S. aureus COL Locus	Gene	t0 v t101	+0 v +401	t10 v t401	expr.²	SigB <sup>3</sup>	linoleic acid	functional gene annotation	cellular role category
SACOL0247	IrgA	8.64	-1.04	-8.99	C1	Jigo	Illioieic acid	holin-like protein LrgA	Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan
SACOL0248	IrgB	14.03	1.45	-9.69	C1		•	IreB protein	Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan
SACOL0740	-	2.65	-1.24	-3.30	C1	O <sub>B</sub>	<b>†</b>	decarboxylase family protein	Unknown function: Enzymes of unknown specificity
SACOL0741		3.18	1.30	-2.45	C1	O <sup>th</sup>	i i	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0742	-	3.43	1.29	-2.66	C1	O <sub>B</sub>		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0866	-	5.43	1.98	-2.74	C1			hypothetical protein	
SACOL1074	purK	2.31	-1.34	-3.09	C1			phosphoribosylaminoimidazole carboxylase, ATPase subunit	Purines, pyrimidines, nucleosides, and nucleotides: Purine ribonucleotide biosynthesis
SACOL1076	purS	2.22	-1.13	-2.50	C1			phosphoribosylformylglycinamidine synthase, PurS protein	Purines, pyrimidines, nucleosides, and nucleotides: Purine ribonucleotide biosynthesis
SACOL1077	purQ	2.54	-1.86	-4.71	C1			phosphoribosylformylglycinamidine synthase I	Purines, pyrimidines, nucleosides, and nucleotides: Purine ribonucleotide biosynthesis
SACOL1078	purL	2.10	-1.62	-3.41	C1			phosphoribosylformylglycinamidine synthase II	Purines, pyrimidines, nucleosides, and nucleotides: Purine ribonucleotide biosynthesis
SACOL1080	purM	3.11	1.47	-2.12	C1	_		phosphoribosylformylglycinamidine cyclo-ligase	Purines, pyrimidines, nucleosides, and nucleotides: Purine ribonucleotide biosynthesis
SACOL1090	-	2.35	-1.47	-3.45	C1	O <sub>B</sub>	t	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1226	-	2.86	-1.06	-3.03	C1			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1236 SACOL1373	-	1.79 3.75	-1.54 1.47	-2.76 -2.55	C1 C1			thiamine pyrophosphokinase	Biosynthesis of cofactors, prosthetic groups, and carriers: Thiamine
SACOL1373 SACOL1398	-	1.89	-1.41	-2.55 - <b>2.67</b>	C1			conserved hypothetical protein transcriptional regulator, putative	Hypothetical proteins: Conserved Regulatory functions: Other
SACOL1602	-	2.25	-1.41	-3.63	C1		+	metallo-beta-lactamase family protein	Unknown function: Enzymes of unknown specificity
SACOL1662 SACOL1647		1.96	-1.46	-2.86	C1		'	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1735	coaE	2.09	-1.41	-2.95	C1			dephospho-CoA kinase	Biosynthesis of cofactors, prosthetic groups, and carriers: Pantothenate and coenzyme A
SACOL1745	pyk	2.67	-1.66	-4.42	C1			pyruvate kinase	Energy metabolism: Glycolysis/gluconeogenesis
SACOL1789		2.23	-1.34	-3.00	C1	O <sup>B</sup>		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1895		3.11	1.17	-2.66	C1			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1897		2.39	-1.06	-2.55	C1			protein export protein PrsA, putative	Protein fate: Protein and peptide secretion and trafficking
SACOL1898	cbf1	2.51	1.19	-2.11	C1			cmp-binding-factor 1	Mobile and extrachromosomal element functions: Plasmid functions
SACOL1912	-	2.65	1.45	-1.82	C1	O <sub>B</sub>		glucosamine-6-phosphate isomerase, putative	Central intermediary metabolism: Amino sugars
SACOL1933	-	4.68	1.76	-2.66	C1	O <sup>th</sup>	t	ThiJ/PfpI family protein	Unknown function: General
SACOL1934	-	3.37	1.50	-2.24	C1			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1941	yihY	2.95	-1.13	-3.34	C1	O <sub>B</sub>		YihY family protein	Unknown function: General
SACOL2091	fabZ	4.02	-1.02	-4.08	C1	O <sub>B</sub>	t	beta-hydroxyacyl-(acyl-carrier-protein) dehydratase FabZ	Fatty acid and phospholipid metabolism: Biosynthesis
SACOL2132	-	2.50	1.46	-1.71	C1	O <sub>B</sub>		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2136	-	4.11	1.38	-2.97	C1	O <sub>B</sub>	T T	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2174	-	5.38	1.74	-3.09	C1	O <sub>B</sub>	t	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2175	-	5.70	1.29	-4.41	C1	O <sub>B</sub>	t	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2242	-	2.32	-1.10	-2.55	C1			xanthine/uracil permease family protein	Transport and binding proteins: Nucleosides, purines and pyrimidines
SACOL2300	-	3.13	1.09	-2.87	C1	ون		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2301	-	3.45	1.47	-2.35	C1	O <sub>B</sub>	Ţ	formate dehydrogenase, alpha subunit, putative	Energy metabolism: Anaerobic
SACOL2302	-	2.51	-1.19	-2.98	C1	هي	Ţ	transcriptional regulator, putative	Regulatory functions: Other
SACOL2321 SACOL2327	- hutG	3.42 2.57	1.58 -1.06	-2.16 -2.74	C1 C1		Ţ	oxidoreductase, short chain dehydrogenase/reductase family formiminoglutamase	Unknown function: Enzymes of unknown specificity
				-2.74		O <sub>B</sub>	Т		Energy metabolism: Amino acids and amines
SACOL2329 SACOL2379	rpiA	2.76 3.36	-1.40 1.32	-3.86 -2.55	C1 C1	OB.		ribose 5-phosphate isomerase conserved hypothetical protein	Energy metabolism: Pentose phosphate pathway  Hypothetical proteins: Conserved
SACOL2379 SACOL2394	narH	3.26	1.32	-2.55 -2.73	C1	0-	Ţ	respiratory nitrate reductase, beta subunit	Energy metabolism: Anaerobic; Energy metabolism: Electron transport; Central intermediary metabolism: Nitrogen metabolism
SACOL2394 SACOL2395	narG	3.49	1.17	-2.73	C1			respiratory nitrate reductase, beta subunit	Energy metabolism: Anaerobic; Energy metabolism: Electron transport; Central intermediary metabolism: Nitrogen metabolism: Electron transport; Central intermediary metabolism: Nitrogen metabolism:
SACOL2563	clpL	2.53	1.08	-2.34	C1	O <sup>B</sup>		ATP-dependent Clp protease, putative	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL2503	CIPL	1.88	-1.37	-2.59	C1	O <sub>0</sub>	' i	glycosyl transferase, group 2 family protein	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides
SACOL2576		2.89	1.14	-2.53	C1	ەق خ	<b>.</b>	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL 2597		3.50	1.39	-2.52	C1	o,	<b>.</b>	hydrolase, alpha/beta hydrolase fold family	Unknown function: Enzymes of unknown specificity
SACOL2609		2.31	-1.79	-4.14	C1	•		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2621		2.94	1.03	-2.86	C1			hypothetical protein	-
SACOL2625		3.33	1.18	-2.83	C1	O <sup>30</sup>	t	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2681		2.90	1.54	-1.88	C1	O <sub>B</sub>	i i	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2717	-	2.83	-1.21	-3.42	C1			hypothetical protein	
SACOL0012	-	1.06	2.84	2.69	C2			homoserine O-acetyltransferase, putative	Amino acid biosynthesis: Aspartate family
SACOL0184	-	1.25	4.03	3.23	C2			peptide ABC transporter, ATP-binding protein	Transport and binding proteins: Amino acids, peptides and amines
SACOL0263	lytM	1.12	3.86	3.43	C2			peptidoglycan hydrolase	Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan
SACOL0428	metE	1.18	2.80	2.38	C2			5-methyltetrahydropteroyltriglutamatehomocysteine methyltransferase	Amino acid biosynthesis: Aspartate family
SACOL0504	-	-1.19	4.44	5.29	C2			ABC transporter, ATP-binding protein	Transport and binding proteins: Unknown substrate
SACOL0505	-	1.33	6.67	5.00	C2			ABC transporter, permease protein	Transport and binding proteins: Unknown substrate
SACOL0514	gltB	-1.03	3.48 3.87	3.57	C2			glutamate synthase, large subunit	Amino acid biosynthesis: Glutamate family
SACOL0515	gltD	1.21		3.19 2.74	C2			glutamate synthase, small subunit	Amino acid biosynthesis: Glutamate family
SACOL0517 SACOL0641	treC	1.18	3.23 2.62	2.74	C2 C2		+	alpha,alpha-phosphotrehalase conserved hypothetical protein	Energy metabolism: Biosynthesis and degradation of polysaccharides  Hypothetical proteins: Conserved
SACOL0641 SACOL0712	-	-1.11	3.11	3.60	C2		T	lipase/esterase	Fatty acid and phospholipid metabolism: Degradation
SACOL0770		1.21	4.81	3.96	C2			radical activating enzyme family protein	Unknown function: Enzymes of unknown specificity
SACOL0771		1.30	5.31	4.09	C2		t	6-pyruvoyl tetrahydrobiopterin synthase, putative	Biosynthesis of cofactors, prosthetic groups, and carriers: Other
SACOL0772		1.01	4.29	4.25	C2			exsB protein	Unknown function: General
SACOL0802		-1.17	3.77	4.43	C2		1	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0813		1.26	3.07	2.43	C2		_	comf operon protein 1, putative	Cellular processes: DNA transformation
SACOL0845	est	1.26	3.31	2.63	C2			carboxylesterase	Cellular processes: Detoxification; Fatty acid and phospholipid metabolism: Degradation
SACOL0870	-	1.20	2.66	2.22	C2			LysE/YggA family protein	Unknown function: General
SACOL0882		-1.21	4.53	5.49	C2			ABC transporter, ATP-binding protein	Transport and binding proteins: Unknown substrate
SACOL0883		-1.06	5.19	5.50	C2			ABC transporter, permease protein	Transport and binding proteins: Unknown substrate
SACOL0884		1.10	4.39	3.98	C2			ABC transporter, substrate-binding protein	Transport and binding proteins: Unknown substrate
SACOL1032	-	-1.15	3.87	4.44	C2			ComK family protein	Unknown function: General
SACOL1268	gid	1.09	2.60	2.39	C2		t	Gid protein	Unknown function: General
SACOL1375	-	1.18	3.67	3.11	C2			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1414	-	1.19	3.08	2.59	C2			peptide ABC transporter, ATP-binding protein	Transport and binding proteins: Amino acids, peptides and amines
SACOL1415	-	1.09	3.06	2.80	C2			peptide ABC transporter, ATP-binding protein	Transport and binding proteins: Amino acids, peptides and amines
SACOL1416	-	1.00	4.13	4.12	C2			peptide ABC transporter, permease protein, putative	Transport and binding proteins: Amino acids, peptides and amines
SACOL1417	-	1.26	5.78	4.60	C2			peptide ABC transporter, permease protein	Transport and binding proteins: Amino acids, peptides and amines
SACOL1442 SACOL1468	-	1.14 1.24	2.66	2.33 2.33	C2 C2			IS1272-related, transposase, degenerate	Mobile and extrachromosomal element functions: Transposon functions; Disrupted reading frame
SACOL1468 SACOL1490	nk-2	1.24 1.17	2.89	2.33	C2 C2			membrane protein, putative penicillin-binding protein 2	Cell envelope: Other  Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan
SACOL1490 SACOL1541	pbp2	1.17 1.34	2.59 4.01	2.21 3.00	C2 C2		1	penicillin-binding protein 2 transcriptional regulator. Fur family	Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan  Transport and binding proteins: Cations and iron carrying compounds; Regulatory functions: DNA interactions
SACOL1541 SACOL1724	-	1.14	4.01 3.14	3.00 2.75	C2		•	transcriptional regulator, Fur family MutT/nudix family protein	DNA metabolism: DNA replication, recombination, and repair
3,0021,24			3.24	2.75	-			,, protein	

SACOL1830		-1.13	2.41	2.73	C2			abortive infection protein family	Unknown function: General
SACOL1870		1.02	3.18	3.12	C2			hypothetical protein	-
SACOL1880	lukD	1.15	2.78	2.42	C2			leukotoxin LukD	Cellular processes: Toxin production and resistance; Cellular processes: Pathogenesis
SACOL1881	lukE	-1.17	2.82	3.29	C2			leukotoxin LukE	Cellular processes: Toxin production and resistance; Cellular processes: Pathogenesis
SACOL1954	-	1.07	3.24	3.04	C2			exonuclease	Unknown function: Enzymes of unknown specificity
SACOL2020		-1.05	3.47	3.66	C2			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2033		-1.03	4.20	4.32	C2			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2034		-1.01	4.54	4.60	C2			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2066 SACOL2081	kdpC	1.24 -1.03	3.59 4.59	2.89 4.75	C2 C2			K+-transporting ATPase, C subunit hypothetical protein	Transport and binding proteins: Cations and iron carrying compounds
SACOL2081 SACOL2322	-	1.28	3.49	2.72	C2			peptidase, M20/M25/M40 family	- Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL2322 SACOL2458		1.06	4.25	3.99	C2			amino acid permease	rroten rate. Degradation of proteins, peptides, and gyrope-pudes Transport and binding proteins: Amino acids, peptides and amines
SACOL2456		1.16	5.43	4.69	C2			hypothetical protein	ransport and uniting proteins. Armito acids, peptides and amines
SACOL2483		1.26	3.07	2.43	C2			transporter, putative	Transport and binding proteins: Unknown substrate
SACOL2544	sdaAA	1.11	4.00	3.62	C2			L-serine dehydratase, iron-sulfur-dependent, alpha subunit	Energy metabolism: Amino acids and amines
SACOL2545	sdaAB	1.07	6.96	6.53	C2			L-serine dehydratase, iron-sulfur-dependent, beta subunit	Energy metabolism: Amino acids and amines
SACOL2546	-	1.06	6.29	5.91	C2			perfringolysin O regulator protein, putative	Regulatory functions: Other
SACOL2588	-	1.03	2.90	2.82	C2			hypothetical protein	
SACOL2615	panB	1.03	2.97	2.88	C2			3-methyl-2-oxobutanoate hydroxymethyltransferase	Biosynthesis of cofactors, prosthetic groups, and carriers: Pantothenate and coenzyme A
SACOL0007	-	1.55	2.74	1.76	C3			YjeF-related protein	Unknown function: General
SACOL0061	-	1.55	2.61	1.68	C3			conserved domain protein	Hypothetical proteins: Domain
SACOL0129	-	1.36	2.79	2.05	C3			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0178	-	1.78	2.74	1.54	C3			PTS system, IIBC components	Transport and binding proteins: Carbohydrates, organic alcohols, and acids; Signal transduction: PTS
SACOL0210	-	1.57	3.08	1.97	C3			hypothetical protein	•
SACOL0212	-	1.61	3.13	1.95	C3			3-hydroxyacyl-CoA dehydrogenase protein	Fatty acid and phospholipid metabolism: Degradation
SACOL0231	-	1.62	3.27	2.02	C3			hypothetical protein	
SACOL0308	-	1.44	2.71	1.89	C3			carbohydrate kinase, PfkB family	Energy metabolism: Sugars
SACOL0309	-		3.82	2.33	C3			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0310 SACOL0324	-	2.29 1.51	4.54 2.74	1.99 1.81	C3			nucleoside permease NupC, putative hypothetical protein	ransport and binding proteins: Nucleosides, purines and pyrimidines
SACOL0324 SACOL0333	-	1.60	2.50	1.56	C3			conserved hypothetical protein	- Hypothetical proteins: Conserved
SACOL0333		1.57	2.56	1.63	C3			conserved hypothetical protein	rypottetical proteins: Conserved Hypothetical proteins: Conserved
SACOL0334 SACOL0413		1.57	2.65	1.68	C3			ribosomal-protein-serine acetyltransferase, putative	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL0414	-	1.57	3.53	2.25	C3			lipoprotein, putative	Cell envelope: Other
SACOL0415	-	1.31	2.75	2.10	C3			Dyp-type peroxidase family protein	Unknown function: Enzymes of unknown specificity
SACOL0442		1.64	2.59	1.58	C3			staphylococcal enterotoxin, putative	Cellular processes: Toxin production and resistance
SACOL0462		1.47	2.62	1.78	C3			hypothetical protein	
SACOL0754	norA	1.64	3.62	2.20	C3			multi drug resistance protein (norA)	Cellular processes: Toxin production and resistance; Transport and binding proteins: Other
SACOL0757	-	1.59	3.79	2.38	C3			transcriptional regulator, DeoR family	Regulatory functions: DNA interactions
SACOL0758	fruK	1.69	4.58	2.70	C3		Į.	1-phosphofructokinase	Energy metabolism: Glycolysis/gluconeogenesis
SACOL0804	-	2.05	3.45	1.69	C3			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0814	-	1.43	2.95	2.06	C3			competence protein F	Cellular processes: DNA transformation
SACOL0820	-	1.31	2.68	2.05	C3			LysM domain protein	Unknown function: General
SACOL0846	-	2.07	4.05	1.96	C3		Ť	exoribonuclease, VacB/RNase II family	Transcription: Degradation of RNA
SACOL0847	smpB	2.09	4.17	2.00	C3		Ţ	SsrA-binding protein	Protein synthesis: Other
SACOL0855	-	1.96	4.32	2.20	C3		Ť	acetyltransferase, GNAT family	Unknown function: Enzymes of unknown specificity
SACOL0865 SACOL0998	-	1.68 1.51	2.79 2.89	1.66 1.91	C3			hypothetical protein	
	-							oligopeptide ABC transporter, ATP-binding protein	Transport and binding proteins: Amino acids, peptides and amines
SACOL1107 SACOL1182	arcC1	1.81 1.74	3.22 2.62	1.78 1.51	C3		1	transcriptional regulator, Cro/CI family carbamate kinase	Regulatory functions: DNA interactions  Energy metabolism: Amino acids and amines
SACOL1182 SACOL1238	rpmB	1.74	2.62	1.64	C3		٠	ribosomal protein L28	Energy metapoism: Amino acus and amines Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL1238 SACOL1362	hom	1.40	4.65	3.32	C3			homoserine dehydrogenase	ricuen synthesis. Aspartate family Amino acid biosynthesis: Aspartate family
SACOL1363	thrC	1.33	3.44	2.59	C3			threonine synthase	Amino acid biosynthesis: Aspartate family Amino acid biosynthesis: Aspartate family
SACOL 1400		1.32	2.94	2.22	C3			ImpB/MucB/SamB family protein	DNA metabolism: DNA replication, recombination, and repair
SACOL1488	-	1.35	2.88	2.13	C3			hypothetical protein	-
SACOL1489	recU	1.57	3.60	2.29	C3			recombination protein U	DNA metabolism: DNA replication, recombination, and repair
SACOL1525	fer	1.54	4.66	3.03	C3			ferredoxin	Energy metabolism: Electron transport
SACOL1540	xerD	1.39	4.28	3.08	C3			tyrosine recombinase XerD	DNA metabolism: DNA replication, recombination, and repair
SACOL1696	ruvB	1.52	2.55	1.68	C3			Holliday junction DNA helicase RuvB	DNA metabolism: DNA replication, recombination, and repair
SACOL1698	-	1.96	3.08	1.57	C3			ACT domain protein	Unknown function: General
SACOL1699	-	1.83	2.82	1.54	C3			GTP-binding protein, GTP1/OBG family	Unknown function: General
SACOL1702	rpIU	1.70	2.76	1.62	C3			ribosomal protein L21	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL1723	-	1.54	3.28	2.13	C3			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1822	arsR	1.45	4.93	3.41	C3			arsenical resistance operon repressor	Cellular processes: Detoxification; Regulatory functions: DNA interactions
SACOL1823	arsB	1.70	4.60	2.71	C3			arsenical pump membrane protein	Cellular processes: Detoxification; Transport and binding proteins: Other
SACOL1824	arsC	1.51	3.27	2.17	C3			arsenate reductase (thioredoxin)	Cellular processes: Detoxification
SACOL1825	-	1.58	2.99	1.89	C3	_		N-acetylmuramoyl-L-alanine amidase, family 4	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides
SACOL2088	sceD	2.38	11.30	4.75	C3	O <sup>B</sup>		sceD protein, putative	Unknown function: General
SACOL2215 SACOL2256	rpsM	1.37 <b>1.77</b>	2.73 2.78	1.99 1.58	C3		т	ribosomal protein S13/S18	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL2256 SACOL2291	-	1.77	3.57	2.24	C3	O <sup>th</sup>		transcriptional regulator, MarR family staphyloxanthin biosynthesis protein	Cellular processes: Toxin production and resistance; Regulatory functions: DNA interactions Cellular processes; Pathogenesis
SACOL2291 SACOL2353	tcaR	1.59	5.71	2.24	C3	0-	t	transcriptional regulator TcaR	Cellular processes: Paringenesis Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan; Toxin production and resistance; Regulatory functions: DNA interactions
SACOL2333	ttan	1.28	2.78	2.33	C3		'	cation efflux family protein	Cent environces and usergadation of mineric sacculos and peptidogrean, toxin production and resistance, negotatory functions. DAN interfactions Transport and binding proteins: Cations and iron carrying compounds
SACOL2410		1.39	3.41	2.17	C3			amino acid permease	Transport and binding proteins: Carious and not next ying compounds  Transport and binding proteins: Amino acids, peptides and amines
SACOL2441 SACOL2464		2.34	5.64	2.44	C3			addiction module toxin, Txe/YoeB family	ransport and ununing proteins. Animo actus, perputera and animes Cellular processes: Toxin production and resistance; Mobile and extrachromosomal element functions: Other
SACOL2465		2.28	4.96	2.17	C3			addiction module antitoxin, Axe family	Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction of the Cellular processes: Toxin production and resistance; Mobile and extraction on the Cellular processes: Toxin production and resistance; Mobile and extraction of the Cellular processes: Toxin production and resistance; Mobile and extraction of the Cellular processes: Toxin production and resistance; Mobile and extraction of the Cellular processes: Toxin production and resistance; Mobile and extraction of the Cellular processes: Toxin production and resistance; Mobile and Extraction of the Cellular processes: Toxin production and resistance; Mobile and Resistance; M
SACOL2614	panC	1.39	3.09	2.22	C3			pantoatebeta-alanine ligase	Biosynthesis of cofactors, prosthetic groups, and carriers: Pantothenate and coerzyme A
SACOL2632	cudT	1.32	2.85	2.15	C3			osmoprotectant transporter, BCCT family	Transport and binding proteins: Amino acids, peptides and amines
SACOL2710		1.37	2.72	1.99	C3			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2713	-	2.39	4.93	2.06	С3			rhodanese-like domain protein	Unknown function: General
SACOL2714	рср	1.33	3.61	2.72	С3			pyrrolidone-carboxylate peptidase	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL0008	hutH	3.87	4.16	1.08	C4			histidine ammonia-lyase	Energy metabolism: Amino acids and amines
SACOL0065	-	3.41	2.83	-1.20	C4			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0073	-	2.41	2.59	1.08	C4			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0122	-	2.10	2.61	1.24	C4	_	Ť	tetracycline resistance protein, putative	Cellular processes: Toxin production and resistance; Transport and binding proteins: Other
SACOL0136	cap5A	3.80	2.67	-1.43	C4	O <sup>B</sup>		capsular polysaccharide biosynthesis protein Cap5A	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides; Transport and binding proteins: Carbohydrates, organic alcohols, and acids

SACOL0137	cap5B	3.01	2.30	-1.31	C4	٠,		capsular polysaccharide biosynthesis protein Cap5B	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides
SACOL0138	cap5C	3.37	1.99	-1.69	C4	O <sub>B</sub>		capsular polysaccharide biosynthesis protein Cap5C	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides
SACOL0264	-	3.93	4.44	1.13	C4			ABC transporter, ATP-binding protein	Transport and binding proteins: Unknown substrate
SACOL0265	-	3.13	4.97	1.59	C4			hypothetical protein	· Control of the cont
SACOL0317	-	2.37	3.79	1.60	C4			lipase precursor, interruption-N	Fatty acid and phospholipid metabolism: Degradation; Disrupted reading frame
SACOL0342	-	1.95	2.73	1.40	C4			hypothetical protein	
SACOL0343	-	1.98	2.61	1.32	C4	_		prophage L54a, replicative DNA helicase, putative	DNA metabolism: DNA replication, recombination, and repair; Mobile and extrachromosomal element functions: Prophage functions
SACOL0399		4.30	1.99	-2.16	C4	O,	Ť	oxidoreductase, putative	Unknown function: Enzymes of unknown specificity
SACOL0437	rpsF	2.12	2.67	1.26	C4			ribosomal protein S6	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL0438	ssb2	2.05	2.75	1.34	C4	_	ţ	single-stranded DNA-binding protein	DNA metabolism: DNA replication, recombination, and repair
SACOL0446	-	2.54	1.79	-1.42	C4	O <sub>B</sub>	Ť	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0447	-	2.59	2.65	1.02	C4			phosphoglycerate mutase family protein	Unknown function: General
SACOL0585	rplJ	4.41	6.46	1.46	C4			ribosomal protein L10	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL0620	proP	2.74	3.43	1.25	C4			osmoprotectant proline transporter	Transport and binding proteins: Amino acids, peptides and amines
SACOL0630	-	2.91	1.93	-1.51	C4	OB .	Ť	amino acid permease	Transport and binding proteins: Amino acids, peptides and amines
SACOL0671	-	3.86	2.25	-1.72	C4	O <sub>B</sub>	t	hydrolase, alpha/beta hydrolase fold family	Unknown function: Enzymes of unknown specificity
SACOL0673	-	3.11	4.24	1.36	C4			hypothetical protein	·
SACOL0678	-	4.16	3.04	-1.37	C4	O <sub>B</sub>		integrase/recombinase, phage integrase family	DNA metabolism: DNA replication, recombination, and repair
SACOL0679	-	3.11	2.78	-1.12	C4	O <sub>B</sub>		Na+/H+ antiporter, MnhA component, putative	Transport and binding proteins: Cations and iron carrying compounds
SACOL0680	-	2.95	3.08	1.04	C4	O <sub>B</sub>		Na+/H+ antiporter, MnhB component, putative	Transport and binding proteins: Cations and iron carrying compounds
SACOL0681	-	3.33	3.50	1.05	C4	O <sub>B</sub>		Na+/H+ antiporter, MnhC component, putative	Transport and binding proteins: Cations and iron carrying compounds
SACOL0682	-	3.03	3.13	1.03	C4	OB .		Na+/H+ antiporter, MnhD component, putative	Transport and binding proteins: Cations and iron carrying compounds
SACOL0684	-	2.62	2.84	1.08	C4	O <sub>B</sub>		Na+/H+ antiporter, MnhE component, putative	Transport and binding proteins: Cations and iron carrying compounds
SACOL0685	-	2.46	2.87	1.17	C4	O <sub>B</sub>		Na+/H+ antiporter, MnhF component, putative	Transport and binding proteins: Cations and iron carrying compounds
SACOL0686	-	2.42	2.62	1.08	C4	OB .		Na+/H+ antiporter, MnhG component, putative	Transport and binding proteins: Cations and iron carrying compounds
SACOL0756	-	2.70	4.93	1.83	C4			ebsC protein	Unknown function: General
SACOL0768	-	3.39	2.55	-1.33	C4		1	lipoprotein, putative	Hypothetical proteins: Conserved
SACOL0789	-	3.06	3.09	1.01	C4			GTP cyclohydrolase I family protein	Unknown function: Enzymes of unknown specificity
SACOL0790	-	1.77	2.51	1.41	C4			integral membrane domain protein	Unknown function: General
SACOL0854	-	3.56	5.14	1.44	C4		t	hypothetical protein	
SACOL0856	clfA	3.30	3.01	-1.09	C4	O <sub>B</sub>	÷	clumping factor A	Cellular processes: Pathogenesis
SACOL0871	-	3.28	6.21	1.89	C4		•	acetyltransferase, putative	Unknown function: Enzymes of unknown specificity
SACOL0872	-	3.61	3.26	-1.11	C4		+	OsmC/Ohr family protein	Unknown function: General
SACOL1033	-	3.28	4.19	1.28	C4		•	hypothetical protein	
SACOL1062	atl	3.94	4.05	1.03	C4		t	bifunctional autolysin	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides
SACOL1081	purN	2.91	1.70	-1.71	C4			phosphoribosylglycinamide formyltransferase	Purines, pyrimidines, nucleosides, and nucleotides; Purine ribonucleotide biosynthesis
SACOL1082	purH	2.52	1.68	-1.50	C4				Purines, pyrimidines, nucleosides, and nucleotides: Purine ribonucleotide biosynthesis
SACOL1108	puiii	2.53	3.76	1.49	C4			spermidine/putrescine ABC transporter, ATP-binding protein	Transport and binding proteins: Amino acids, peptides and amines
SACOLITOS SACOLITOS	-	2.82	4.07	1.45	C4			spermidine/putrescine ABC transporter, ATP-binding protein spermidine/putrescine ABC transporter, permease protein	Transport and binding proteins: Amino acids, peptides and amines Transport and binding proteins: Amino acids, peptides and amines
SACOL1109 SACOL1110		2.62	3.53	1.35	C4			spermidine/putrescine ABC transporter, permease protein	Transport and binding proteins: Amino acids, peptides and amines Transport and binding proteins: Amino acids, peptides and amines
SACOL1111		2.58	3.35	1.30	C4		t		Transport and binding proteins: Amino acids, peptides and amines Transport and binding proteins: Amino acids, peptides and amines
SACOL1111 SACOL1183		2.84	3.24	1.14	C4			membrane protein, putative	Tailsport and binding proteins. Annio acids, peptides and annies Cell envelope: Other
SACOL1183 SACOL1254	rpsP	3.84	3.34	-1.14	C4			ribosomal protein S16	Cen envelope. Other Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL1254 SACOL1255	rimM	3.51	3.99	1.14	C4			16S rRNA processing protein RimM	Protein synthesis, niusonina proteins, synthesis anu modification Transcription: RNA processine
		3.42	3.99	1.14	C4 C4				transcription: knw processing Protein synthesis: knW, and rRNA base modification
SACOL1256 SACOL1292	trmD	2.27	3.96 2.61		C4 C4			tRNA (guanine-N1)-methyltransferase	
	rpsO		1.95	1.15	C4 C4			ribosomal protein S15 GMP reductase	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL1371	guaC	4.01 2.78	1.66	-2.06 -1.68	C4 C4				Purines, pyrimidines, nucleosides, and nucleotides: Nucleotide and nucleoside interconversions
SACOL1418	-							conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1420	-	2.52	2.72	1.08	C4			phosphate transport system protein PhoU, putative	Transport and binding proteins: Anions
SACOL1421	-	2.86	2.75	-1.04	C4			phosphate ABC transporter, ATP-binding protein	Transport and binding proteins: Anions
SACOL1422	-	3.14	3.67	1.17	C4			phosphate ABC transporter, permease protein	Transport and binding proteins: Anions
SACOL1451	arIR	1.95	2.62	1.34	C4			DNA-binding response regulator ArIR	Cellular processes: Pathogenesis; Regulatory functions: DNA interactions; Regulatory functions: Protein interactions; Signal transduction: Two-component systems
SACOL1453	murG	2.88	1.80	-1.60	C4		Ť	UDP-N-acetylglucosamineN-acetylmuramyl-(pentapeptide) pyrophosphoryl-undec	
SACOL1550	-	3.69	2.66	-1.38	C4			transcriptional regulator, AraC family	Regulatory functions: DNA interactions
SACOL1576	-	2.05	2.64	1.28	C4		Ť	traG protein, putative	Mobile and extrachromosomal element functions: Plasmid functions
SACOL1577	-	2.15	2.71	1.27	C4			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1700	rpmA	2.07	2.92	1.41	C4			ribosomal protein L27	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL1701	-	2.14	3.02	1.41	C4			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1769	rpsD	3.54	2.57	-1.37	C4			ribosomal protein S4	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL1778	tyrS	2.70	1.59	-1.70	C4	_		tyrosyl-tRNA synthetase	Protein synthesis: tRNA aminoacylation
SACOL1871	epiG	3.69	1.91	-1.93	C4	o <sup>a</sup>		epidermin immunity protein F	Cellular processes: Toxin production and resistance
SACOL1872	epiE	3.32	2.24	-1.48	C4	O*		epidermin immunity protein F	Cellular processes: Toxin production and resistance
SACOL1882	-	2.02	2.59	1.28	C4			hypothetical protein	
SACOL1903	-	2.02	2.61	1.29	C4			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1935	-	2.56	2.32	-1.10	C4			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1939	-	2.50	2.44	-1.02	C4			phosphotyrosine protein phosphatase	Regulatory functions: Protein interactions
SACOL1952	-	3.71	6.34	1.71	C4		1	ferritins family protein	Transport and binding proteins: Cations and iron carrying compounds
SACOL2012	-	3.76	2.74	-1.38	C4			acetyltransferase, GNAT family	Unknown function: Enzymes of unknown specificity
SACOL2013	-	3.66	2.73	-1.34	C4			hypothetical protein	·
SACOL2019	-	3.81	3.27	-1.17	C4		į.	sdrH protein, putative	Cell envelope: Other
SACOL2067	kdpB	2.78	3.86	1.39	C4			K+-transporting ATPase, B subunit	Transport and binding proteins: Cations and iron carrying compounds
SACOL2131	-	3.48	6.44	1.85	C4			Dps family protein	Cellular processes: Adaptations to atypical conditions
SACOL2137	czrA	6.47	7.32	1.13	C4			transcriptional regulator CzrA	Regulatory functions: DNA interactions
SACOL2138	-	6.73	7.85	1.17	C4			cation efflux family protein	Transport and binding proteins: Cations and iron carrying compounds
SACOL2176	opuD2	3.84	2.21	-1.74	C4	O <sub>B</sub>	ţ	osmoprotectant transporter, BCCT family	Transport and binding proteins: Amino acids, peptides and amines
SACOL2197	-	9.21	11.87	1.29	C4	O,	Ť	surface protein, putative	Cell envelope: Other
SACOL2287	sarR	2.19	2.54	1.16	C4			staphylococcal accessory regulator R	Cellular processes: Toxin production and resistance; Regulatory functions: Other; Cellular processes: Pathogenesis; Regulatory functions: DNA interactions
SACOL2295	-	5.46	7.21	1.32	C4			staphyloxanthin biosynthesis protein, putative	Cellular processes: Pathogenesis
SACOL2398	nirB	2.76	2.37	-1.16	C4			nitrite reductase [NAD(P)H], large subunit	Central intermediary metabolism: Nitrogen metabolism
SACOL2434	-	3.04	3.17	1.04	C4	O <sub>B</sub>	t	membrane protein, putative	Cell envelope: Other
SACOL2477	-	2.58	1.79	-1.44	C4			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2481	-	3.38	2.24	-1.51	C4			hypothetical protein	
SACOL2510	-	1.91	2.77	1.45	C4			hypothetical protein	
SACOL2511	fnbA	2.97	5.44	1.83	C4			fibronectin-binding protein A	Cell envelope: Other; Cellular processes: Pathogenesis
SACOL2554	-	2.82	1.74	-1.62	C4	O <sup>a</sup>		membrane protein, putative	Cell envelope: Other
SACOL2557		4.33	2.64	-1.64	C4			conserved domain protein	Hypothetical proteins: Domain

SACOL2631	-	2.50	2.53	1.01	C4		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2735	-	4.15	4.75	1.14	C4		chromosome partioning protein, ParB family	Cellular processes: Cell division
SACOL2736	gidB	3.18	4.03	1.27	C4		glucose-inhibited division protein B	Unknown function: General
SACOL2737	gidA	3.57	4.33	1.21	C4		glucose inhibited division protein A	Unknown function: General
SACOL2738	trmE	3.56	4.00	1.13	C4		tRNA modification GTPase TrmE	Cellular processes: Detoxification
SACOL2739	rnpA	3.52	4.50	1.28	C4		ribonuclease P protein component	Transcription: RNA processing
SACOL2740	rpmH	2.44	2.85	1.17	C4		ribosomal protein L34	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL0024	sasH	-3.45	-4.89	-1.42	C5		5-nucleotidase family protein	Purines, pyrimidines, nucleosides, and nucleotides: Other
SACOL0032	maoC	-1.95	-2.49	-1.28	C5		MaoC domain protein	Unknown function: General
SACOL0052		-1.86	-2.63	-1.41	C5		glycosyl transferase, group 1 family protein	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides
SACOL0058		-2.78	-3.05	-1.10	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0099	sirA	-3.24	-2.47	1.31	C5		iron compound ABC transporter, iron compound-binding protein SirA	Cell envelope: Other; Transport and binding proteins: Cations and iron carrying compounds
SACOL0109	31171	-1.83	-2.60	-1.42	C5		hypothetical protein	careful appearance of the state
SACOL0109 SACOL0110		-2.20	-3.58	-1.63	C5		hypothetical protein	
SACOL0110 SACOL0192		-4.90	-3.19	1.54	C5		maltose ABC transporter, ATP-binding protein, putative	- Transport and binding proteins: Carbohydrates, organic alcohols, and acids
SACOL0192 SACOL0218	-	-2.46	-4.44	-1.80	C5			rransport and omining proteins: Carbonyorates, organic aiconois, and acids Hypothetical proteins: Conserved
	-						conserved hypothetical protein	
SACOL0236		-2.17	-3.44	-1.58	C5	_	4-diphosphocytidyl-2C-methyl-D-erythritol synthase, putative	Biosynthesis of cofactors, prosthetic groups, and carriers: Other
SACOL0246	lytR	-2.19	-2.86	-1.30	C5	+	response regulator LytR	Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan: Pathogenesis; Regulatory functions; Signal transduction: Two-component systems
SACOL0284	-	-3.08	-4.38	-1.42	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0297	-	-1.94	-2.67	-1.38	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0302	brnQ2	-3.68	-2.70	1.36	C5		branched-chain amino acid transport system II carrier protein	Transport and binding proteins: Amino acids, peptides and amines
SACOL0303	-	-5.88	-14.78	-2.51	C5		acid phosphatase5-nucleotidase, lipoprotein e(P4) family	Transport and binding proteins: Other; Biosynthesis of cofactors, prosthetic groups, and carriers: Pyridine nucleotides
SACOL0417	-	-4.54	-2.67	1.70	C5		MttB family protein	Protein fate: Protein and peptide secretion and trafficking
SACOL0418	-	-4.15	-2.46	1.69	C5		mttA/Hcf106 family protein	Protein fate: Protein and peptide secretion and trafficking
SACOL0419		-5.67	-2.79	2.03	C5		hypothetical protein	·
SACOL0512	-	-3.72	-2.12	1.75	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0553	tilS	-2.53	-1.74	1.46	C5		tRNA(IIe)-lysidine synthetase	Protein synthesis: tRNA and rRNA base modification
SACOL0566	nupC	-2.75	-3.30	-1.20	C5	1	nucleoside permease NupC	Transport and binding proteins: Nucleosides, purines and pyrimidines
SACOL0604		-2.74	-2.50	1.09	C5	i	deoxynucleoside kinase family protein	Purines, pyrimidines, nucleosides, and nucleotides: Nucleotide and nucleoside interconversions
SACOL0649		-2.65	-1.87	1.41	C5	•	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0650		-2.51	-1.84	1.36	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0651		-4.20	-2.18	1.93	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0653	_	-2.91	-1.70	1.71	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0688	_	-4.65	-9.59	-2.06	C5		ABC transporter, substrate-binding protein	Transport and binding proteins: Unknown substrate
		-7.06	-9.80					
SACOL0689 SACOL0690	-	-7.06	-9.80	-1.39 - <b>1.87</b>	C5 C5	*	ABC transporter, permease protein ABC transporter, ATP-binding protein	Transport and binding proteins: Unknown substrate Transport and binding proteins: Unknown substrate
		-2.91	-10.93	1.23	C5	*	UDP-N-acetyl-D-mannosamine transferase	
SACOL0693 SACOL0815	tagA	-3.34	-2.37 -6.41	-1.92	C5	•	ribosomal subunit interface protein	Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan Protein synthesis: Translation factors
SACOL0815 SACOL0860	nuc	-5.73	-0.41	-2.58	C5		thermonuclease precursor	Protein Synthesis: Iranslation factors DNA metabolism: Degradation of DNA
SACOL0887		-1.98	-3.12	-2.58 - <b>1.58</b>	C5	1	staphylococcal enterotoxin type I	UNA MELADOISMI: Degradation of UNA Cellular processes: Toxin production and resistance; Cellular processes: Pathogenesis
SACOL0887 SACOL0889	sei	-2.24	-3.12	-1.58 -1.16	C5		pathogenicity island protein	Cellular processes: toxin production and resistance; Centurar processes: Partiogenesis Cellular processes: Pathogenesis
SACOL0889 SACOL0922	-	-2.24	-3.10	-1.10	C5	+		
SACOL0922 SACOL0924	-	-2.85	-3.10	-1.09		Ţ	conserved hypothetical protein	Hypothetical proteins: Conserved Hypothetical proteins: Conserved
SACOL0924 SACOL0930	-	-2.73	-2.79		C5 C5	1	conserved hypothetical protein	Hypothetical proteins: Conserved
	-			-1.07		•	conserved hypothetical protein	
SACOL0959 SACOL0975	cdr	-4.22 -2.15	-3.21 -3.38	1.31 -1.57	C5 C5		NADH-dependent flavin oxidoreductase, Oye family	Unknown function: Enzymes of unknown specificity
SACOL0975 SACOL0976	car	-2.15 -2.44	-3.38 -3.45	-1.57 -1.41	C5		CoA-disulfide reductase	Energy metabolism: Electron transport Unknown function: Enzymes of unknown specificity
SACOL1976 SACOL1005	pepF	-2.44	-3.45	-1.41	C5		hydrolase, haloacid dehalogenase-like family oligoendopeptidase F	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL1003 SACOL1028		-1.76	-2.58	-1.46	C5		•	
SACOL1028 SACOL1034	htrA	-1.76 -2.90	-2.58 -4.32	-1.46 -1.49	C5		serine protease	Protein fate: Degradation of proteins, peptides, and glycopeptides; Cellular processes: Pathogenesis Protein fate: Protein modification and repair
	-	-2.90 -3.30	-4.32 -2.58	-1.49 1.28			lipoate-protein ligase A family protein	
SACOL1048 SACOL1094		-3.30	-2.58	1.28	C5 C5		acetyltransferase, GNAT family	Unknown function: Enzymes of unknown specificity
	cydA						cytochrome d ubiquinol oxidase, subunit I	Energy metabolism: Electron transport
SACOL1095	cydB	-2.75	-2.15	1.28	C5		cytochrome d ubiquinol oxidase, subunit II	Energy metabolism: Electron transport
SACOL1115		-2.32	-3.53	-1.52	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1140	sasE	-5.88	-5.72	1.03	C5		LPXTG cell wall surface anchor protein	Cell envelope: Other
SACOL1142	isdD	-2.74	-1.71	1.60	C5		hypothetical protein	·
SACOL1143	-	-2.78	-1.73	1.60	C5		iron compound ABC transporter, iron compound-binding protein, putative	Cell envelope: Other; Transport and binding proteins: Cations and iron carrying compounds
SACOL1145	srtB	-2.56	-2.78	-1.09	C5		sortase B	Cell envelope: Other
SACOL1150	rnhC	-2.20	-2.49	-1.13	C5		ribonuclease HIII	DNA metabolism: DNA replication, recombination, and repair
SACOL1206	ileS	-2.46	-3.72	-1.52	C5		isoleucyl-tRNA synthetase	Protein synthesis: tRNA aminoacylation
SACOL1296	-	-3.37	-2.77	1.22	C5		transcriptional regulator, GntR family, putative	Regulatory functions: DNA interactions
SACOL1297	-	-5.26	-3.06	1.72	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1298	-	-3.04	-4.03	-1.33	C5		peptidase, M16 family	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL1299	-	-2.85	-4.16	-1.46	C5		acetoacetyl-CoA reductase, putative	Fatty acid and phospholipid metabolism: Biosynthesis
SACOL1300	-	-2.34	-3.87	-1.65	C5		ACT domain protein	Unknown function: General
SACOL1321	glpD	-2.05	-2.90	-1.42	C5		aerobic glycerol-3-phosphate dehydrogenase	Energy metabolism: Other
SACOL1328	glnR	-2.34	-3.00	-1.28	C5		glutamine synthetase repressor	Cellular processes: Toxin production and resistance; Regulatory functions: DNA interactions
SACOL1419	-	-10.64	-11.53	-1.08	C5		oligoendopeptidase F, putative	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL1438		-5.99	-5.02	1.19	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1471	-	-2.77	-1.77	1.56	C5		cell wall enzyme EbsB. putative	Cell envelope: Other; Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL1481		-3.88	-4.73	-1.22	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1495		-2.06	-3.14	-1.52	C5		DNA polymerase III, epsilon subunit/ATP-dependent helicase DinG	DNA metabolism: DNA replication, recombination, and repair
SACOL1496	birA	-2.28	-2.57	-1.13	C5		birA bifunctional protein	Biosynthesis of cofactors, prosthetic groups, and carriers: Biotin; Protein fate: Protein modification and repair; Regulatory functions: DNA interactions
SACOL1530		-2.16	-2.54	-1.17	C5		lipoprotein, putative	Cell envelope: Other
SACOL1552	malR	-3.46	-2.28	1.51	C5	+	maltose operon repressor	Regulatory functions: DNA interactions
SACOL1564	recN	-2.71	-3.76	-1.39	C5	•	DNA repair protein RecN	DNA metabolism: DNA replication, recombination, and repair
SACOL1565	argR	-3.99	-3.93	1.02	C5	1	arginine repressor	Amino acid biosynthesis: Glutamate family, Regulatory functions: DNA interactions
SACOL1674		-2.47	-1.94	1.27	C5	•	helicase, putative, RecD/TraA family	Unknown function: Enzymes of unknown specificity
SACOL1743		-2.17	-2.89	-1.33	C5		amino acid permease	Transport and binding proteins: Amino acids, peptides and amines
SACOL1771	-	-2.38	-3.39	-1.42	C5		OsmC/Ohr family protein	Unknown function: General
SACOL1777	-	-3.69	-4.74	-1.29	C5		serine protease HtrA, putative	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL1816	putA	-4.11	-2.21	1.86	C5		proline dehydrogenase	Energy metabolism: Amino acids and amines
SACOL1818	ribBA	-3.15	-2.12	1.48	C5		3,4-dihydroxy-2-butanone-4-phosphate synthase/GTP cyclohydrolase II	Biosynthesis of cofactors, prosthetic groups, and carriers: Riboflavin, FMN, and FAD
SACOL1819	ribE	-3.59	-1.96	1.83	C5		riboflavin synthase, alpha subunit	Biosynthesis of cofactors, prosthetic groups, and carriers: Riboflavin, FMN, and FAD
SACOL1820	ribD	-3.41	-1.94	1.76	C5		riboflavin biosynthesis protein RibD	Biosynthesis of cofactors, prosthetic groups, and carriers: Riboflavin, FMN, and FAD
SACOL1833	-	-2.96	-2.09	1.42	C5		crcB family protein	Unknown function: General
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SACOL1838	pckA	-3.24	-2.43	1.33	C5		phosphoenolpyruvate carboxykinase (ATP)	Energy metabolism: Glycolysis/gluconeogenesis
SACOL1840	-	-3.26	-5.42	-1.66	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1841	ytkD	-4.82	-5.30	-1.10	C5		nucleoside triphosphatase YtkD	DNA metabolism: DNA replication, recombination, and repair
SACOL1844		-3.47	-6.46	-1.86	C5		O-succinylbenzoic acidCoA ligase, putative	Biosynthesis of cofactors, prosthetic groups, and carriers: Menaquinone and ubiquinone
SACOL1848		-4.91	-5.68	-1.16	C5		lipoprotein, putative	
SACOL1851		-3.42	-3.39	1.01	C5	1	hypothetical protein	
	-							
SACOL1893	-	-2.20	-3.67	-1.67	C5		ABC transporter, ATP-binding protein	Transport and binding proteins: Unknown substrate
SACOL1946	-	-3.35	-4.13	-1.23	C5		methionine aminopeptidase, type I	Protein fate: Protein modification and repair
SACOL1984	aldA2	-2.24	-3.14	-1.40	C5		aldehyde dehydrogenase	Energy metabolism: Fermentation
SACOL1992		-2.60	-2.19	1.19	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2017	groES	-2.11	-2.79	-1.32	C5		chaperonin, 10 kDa	Protein fate: Protein folding and stabilization
SACOL2075	ftsW	-2.53	-2.73	-1.08	C5		cell division protein, FtsW/RodA/SpoVE family	Cellular processes: Cell division
SACOL2130	deoD2	-2.24	-3.23	-1.44	C5		purine nucleoside phosphorylase	Purines, pyrimidines, nucleosides, and nucleotides: Salvage of nucleosides and nucleotides
SACOL2146		-3.42	-5.27	-1.54	C5		PTS system, mannitol-specific IIBC components	Transport and binding proteins: Carbohydrates, organic alcohols, and acids; Signal transduction: PTS
SACOL2164		-4.24	-3.86	1.10	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2179	-	-2.05	-2.97	-1.44	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2193	-	-3.04	-4.85	-1.59	C5		transcriptional regulator, MerR family	Regulatory functions: DNA interactions
SACOL2273	fdhD	-3.30	-1.84	1.80	C5		formate dehydrogenase accessory protein FdhD	Energy metabolism: Anaerobic; Energy metabolism: Electron transport
SACOL2280	ureA	-2.95	-3.11	-1.05	C5		urease, gamma subunit	Central intermediary metabolism: Nitrogen metabolism
SACOL2281	ureB	-3.19	-2.88	1.11	C5		urease, beta subunit	Central intermediary metabolism: Nitrogen metabolism
SACOL2306	-	-4.23	-5.94	-1.41	C5		abortive infection protein family	Unknown function: General
SACOL2310	-	-2.36	-2.73	-1.16	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2311		-1.75	-2.49	-1.43	C5		hypothetical protein	
SACOL2311		-2.70	-5.06	-1.87	C5		malate:quinone oxidoreductase	Francis and the literature TCA and a
	mqo1							Energy metabolism: TCA cycle
SACOL2470	-	-2.64	-3.35	-1.27	C5		hypothetical protein	·
SACOL2486	-	-2.34	-4.15	-1.77	C5		hypothetical protein	-
SACOL2487		-3.35	-3.47	-1.03	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2488		-2.81	-3.33	-1.18	C5		oxidoreductase, short-chain dehydrogenase/reductase family	Unknown function: Enzymes of unknown specificity
SACOL2491	-	-2.93	-4.08	-1.39	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2501	-	-2.63	-4.77	-1.81	C5		phosphoglucomutase/phosphomannomutase family protein	Energy metabolism: Sugars
SACOL2502		-4.45	-3.18	1.40	C5		hypothetical protein	
SACOL2503		-3.47	-2.87	1.21	C5		hypothetical protein	
			-5.19					Unanthatial anthine Conserved
SACOL2518	-	-3.77		-1.38	C5		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2522	-	-3.05	-2.40	1.27	C5		DedA family protein	Unknown function: General
SACOL2551	-	-2.48	-2.53	-1.02	C5		conserved hypothetical protein TIGR00051	Hypothetical proteins: Conserved
SACOL2606	pyrD	-2.68	-1.97	1.36	C5	1	dihydroorotate dehydrogenase	Purines, pyrimidines, nucleosides, and nucleotides: Pyrimidine ribonucleotide biosynthesis
SACOL2660	isaB	-2.72	-4.70	-1.73	C5	•	immunodominant antigen B	Unknown function: General
SACOL0003	-	-1.49	-2.80	-1.88	C6		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0004	-	-1.61	-2.68	-1.66	C6	Į.	recF protein	DNA metabolism: DNA replication, recombination, and repair
SACOL0005	gyrB	-1.57	-2.59	-1.65	C6		DNA gyrase, B subunit	DNA metabolism: DNA replication, recombination, and repair
SACOL0006	gyrA	-1.76	-3.93	-2.23	C6		DNA gyrase. A subunit	DNA metabolism: DNA replication, recombination, and repair
SACOL0009	serS	-2.11	-3.72	-1.77	C6		seryl-tRNA synthetase	Protein synthesis: tRNA aminoacylation
SACOL0023	yycJ	-1.47	-3.01	-2.04	C6		metallo-beta-lactamase family protein YycJ	Unknown function: General
SACOL0025	-	-1.45	-3.22	-2.23	C6		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0173	ipdC	-1.35	-3.80	-2.80	C6		indole-3-pyruvate decarboxylase	Central intermediary metabolism: Other
SACOL0181	.,	-1.62	-3.09	-1.90	C6	Ţ	conserved domain protein	Hypothetical proteins: Domain
			-4.50			•		Typothetical proteins. Domain
SACOL0182	-	-2.13		-2.11	C6		hypothetical protein	•
SACOL0183	-	-1.57	-2.65	-1.69	C6		hypothetical protein	•
SACOL0219	-	-2.38	-9.53	-4.00	C6		hypothetical protein	-
SACOL0220		-1.74	-3.62	-2.08	C6		flavohemoprotein, putative	Unknown function: General
SACOL0225		-2.50	-4.95	-1.98	C6		inosine-uridine preferring nucleoside hydrolase	Purines, pyrimidines, nucleosides, and nucleotides: Salvage of nucleosides and nucleotides
SACOL0223 SACOL0274			-6.28	-3.68	C6			
	-	-1.71					conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0275	-	-1.60	-6.37	-3.98	C6		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0299	-	-1.30	-2.69	-2.07	C6	t	lipoprotein, putative	
SACOL0477		-1.72	-3.55	-2.06	C6		type I restriction-modification system, S subunit, EcoA family, putative	DNA metabolism: Restriction/modification
SACOL0478		-2.39	-4.32	-1.80	C6		exotoxin 3, putative	Cellular processes: Toxin production and resistance
SACOL0536	ksgA	-1.50	-2.54	-1.69	C6		dimethyladenosine transferase	Cellular processes: Toxin production and resistance; Protein synthesis: tRNA and rRNA base modification
SACOL0558	folP	-1.96	-4.08	-2.08	C6		dihydropteroate synthase	Biosynthesis of cofactors, prosthetic groups, and carriers: Folic acid
SACOL0564	-	-1.37	-4.28	-3.11	C6	1	pyridoxine biosynthesis protein	Biosynthesis of cofactors, prosthetic groups, and carriers: Pyridoxine
SACOL0567	ctsR	-1.68	-2.63	-1.57	C6	•	transcriptional regulator CtsR	Regulatory functions: DNA interactions
SACOL0602		-1.35	-2.48	-1.83	C6		hydrolase, haloacid dehalogenase-like family	Unknown function: Enzymes of unknown specificity
SACOL0633	-	-1.71	-5.11	-3.00	C6		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0714	-	-1.64	-2.84	-1.73	C6		acetyltransferase, GNAT family	Unknown function: Enzymes of unknown specificity
SACOL0739	-	-1.49	-3.61	-2.42	C6	t	acetyltransferase, GNAT family	Unknown function: Enzymes of unknown specificity
SACOL0781	-	-1.37	-2.82	-2.07	C6	ŧ	osmoprotectant ABC transporter, ATP-binding protein, putative	Transport and binding proteins: Amino acids, peptides and amines
SACOL0799		-1.41	-2.74	-1.94	C6		transferrin receptor	Cell envelope: Other; Transport and binding proteins: Cations and iron carrying compounds
SACOL0833	-I-D	-1.35	-3.35	-2.48	C6			
	clpP						ATP-dependent Clp protease, proteolytic subunit ClpP	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL0849	-	-1.30	-4.61	-3.55	C6		hypothetical protein	·
SACOL0850	-	-1.49	-3.03	-2.03	C6		hypothetical protein	·
SACOL0851		-2.35	-4.89	-2.08	C6		lipoprotein, putative	
SACOL0859		-1.88	-3.11	-1.65	C6	1	hypothetical protein	
SACOL0875		-1.24	-3.21	-2.59	C6	•	thioredoxin, putative	Energy metabolism: Electron transport
SACOL0876	-	-1.56	-3.80	-2.44	C6		arsenate reductase, putative	Cellular processes: Detoxification
SACOL0877	gcvH	-1.35	-2.90	-2.16	C6		glycine cleavage system H protein	Energy metabolism: Amino acids and amines
SACOL0888	-	-1.91	-3.39	-1.78	C6		pathogenicity island, lipoprotein, putative	Cell envelope: Other; Cellular processes: Pathogenesis
SACOL0925	-	-1.66	-2.69	-1.63	C6		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0926		-1.43	-2.98	-2.08	C6		5-nucleotidase family protein	Purines, pyrimidines, nucleosides, and nucleotides: Other
		-1.43 -1.62						
	-		-2.74	-1.70	C6		hydrolase, haloacid dehalogenase-like family	Unknown function: Enzymes of unknown specificity
SACOL0931	-				C6	t	NADH dehydrogenase, putative	Energy metabolism: Electron transport
SACOL0931 SACOL0944		-1.62 -1.52	-3.49	-2.30				
SACOL0944		-1.52	-3.49 -2.88	-2.30 -1.89	C6		conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0944 SACOL0977	:	<b>-1.52</b> -1.52	-2.88	-1.89	C6		conserved hypothetical protein	Hypothetical proteins: Conserved  Fatty acid and phospholinid metabolism: Riosynthesis
SACOL0944 SACOL0977 SACOL0987	- - fabH	-1.52 -1.52 -2.19	-2.88 -4.48	-1.89 <b>-2.04</b>	C6		3-oxoacyl-(acyl-carrier-protein) synthase III	Fatty acid and phospholipid metabolism: Biosynthesis
SACOL0944 SACOL0977 SACOL0987 SACOL0988	- - fabH fabF	-1.52 -1.52 -2.19 -1.53	-2.88 -4.48 -3.31	-1.89 -2.04 -2.16	C6 C6		3-oxoacyl-(acyl-carrier-protein) synthase III 3-oxoacyl-(acyl-carrier-protein) synthase II	Fatty acid and phospholipid metabolism: Biosynthesis Fatty acid and phospholipid metabolism: Biosynthesis
SACOL0944 SACOL0977 SACOL0987 SACOL0988 SACOL1168	- - fabH	-1.52 -1.52 -2.19 -1.53 -1.36	-2.88 -4.48 -3.31 -4.43	-1.89 -2.04 -2.16 -3.25	C6 C6		3-oxoacyl-(acyl-carrier-protein) synthase III 3-oxoacyl-(acyl-carrier-protein) synthase II fibrinogen-binding protein	Fatty acid and phospholipid metabolism: Biosynthesis Fatty acid and phospholipid metabolism: Biosynthesis Cell envelope: Other
SACOL0944 SACOL0977 SACOL0987 SACOL0988 SACOL1168 SACOL1301	- - fabH fabF	-1.52 -1.52 -2.19 -1.53 -1.36 -1.77	-2.88 -4.48 -3.31 -4.43 -3.23	-1.89 -2.04 -2.16 -3.25 -1.82	C6 C6 C6	t	3-oxoacyl-(acyl-carrier-protein) synthase III 3-oxoacyl-(acyl-carrier-protein) synthase II fibrinogen-binding protein transcriptional regulator, putative	Fatty acid and phospholipid metabolism: Biosynthesis Fatty acid and phospholipid metabolism: Biosynthesis Cell envelope: Other Regulatory functions: Other
SACOL0944 SACOL0977 SACOL0987 SACOL0988 SACOL1168	- - fabH fabF	-1.52 -1.52 -2.19 -1.53 -1.36	-2.88 -4.48 -3.31 -4.43	-1.89 -2.04 -2.16 -3.25	C6 C6	t	3-oxoacyl-(acyl-carrier-protein) synthase III 3-oxoacyl-(acyl-carrier-protein) synthase II fibrinogen-binding protein transcriptional regulator, putative	Fatty acid and phospholipid metabolism: Biosynthesis Fatty acid and phospholipid metabolism: Biosynthesis Cell envelope: Other
SACOL0944 SACOL0977 SACOL0987 SACOL0988 SACOL1168 SACOL1301 SACOL1302	- fabH fabF efb - pgsA	-1.52 -1.52 -2.19 -1.53 -1.36 -1.77 -1.72	-2.88 -4.48 -3.31 -4.43 -3.23 -3.66	-1.89 -2.04 -2.16 -3.25 -1.82 -2.13	C6 C6 C6 C6	t	3-oxoacyl-(acyl-carrier-protein) synthase III 3-oxoacyl-(acyl-carrier-protein) synthase II fibrinogen-binding protein transcriptional regulator, putative CDP-diacyglyscort-glycerol-3-phosphate 3-phosphatidyltransferase	Fatty acid and phospholipid metabolism: Biosynthesis Fatty acid and phospholipid metabolism: Biosynthesis Cell envelope: Other Regulatory functions: Other Fatty acid and phospholipid metabolism: Biosynthesis
SACOL0944 SACOL0977 SACOL0987 SACOL0988 SACOL1168 SACOL1301	- - fabH fabF efb -	-1.52 -1.52 -2.19 -1.53 -1.36 -1.77	-2.88 -4.48 -3.31 -4.43 -3.23	-1.89 -2.04 -2.16 -3.25 -1.82	C6 C6 C6	t	3-oxoacyl-(acyl-carrier-protein) synthase III 3-oxoacyl-(acyl-carrier-protein) synthase II fibrinogen-binding protein transcriptional regulator, putative	Fatty acid and phospholipid metabolism: Biosynthesis Fatty acid and phospholipid metabolism: Biosynthesis Cell envelope: Other Regulatory functions: Other

SACOL1365	-	-1.23	-2.58	-2.09	C6			hydrolase, haloacid dehalogenase-like family	Unknown function: Enzymes of unknown specificity
SACOL1377	tkt	-1.69	-2.54	-1.50	C6			transketolase	Energy metabolism: Pentose phosphate pathway
SACOL1439	-	-1.58	-3.16	-2.01	C6			acylphosphatase	Fatty acid and phospholipid metabolism: Other
SACOL1440	-	-1.23	-3.26	-2.65	C6			xpaC protein, putative	Cellular processes: Other
SACOL1516	rpsA	-1.40	-2.92	-2.08	C6			ribosomal protein S1	Protein synthesis: Ribosomal proteins: synthesis and modification
SACOL1520	-	-1.82	-2.94	-1.62	C6			pyridine nucleotide-disulfide oxidoreductase	Unknown function: Enzymes of unknown specificity
SACOL1554	gnd	-1.44	-2.89	-2.01	C6			6-phosphogluconate dehydrogenase, decarboxylating	Energy metabolism: Pentose phosphate pathway
SACOL1562		-1.43	-2.62	-1.83	C6			2-oxoisovalerate dehydrogenase, E1 component, alpha subunit	Energy metabolism: Amino acids and amines
SACOL1563	lpdA	-1.52	-2.53	-1.66	C6			2-oxoisovalerate dehydrogenase, E3 component, lipoamide dehydrogenase	Energy metabolism: Amino acids and amines
SACOL1566	ispA	-1.45	-2.80	-1.94	C6			geranyltranstransferase	Biosynthesis of cofactors, prosthetic groups, and carriers: Menaquinone and ubiquinone
SACOL1568	xseA	-1.45	-2.85	-1.97	C6			exodeoxyribonuclease VII, large subunit	DNA metabolism: Degradation of DNA
SACOL1588	XSEA	-1.43	-3.00	-2.28	C6			proline dipeptidase	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL1629		-1.22	-2.49	-2.26	C6				Hypothetical proteins: Conserved
SACOL1629 SACOL1630	-	-1.22	-2.49	-2.04 -1.62	C6			conserved hypothetical protein	
	-		-2.55		C6			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1631		-1.71		-1.65				conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1714	hemL1	-1.28	-3.26	-2.55	C6			glutamate-1-semialdehyde-2,1-aminomutase	Biosynthesis of cofactors, prosthetic groups, and carriers: Heme, porphyrin, and cobalamin
SACOL1715	hemB	-1.49	-3.19	-2.14	C6			delta-aminolevulinic acid dehydratase	Biosynthesis of cofactors, prosthetic groups, and carriers: Heme, porphyrin, and cobalamin
SACOL1716	hemD	-1.75	-3.06	-1.75	C6			uroporphyrinogen-III synthase	Biosynthesis of cofactors, prosthetic groups, and carriers: Heme, porphyrin, and cobalamin
SACOL1782	fhs	-1.62	-5.16	-3.18	C6			formatetetrahydrofolate ligase	Central intermediary metabolism: One-carbon metabolism
SACOL1835	-	-1.53	-2.61	-1.71	C6			oxidoreductase, aldo/keto reductase family	Unknown function: Enzymes of unknown specificity
SACOL1843	-	-1.94	-4.00	-2.06	C6			o-succinylbenzoic acid (OSB) synthetase, putative	Biosynthesis of cofactors, prosthetic groups, and carriers: Menaquinone and ubiquinone
SACOL1892	-	-1.43	-3.36	-2.35	C6			membrane protein, putative	Cell envelope: Other
SACOL1943	vraS	-1.40	-2.68	-1.91	C6			sensor histidine kinase VraS	Cellular processes: Toxin production and resistance; Regulatory functions: Protein interactions; Signal transduction: Two-component systems
SACOL1961	gatA	-1.28	-2.64	-2.07	C6			glutamyl-tRNA(Gln) amidotransferase, A subunit	Protein synthesis: tRNA aminoacylation
SACOL1970	sspB2	-1.36	-2.56	-1.88	C6		1	cysteine protease precursor SspB	Protein fate: Degradation of proteins, peptides, and glycopeptides; Cellular processes: Pathogenesis
SACOL2018		-2.78	-6.45	-2.32	C6		Ĭ	abortive infection protein family	Unknown function: General
SACOL2126	luxS	-1.42	-2.82	-1.99	C6		•	autoinducer-2 production protein LuxS	Cellular processes: Other
SACOL2120	iuxs	-1.28	-2.88	-2.24	C6				
SACOL2241		-2.84	-6.72	-2.24	C6			galactose-6-phosphate isomerase, LacA subunit	Energy metabolism: Biosynthesis and degradation of polysaccharides
	-							conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2439		-2.36	-4.55	-1.93	C6			lipoprotein, putative	Cell envelope: Other
SACOL2534	frp	-1.74	-2.98	-1.71	C6			NAD(P)H-flavin oxidoreductase	Energy metabolism: Electron transport
SACOL2535	-	-1.71	-2.72	-1.59	C6			D-isomer specific 2-hydroxyacid dehydrogenase family protein	Central intermediary metabolism: Other
SACOL2592	-	-1.75	-3.54	-2.01	C6		t	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2593	-	-1.81	-3.30	-1.82	C6		t	transcriptional regulator, TetR family	Regulatory functions: DNA interactions
SACOL2618	ldh2	-1.95	-5.19	-2.67	C6			L-lactate dehydrogenase	Energy metabolism: Anaerobic; Energy metabolism: Glycolysis/gluconeogenesis
SACOL2688	icaR	-3.14	-8.59	-2.74	C6			intercellular adhesion regulator	Cellular processes: Pathogenesis; Regulatory functions: DNA interactions
SACOL2731	-	-2.58	-5.59	-2.17	C6			cold shock protein, CSD family	Cellular processes: Adaptations to atypical conditions
SACOL0170	rocD1	-1.48	2.42	3.57	C7			ornithine aminotransferase	Energy metabolism: Amino acids and amines
SACOL0170	10001	-1.57	1.61	2.53	C7		1	trans-sulfuration enzyme family protein	Amino acid biosynthesis: Aspartate family
SACOL0494	nuoF	-2.82	-1.33	2.12	C7		•	NADH dehydrogenase I, F subunit	Energy metabolism: Electron transport
	Huor			3.83	C7				
SACOL0501	-	-8.34	-2.18					sodium-dependent transporter, putative	Transport and binding proteins: Unknown substrate; Transport and binding proteins: Cations and iron carrying compounds
SACOL0502	-	-2.26	2.98	6.74	C7			cysteine synthase/cystathionine beta-synthase family protein	Amino acid biosynthesis: Serine family
SACOL0506	-	-1.25	2.28	2.85	C7			ABC transporter, substrate-binding protein	Transport and binding proteins: Unknown substrate
SACOL0516	-	-2.04	1.38	2.83	C7			PTS system, IIBC components	Transport and binding proteins: Carbohydrates, organic alcohols, and acids; Signal transduction: PTS
SACOL0621	-	-1.76	1.74	3.06	C7			substrateCoA ligase, putative	Fatty acid and phospholipid metabolism: Other
SACOL0652	-	-2.55	-1.25	2.05	C7			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0725	-	-2.57	1.26	3.23	C7			transcriptional regulator, AraC family	Regulatory functions: DNA interactions
SACOL0769	-	-1.84	1.61	2.95	C7			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1044		-2.54	-1.44	1.77	C7			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL1141	isdC	-2.99	-1.45	2.06	C7			NPOTN cell wall surface anchor protein	Cell envelope: Other
SACOL1269	xerC	-2.24	1.18	2.64	C7			tyrosine recombinase XerC	DNA metabolism: DNA replication, recombination, and repair
SACOL1675	ACI C	-2.73	-1.58	1.73	C7		- 1	TPR domain protein	Unknown function: General
SACOL1687		-2.68	-1.52	1.76	C7		•		
	-							N-acetylmuramoyl-L-alanine amidase, family 3	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides
SACOL1832	crcB	-2.50	-1.32	1.89	C7			crcB protein	Unknown function: General
SACOL1904	-	-1.48	1.79	2.65	C7			transcriptional regulator, putative	Regulatory functions: Other
SACOL2086	-	-2.77	1.37	3.81	C7			transcriptional regulator, TenA family	Regulatory functions: Other
SACOL2157	-	-1.35	1.87	2.52	C7			drug resistance transporter, EmrB/QacA subfamily	Cellular processes: Toxin production and resistance; Transport and binding proteins: Other
SACOL2158	-	-2.37	1.15	2.74	C7			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2159	-	-1.48	1.92	2.83	C7			drug transporter, putative	Cellular processes: Toxin production and resistance; Transport and binding proteins: Other
SACOL2163	-	-2.90	-1.39	2.09	C7			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2440	-	-2.73	-1.56	1.75	C7			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL2463	pepA2	-1.39	3.00	4.17	<b>C7</b>			glutamyl-aminopeptidase	Protein fate: Degradation of proteins, peptides, and glycopeptides
SACOL2509	fnbB	-2.01	2.90	5.83	<b>C7</b>			fibronectin binding protein B	Cell envelope: Other
SACOL2689	icaA	-1.42	2.53	3.60	C7			intercellular adhesion protein A	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides
SACOL2690	icaD	-1.47	2.14	3.13	C7			intercellular adhesion protein D	Cell envelope: Biosynthesis and degradation of surface polysaccharides and lippoplysaccharides
SACOL0018	purA	1.87	-2.17	-4.06	C8			adenylosuccinate synthetase	Purines, pyrimidines, nucleosides, and nucleotides: Purine ribonucleotide biosynthesis
SACOL0016		-1.15	-3.07	-2.67	C8			conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0020	mecA	1.26	-1.98	-2.49	C8			penicillin-binding protein 2	Typothetian proteins: Conserved Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan
	IIIeca	1.77	-1.88	-3.33	C8				Cell envelope. Biosynthesis and degradation of indirent saccolds and peptidogrycan
SACOL0035	-							hypothetical protein	
SACOL0092	-	1.61	-2.20	-3.55	C8		Ť	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0095	spa	1.10	-5.78	-6.35	C8			immunoglobulin G binding protein A precursor	Cellular processes: Pathogenesis
SACOL0111	-	-1.14	-2.57	-2.25	C8			acetoin reductase	Energy metabolism: Fermentation
SACOL0119	sasD	1.25	-2.24	-2.81	C8			cell wall surface anchor family protein	Cell envelope: Other
SACOL0276	yukA	1.02	-2.43	-2.48	C8			diarrheal toxin	Unknown function: General
SACOL0300	-	-1.06	-2.93	-2.75	C8			hypothetical protein	· ·
SACOL0565	-	-1.18	-2.86	-2.43	C8		1	conserved hypothetical protein	Hypothetical proteins: Conserved
SACOL0617	-	1.02	-2.67	-2.72	C8	O <sup>to</sup>	t	hexulose-6-phosphate synthase, putative	Energy metabolism: Sugars
SACOL0618	-	1.20	-2.20	-2.64	C8	o o	÷	SIS domain protein	Unknown function: General
SACOL0018 SACOL0635	-	1.64	-1.64	-2.69	C8	-	•	lipoate-protein ligase A family protein	Protein fate: Protein modification and repair
SACOL0763	-	2.08	-2.74	-5.70	C8		ŧ	oxidoreductase, aldo/keto reductase family	Unknown function: Enzymes of unknown specificity
SACOL0703	-	1.11	-2.74	-2.66	C8			urea amidolyase-related protein	Unknown function: General Unknown function: General
SACOLU777 SACOL0778	-	1.11	-2.39 -1.51	-2.66 -2.48	C8				
	00							sulfatase family protein	Unknown function: Enzymes of unknown specificity
SACOL0783	opuBB	1.26	-2.06	-2.59	C8		Ţ	osmoprotectant ABC transporter, permease protein	Transport and binding proteins: Amino acids, peptides and amines
SACOL0957	-	1.61	-2.32	-3.74	C8		+	peptidyl-prolyl cis-trans isomerase, cyclophilin-type	Protein fate: Protein folding and stabilization
SACOL0985	-	1.42	-2.57	-3.65	C8			surface protein, putative	Cell envelope: Other
SACOL1123	pyc	1.13	-2.24	-2.53	C8		Ţ	pyruvate carboxylase	Energy metabolism: Glycolysis/gluconeogenesis

glpP femC cls1 - - - - - - -	1.91 -1.14 -1.07 -1.05 -1.05 1.16 1.86 1.66 1.20 1.67 1.22	-3.35 -4.32 -2.61 -3.56 -2.58 -3.30 -2.14 -2.83 -2.45 -1.55 -2.81	-6.40 -3.80 -2.44 -3.38 -2.45 -3.81 -3.97 -4.70 -2.95 -2.60	C8 C8 C8 C8 C8 C8 C8 C8 C8			fibrinogen binding-related protein fibrinogen-binding protein precursor-related protein glycerol uptake operon antiterminator regulatory protein glutamine synthetase FemC cardiolipin synthetase tellurite resistance protein, putative conserved hypothetical protein PS system. IA component	Unknown function: General Unknown function: General Regulatory functions: RNA interactions Cell envelope: Blosynthesis and degradation of murein sacculus and peptidoglycan Fatty acid and phospholipid metabolism: Blosynthesis Cellular processes: Toxin production and resistance Hypothetical proteins: Conserved
femC cls1 - - - - - -	-1.07 -1.05 -1.05 1.16 1.86 1.66 1.20 1.67	-2.61 -3.56 -2.58 -3.30 -2.14 -2.83 -2.45 -1.55	-2.44 -3.38 -2.45 -3.81 -3.97 -4.70 -2.95 -2.60	C8 C8 C8 C8 C8 C8			glycerol uptake operon antiterminator regulatory protein glutamine synthetase FemC cardiolipin synthetase tellurite resistance protein, putative conserved hypothetical protein	Regulatory functions: RNA interactions Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan Fatty acid and phospholipid metabolism: Biosynthesis Cellular processes: Toxin production and resistance
femC cls1 - - - - - -	-1.05 -1.05 1.16 1.86 1.66 1.20 1.67	-3.56 -2.58 -3.30 -2.14 -2.83 -2.45 -1.55	-3.38 -2.45 -3.81 -3.97 -4.70 -2.95 -2.60	C8 C8 C8 C8 C8			glutamine synthetase FemC cardiolipin synthetase tellurite resistance protein, putative conserved hypothetical protein	Cell envelope: Biosynthesis and degradation of murein sacculus and peptidoglycan Fatty acid and phospholipid metabolism: Biosynthesis Cellular processes: Toxin production and resistance
cls1 - - - - -	-1.05 1.16 1.86 1.66 1.20 1.67	-2.58 -3.30 -2.14 -2.83 -2.45 -1.55	-2.45 -3.81 -3.97 -4.70 -2.95 -2.60	C8 C8 C8 C8			cardiolipin synthetase tellurite resistance protein, putative conserved hypothetical protein	Fatty acid and phospholipid metabolism: Blosynthesis Cellular processes: Toxin production and resistance
	1.16 1.86 1.66 1.20 1.67	-3.30 -2.14 -2.83 -2.45 -1.55	-3.81 -3.97 -4.70 -2.95 -2.60	C8 C8 C8			tellurite resistance protein, putative conserved hypothetical protein	Cellular processes: Toxin production and resistance
- - - - -	1.86 1.66 1.20 1.67 1.22	-2.14 -2.83 -2.45 -1.55	-3.97 -4.70 -2.95 -2.60	C8 C8			conserved hypothetical protein	
- - - - -	1.66 1.20 1.67 1.22	-2.83 -2.45 -1.55	-4.70 -2.95 -2.60	C8 C8				Hypothetical proteins: Conserved
- - - -	1.20 <b>1.67</b> 1.22	- <b>2.45</b> -1.55	-2.95 -2.60	C8			DTS system IIA component	
- - -	1.67 1.22	-1.55	-2.60	C8				Transport and binding proteins: Carbohydrates, organic alcohols, and acids; Signal transduction: PTS
- - -	1.22			C8			DNA repair protein RecO family	DNA metabolism: DNA replication, recombination, and repair
- - ackA		-2.81					conserved hypothetical protein	Hypothetical proteins: Conserved
- ackA	-1 11		-3.42	C8			universal stress protein family	Cellular processes: Adaptations to atypical conditions
ackA		-3.64	-3.28	C8			universal stress protein family	Cellular processes: Adaptations to atypical conditions
	1.14	-3.37	-3.83	C8		Į.	acetate kinase	Central intermediary metabolism: Other; Energy metabolism: Fermentation
	1.70	-1.89	-3.21	C8			conserved hypothetical protein	Hypothetical proteins: Conserved
tal	-1.18	-5.26	-4.46	C8			transaldolase	Energy metabolism: Pentose phosphate pathway
vraR	-1.16	-2.69	-2.31	C8			DNA-binding response regulator VraR	Cellular processes: Toxin production and resistance; Regulatory functions: DNA interactions; Regulatory functions; Signal transduction: Two-component systems
gatB	1.03	-2.44	-2.50	C8			glutamyl-tRNA(Gln) amidotransferase, B subunit	Protein synthesis: tRNA aminoacylation
camS	-1.03	-2.60	-2.53	C8			Staphylococcus aureus sex pheromone	Cellular processes: Other; Cellular processes: Cell adhesion
ligA	-1.01	-2.57	-2.54	C8			DNA ligase, NAD-dependent	DNA metabolism: DNA replication, recombination, and repair
pcrA	1.04	-2.38	-2.49	C8			ATP-dependent DNA helicase PcrA	DNA metabolism: DNA replication, recombination, and repair
	1.05	-3.20	-3.34	C8			conserved hypothetical protein	Hypothetical proteins: Conserved
purB	1.24	-2.94	-3.65	C8			adenylosuccinate lyase	Purines, pyrimidines, nucleosides, and nucleotides: Purine ribonucleotide biosynthesis
-	1.61	-1.64	-2.64	C8			Aerolysin/Leukocidin family protein	Cellular processes: Toxin production and resistance; Cellular processes: Pathogenesis
fbaA	-1.21	-4.13	-3.41	C8		Į.	fructose-bisphosphate aldolase, class II	Energy metabolism: Glycolysis/gluconeogenesis
	1.07	-3.06	-3.28	C8			oxidoreductase, aldo/keto reductase family	Unknown function: Enzymes of unknown specificity
gpm	1.19	-2.53	-3.01	C8		t	phosphoglycerate mutase	Energy metabolism: Glycolysis/gluconeogenesis
-	-1.13	-4.54	-4.03	C8			IgG-binding protein SBI	Cellular processes: Pathogenesis
	1.74	-1.74	-3.02	C8		Į.	lipoprotein, putative	Cell envelope: Other
crtN	1.67	-1.58	-2.65	C8	O <sub>B</sub>	t	dehydrosqualene desaturase	Central intermediary metabolism: Other
fdaB	-1.09	-8.52	-7.83	C8		t	fructose-bisphosphate aldolase, class I	Energy metabolism: Glycolysis/gluconeogenesis
-	1.17	-2.39	-2.81	C8		t	isochorismatase family protein	Unknown function: Enzymes of unknown specificity
	tal vraR gatB camS ligA pcrA - purB - gpm - crtN fdaB	. 1.70 tal -1.18 vraR -1.16 gatB 1.03 camS -1.03 ligA -1.01 pcrA 1.04 . 1.05 purB 1.24 . 1.61 fbaA -1.21 . 1.07 gpm 1.191.13 . 1.74 crtN 1.67 fdaB -1.09 . 1.17	- 1.70 - 1.89 tal - 1.18 - 1.89 tal - 1.18 - 2.69 gatB 1.03 - 2.40 cams - 1.03 - 2.60 ligA - 1.01 - 2.57 pcr	. 1,70 -1.89 -3.21 tal -1.18 -5.26 -4.46 vraR -1.16 -2.69 -2.31 gatB 1.03 -2.44 -2.50 cam5 -1.03 -2.60 -2.53 ligA -1.01 -2.57 -2.54 pcrA -1.04 -2.38 -2.49 -1.05 -3.20 -3.34 purB 1.24 -2.94 -3.65 -1.61 -1.64 -2.64 fbaA -1.21 -4.13 -3.41 -1.07 -3.06 -3.28 gpm 1.19 -2.53 -3.01 -1.13 -4.54 -4.03 -1.13 -1.13 -1.14 -3.02 crtN 1.67 -1.58 -2.65 fdaB -1.09 -8.52 -7.83 -1.17 -2.39 -2.81	. 1,70 -1.89 -3.21 C8 tal -1.18 -5.26 -4.46 C8 vraR -1.16 -2.69 -2.31 C8 gatB 1.03 -2.44 -2.50 C8 camS -1.03 -2.60 -2.53 C8 ligA -1.01 -2.57 -2.54 C8 pcrA 1.04 -2.38 -2.49 C8 - 1.05 -3.20 -3.34 C8 purB 1.24 -2.94 -3.65 C8 - 1.61 -1.64 -2.64 C8 fbaA -1.21 -4.13 -3.41 C8 - 1.07 -3.06 -3.28 C8 gpm 1.19 -2.53 -3.01 C8 gpm 1.19 -2.53 -3.01 C8 -1.13 -4.54 -4.03 C8 -1.174 -1.74 -3.02 C8 crtN 1.67 -1.58 -2.65 C8 IdaB -1.09 -8.52 -7.83 C8	- 1.70 - 1.89 - 3.21 C8 tal -1.18 - 5.26 - 4.46 C8 vraR -1.16 -2.69 - 2.31 C3 gatB 1.03 -2.44 -2.50 C8 camS -1.03 -2.60 -2.53 C8 ligA -1.01 -2.57 -2.54 C8 pcrA 1.04 -2.38 -2.49 C8 - 1.05 -3.20 -3.34 C8 purB 1.24 -2.94 -3.65 C8 - 1.61 -1.64 -2.64 C3 fbaA -1.21 -4.13 -3.41 C8 -1.07 -3.06 -3.28 C8 gpm 1.19 -2.53 -3.01 C8 - 1.13 -4.54 -4.03 C8 - 1.11 -4.54 -4.03 C8 - 1.17 -1.58 -2.65 C8 - 1.74 -1.74 -3.02 C8 crtN 1.67 -1.58 -2.65 C8 - 1.17 -2.39 -2.81 C8	. 1.70 - 1.89 - 3.21 C8 tal -1.18 - 5.26 - 4.46 C8 vraR -1.16 - 2.69 - 2.31 C8 gatB 1.03 - 2.44 - 2.50 C8 camS -1.03 - 2.60 - 2.53 C8 ligA -1.01 - 2.57 - 2.54 C8 pcrA 1.04 - 2.38 - 2.49 C8 pcrA 1.05 - 3.20 - 3.34 C8 purB 1.24 - 2.94 - 3.65 C8 - 1.61 - 1.64 - 2.64 C8 fbaA -1.21 - 4.13 - 3.41 C8 - 1.07 - 3.06 - 3.28 C8 gpm 1.19 - 2.53 - 3.01 C8 c - 1.13 - 4.54 - 4.03 C8 c - 1.13 - 4.54 - 4.03 C8 crtN 1.67 - 1.58 - 2.65 C8	- 1.70 - 1.89 - 3.21 C8 conserved hypothetical protein transaldolase vra

1) Fold change: genes that passed the significance test (see materials and methods section) are shown in bold. Red: at least 2.5 fold up-regulation. Green: at least -2.5 fold down regulation.

2) Genes grouped based on expression kinetics. C1: up-regulated at 10 min and down regulated at 40 min; C2: unchanged at 10 min and up-regulated at 40 min; C3: up-regulated at 10 min and further up-regulated at 40 min; C4:

up-regulated at 10 min and remains up-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at a similar level at 40 min; C5: down-regulated at 10 min and remains down-regulated at 20 min; C5: down-regulate

regulated at 10 min and up-regulated at 40 min; C8: unchanged at 10 min and down-regulated at 40 min

3)Genes positively regulated by SigB as identified by Bischoff et al. 2004 and Pané-Farré et al. 2006 (overlap between both studies). Genes organized in transcription units that are transcribed from an experimentally confirmed SigB-dependent promoter are shaded gray (Bischoff et al. 2004, Pané-Farré et al. 2006, Homerova et al. 2004).

4) Upward and downward arrows show genes induced or repressed in response to linoleic acid based on Kenny et al. 2009.

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Kenny, J. G., D. Ward, E. Josefsson, I. M. Jonsson, J. Hinds, H. H. Rees, J. A. Lindsay, A. Tarkowski, and M. J. Horsburgh. 2009. The Staphylococcus aureus response to unsaturated long chain free fatty acids: survival mechanisms and virulence implications. PLoS One 4:e4344.

Pane-Farre, J., B. Jonas, K. Forstner, S. Engelmann, and M. Hecker. 2006. The sigmaB regulon in Staphylococcus aureus and its regulation. Int. J. Med. Microbiol. 296:237-258.

