

Table 3. The list of S-loops that are conserved in all eight tested O157 strains

S-loop	Position	Length, bp	ORFs encoded	Note
S-loop 1	18463	24969	6,505 ECs0019-ECs0025	Fimbrial biosynthesis locus 1
S-loop 3	54725	55371	645 ECs0052-ECs0053	
S-loop 10	154205	161615	7,409 ECs0139-ECs0145	Fimbrial biosynthesis locus 2
S-loop 18	345356	347807	2,450 ECs0328-ECs0330	
S-loop 19	348664	353381	4,716 ECs0331-ECs0335	
S-loop 20	354806	358558	3,751 ECs0336	
S-loop 21	359426	360014	587 ECs0338	
S-loop 24	379200	383870	4,669 ECs0361-ECs0362	AidA-I adhesin-like protein, etc.
S-loop 26	394158	394757	598	
S-loop 27	394828	399422	4,593 ECs0374-ECs0378	Putative sugar transporter
S-loop 28	411185	411749	563	
S-loop 30	424356	426191	1,834 ECs0399-ECs0400	
S-loop 31	438071	446196	8,124 ECs0413-ECs0418	Putative ferric transporter
S-loop 33	451337	452983	1,645 ECs0424	
S-loop 35	468382	470322	1,939	
S-loop 37	486313	487971	1,657 ECs0454	
S-loop 38	494106	494794	687 ECs0461-Ecs0462	
S-loop 39	501355	503339	1,983 ECs0472	
S-loop 43	605563	608223	2,659 ECs0546-ECs0550	Adhesin/invasin-like protein, etc.
S-loop 44	664488	676004	11,515 ECs0602-ECs0607	RhsK/J
S-loop 48	690300	690804	503 ECs0620-ECs0621	
S-loop 49	812814	814242	1,427	
S-loop 51	824488	829848	5,359 ECs0741-ECs0744	Fimbrial biosynthesis locus 4
S-loop 52	841618	855497	13,878 ECs0755-ECs0767	
S-loop 57	954607	957415	2,807 ECs0876	
S-loop 59	1000996	1001993	996 ECs0914	
S-loop 60	1024922	1028441	3,518 ECs0940-ECs0942	Putative transporter
S-loop 61	1033040	1035649	2,608 ECs0949-ECs0951	
S-loop 70	1321634	1324179	2,544 ECs1262	
S-loop 71	1337196	1368924	31,727 ECs1272-ECs1288	Fimbrial biosynthesis locus 6 and putative fatty acid biosynthesis genes
S-loop 88	1898538	1899204	665 ECs1906	
S-loop 89	1899341	1900235	893 ECs1907-ECs1908	
S-loop 95	1983605	1988511	4,905 ECs2005-ECs2007	Putative transporter
S-loop 98	2002853	2004673	1,819 ECs2016-ECs2019	
S-loop 101	2064664	2065318	653 ECs2073-ECs2074	
S-loop 102	2065631	2067177	1,545 ECs2075-ECs2076	IpaH-like protein and putative outer membrane protein
S-loop 107	2146931	2148439	1,507 ECs2142-ECs2143	Putative transcriptional regulator, etc.
S-loop 115	2450242	2451084	841 ECs2473	Hypothetical lipoprotein
S-loop 120	2624612	2625565	952 ECs2662	
S-loop 128	2735503	2737954	2,450 ECs2789-ECs2791	
S-loop 132	2773357	2787539	14,181 ECs2831-ECs2845	O antigen biosynthesis
S-loop 133	2788491	2789868	1,376 ECs2847	Putative UDP-galactose 4-epimerase
S-loop 135	2814861	2815608	746 ECs2869-ECs2870	
S-loop 138	2858968	2861261	2,292 ECs2908-ECs2910	Putative outer membrane protein, etc.
S-loop 141	2863192	2864164	971 ECs2914-ECs2915	A part of fimbrial biosynthesis locus 9
S-loop 142	2867206	2867782	575 ECs2916-ECs2917	A part of fimbrial biosynthesis locus 9
S-loop 150	2883045	2883981	935	
S-loop 156	2959357	2965543	6,185 ECs3027-ECs3032	Putative salicylate degradation system
S-loop 160	3075435	3077315	1,879 ECs3121-ECs3122	
S-loop 161	3077557	3079271	1,713 ECs3123	
S-loop 166	3175533	3178040	2,506 ECs3216-ECs3220	A part of fimbrial biosynthesis locus 10
S-loop 168	3180470	3181231	760 ECs3221	A part of fimbrial biosynthesis locus 10
S-loop 170	3182200	3182723	522 ECs3222	A part of fimbrial biosynthesis locus 10

S-loop 173	3245984	3247733	1,748	ECs3276-ECs3277	IS609
S-loop 177	3361137	3366004	4,866	ECs3381-ECs3384	Putative anaerobic dimethyl sulfoxide reductase, etc.
S-loop 188	3522675	3524758	2,082	ECs3534-ECs3535	Putative transcriptional regulator, etc.
S-loop 192	3598251	3607431	9,179	ECs3608-ECs3616	
S-loop 194	3625316	3628911	3,594	ECs3634-ECs3638	
S-loop 202	3811381	3814817	3,435	ECs3799-ECs3804	Putative ABC transporter
S-loop 203	3824485	3825421	935	ECs3813	Hypothetical lipoprotein
S-loop 206	3912297	3919602	7,304	ECs3912-ECs3917	Putative ferrichrome ABC transporter
S-loop 211	4020311	4022617	2,305	ECs4013-ECs4014	PTS system for <i>N</i> -acetyl-galactosamine and galactosamine
S-loop 215	4188466	4189183	716	ECs4187-ECs4188	Leader peptidase HopD, etc.
S-loop 218	4267902	4268792	889	ECs4261-ECs4262	
S-loop 219	4276740	4279593	2,852	ECs4270-ECs4272	Putative ABC transporter
S-loop 220	4291463	4294975	3,511	ECs4280-ECs4284	Putative DNA helicases, etc.
S-loop 221	4300881	4302699	1,817	ECs4291-ECs4292	
S-loop 223	4310167	4311209	1,041	ECs4300	
S-loop 224	4316855	4317799	943	ECs4307-ECs4308	
S-loop 225	4332161	4347543	15,381	ECs4324-ECs4341	Putative fatty acid biosynthesis genes
S-loop 226	4353594	4360156	6,561	ECs4349-ECs4357	Putative PTS system, etc.
S-loop 231	4388327	4397385	9,057	ECs4379-ECs4387	Hem transport system
S-loop 232	4452481	4458385	5,903	ECs4426-ECs4431	Fimbrial biosynthesis locus 12
S-loop 235	4488012	4492034	4,021	ECs4457-ECs4459	Putative transcriptional regulator, etc.
S-loop 237	4497957	4499326	1,368	ECs4465	
S-loop 238	4517840	4523932	6,091	ECs4479-4480	
S-loop 239	4543692	4551792	8,099	ECs4500-4504	<i>rfa</i> locus
S-loop 243	4571151	4572007	855	ECs4528	
S-loop 246	4628167	4629008	840	ECs4597-ECs4598	
S-loop 247	4637919	4641277	3,357	ECs4607-ECs4610	
S-loop 248	4651870	4652379	508	ECs4622	
S-loop 249	4674425	4677053	2,627	ECs4642-ECs4643	
S-loop 252	4686175	4693574	7,398	ECs4653-ECs4659	
S-loop 253	4698338	4705282	6,943	ECs4665-ECs4670	Fimbrial biosynthesis locus 13
S-loop 262	4865138	4866128	989	ECs4801	
S-loop 264	4875484	4877532	2,047	ECs4812-ECs4814	
S-loop 267	4918811	4920339	1,527	ECs4854-ECs4855	
S-loop 268	4928764	4934291	5,526	ECs4864-ECs4865	RhsF
S-loop 269	4967546	4970248	2,701	ECs4892-ECs4893	Putative amino acid amidohydrolase and transporter
S-loop 276	5159503	5168718	9,214	ECs5067-ECs5074	Putative sugar ABC transporter
S-loop 278	5281714	5283463	1,748	ECs5182-ECs5183	IS609
S-loop 290	5423936	5426840	2,903	ECs5295-ECs5296	
S-loop 292	5435059	5437298	2,238	ECs5304-ECs5305	
S-loop 293	5437753	5445572	7,818	ECs5306-ECs5310	Type I restriction-modification system
S-loop 294	5449126	5449949	822	ECs5314	

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