyclase
SCO7728	2D and MudPIT (Δ <i>tatC</i> )	Conserved hypothetical protein
SCO7730	MudPIT (mutual)	Conserved hypothetical protein

Proteins are listed by SCO number. Method of observation indicates which technique was used to identify a particular protein. 2D is two-dimensional gel electrophoresis; MudPIT is multidimensional protein identification technology. Bracketed after MudPIT is indicated ' $\Delta tatC$ ' if the protein was found in the cell-wall fraction of the tatC mutant strain only, 'M145' if the protein was found in the cell-wall fraction of the M145 strain only and 'mututal' if it was found in the cell-wall fractions of both the M145 and the tatC mutant strains.

<sup>†</sup>These proteins have also been identified in the extracellular fraction of *S. coelicolor* grown in liquid medium (Kim DW, Chater K, Lee KJ, Hesketh, A (2005) *J Bacteriol* 187: 2957-2966).