

Supplementary Table 3 Oac, OacB and OacC homologs identified in Sequenced *S. flexneri* strain Sf301

Oac protein	Gene name	Homologous			Encoding proteins or function
		Identity (%)	Similarity (%)	Alignment length (bp)	
Oac	SF0315	25.54	40.22	184	OacB, O-acyltransferase mediates the 3/4-O-acetylation on RhaIII
	SF1489	24.14	37.93	145	CelB, N,N'-diacetylchitobiose-specific PTS system transporter subunit IIC
	SF1720	22.22	40.74	135	Putative transport system permease protein
	SF1014	21.31	36.07	122	putative synthetase
	SF1644	21.05	41.23	114	7-alpha-hydroxysteroid dehydrogenase
	SF1193	20.75	41.51	106	Putative iron compound ABC transporter permease protein
	SF0748	25.74	40.59	101	ATP-dependent DNA helicase DinG
	SF1119	30.61	43.88	98	YcfT, hypothetical protein
	SF0972	26.8	42.27	97	YccA, hypothetical protein
	SF1561	30.21	47.92	96	YdeD, O-acetylserine/cysteine export protein
	SF0742	25.56	41.11	90	YbhR, hypothetical protein
OacB	SF1566	26	42	150	YdeA, sugar efflux transporter
	SF0628	22.95	41.8	122	GltK, glutamate/aspartate transport system permease
	SF1498	22.64	45.28	106	YdjO, hypothetical protein
	SF1009	23.53	39.22	102	YcdG, putative transport protein
	SF0002	21.43	43.88	98	ThrA, bifunctional aspartokinase I/homeserine dehydrogenase
	SF1318	25.77	44.33	97	YcjP, putative transport system permease protein
	SF1043	22.34	42.55	94	MdoC, glucans biosynthesis protein
	SF1011	26.09	41.3	92	Hypothetical protein
	SF0656	25.27	45.05	91	CcrB, camphor resistance protein
OacC	SF0315	72.18	85.56	381	OacB, O-acyltransferase mediates the 3/4-O-acetylation on RhaIII of O-antigen
	SF1569	22.08	38.96	154	YneH, glutaminase
	SF1175	22.02	42.2	109	NhaB, sodium/proton antiporter
	SF0309	27.08	45.83	96	Hypothetical protein
	SF0810	27.08	42.71	96	PotH, putrescine transporter subunit: membrane component of ABC superfamily
	SF1043	21.11	43.33	90	MdoC, glucans biosynthesis protein