Table 3.

Table 4. Microarray probe sets, probe set % similarities, NCBI protein and gene annotations, and hybridization results of corresponding to the malonate gene clusters of malonate-postive *Cronobacter* species including the malonate-positive *C. sakazakii* ST64 strains

	Probe	Probe species ID	ProbeSet	% similarity	NCBI protein	NCBI annotations	BAA loci	BAA_pos	GR	core	CronLMG26250	CdubCFS237	CmuyS1329B	CmalCI825	Csak Comp11A	Csak Comp19B	Csak Comp20A	Csak Comp45B	Csak Comp46B	Csak Comp49B	Csak Comp53A	Csak Comp54A	Csak Comp55A	Csak Comp57A	Csak Com	CDC1121	E772	I172	GK1025A	GK1027A	GK1028A	GK1029B	GK1030B	GK1034A	GK1035A	GK1036B	CsakBAA8	Ctur3032	Cuni797_1	CO1185_I	CO1195_h	CO125Citrosedlakii
											C. sakazakii ST64 strains																															
4228	c_413498.3.1473_at	Cdubdub	1473	23.77	ABU77068	LysR family transcriptional regulator YneJ	ESA_01814	1629	GR34 - malonate		P*	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4229	c_413498.3.1474_at	Cdubdub	1474	35.66	ABU77502	Malonyl CoA-acyl carrier protein transacylase;Ontology_term=KEGG_ENZYME:2.3.1.39	ESA_02253	2043	GR34 - malonate		P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4230	c_413498.3.1475_at	Cdubdub	1475	63.9	AEW61164	phosphoribosyl-dephospho-CoA_transferase		NA	GR34 - malonate		P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4231	c_413498.3.1476_at	Cdubdub	1476	87.77	ACI09216	malonate_transporter_MdcF;mdcF		NA	GR34 - malonate		P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4232	c_413498.3.1477_at	Cdubdub	1477	81.95	AEW61166	MdcE		NA	GR34 - malonate		A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4233	c_413498.3.1478_at	Cdubdub	1478	39.13	ABU76170	Acetyl-coenzyme A carboxyl transferase beta chain;Ontology_term=KEGG_ENZYME:6.4.1.2	ESA_00900	808	GR34 - malonate		P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4234	c_413498.3.1479_x_at	Cdubdub	1479	80.56	ACI11832	"malonate_decarboxylase	_delta_subunit;mdcC"	NA	GR34 - malonate		P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4235	c_413498.3.1480_at	Cdubdub	1480	33.85	ABU75626	2-(5''-triphosphoribosyl)-3'-dephosphocoenzyme-A synthase;Ontology_term=KEGG_ENZYME:2.7.8.25	ESA_00327	294	GR34 - malonate		P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4236	c_413498.3.1481_at	Cdubdub	1481	93.28	ACI08064	"malonate_decarboxylase	_alpha_subunit;mdcA"	NA	GR34 - malonate		P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9720	c_413501.3.3636_at	Cmuy	3636	22.67	ABU77068	LysR family transcriptional regulator YneJ	ESA_01814	1629	GR34 - malonate		A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9721	c_413501.3.3637_at	Cmuy	3637	37.6	ABU77502	Malonyl CoA-acyl carrier protein transacylase;Ontology_term=KEGG_ENZYME:2.3.1.39	ESA_02253	2043	GR34 - malonate		A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9722	c_413501.3.3638_at	Cmuy	3638	71.24	AEW61164	phosphoribosyl-dephospho-CoA_transferase		NA	GR34 - malonate		A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9723	c_413501.3.3639_at	Cmuy	3639	87.15	ACI09216	malonate_transporter_MdcF;mdcF		NA	GR34 - malonate		A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9724	c_413501.3.3640_at	Cmuy	3640	81.95	AEW61166	MdcE		NA	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9725	c_413501.3.3641_at	Cmuy	3641	36.65	ABU76170	Acetyl-coenzyme A carboxyl transferase beta chain;Ontology_term=KEGG_ENZYME:6.4.1.2	ESA_00900	808	GR34 - malonate		A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9726	c_413501.3.3642_x_at	Cmuy	3642	81.94	ACI11832	"malonate_decarboxylase	_delta_subunit;mdcC"	NA	GR34 - malonate		A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
9727	c_413501.3.3643_at	Cmuy	3643	32.94	ABU75626	2-(5''-triphosphoribosyl)-3'-dephosphocoenzyme-A synthase;Ontology_term=KEGG_ENZYME:2.7.8.25	ESA_00327	294	GR34 - malonate		A	A	P	A	A	A	A	P	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A	A	A	A	A
9728	c_413501.3.3644_at	Cmuy	3644	95.9	ACI08064	"malonate_decarboxylase	_alpha_subunit;mdcA"	NA	GR34 - malonate		A	A	P	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
10476	c_413503.3.1626_x_at	Cmal 825	1626	74.35	ACI08014	malonate_utilization_transcriptional_regulator_MdcR		NA	GR34		A	A	A	P	A	A	A	P	A	A	P	P	P	P	P	A	A	P	A	P	A	P	P	A	P	A	A	A	A	A	A	A
10478	c_413503.3.1627_at	Cmal 825	1627	37.6	ABU77502	Malonyl CoA-acyl carrier protein transacylase;Ontology_term=KEGG_ENZYME:2.3.1.39	ESA_02253	2043	GR34		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	A	A	A	A
10482	c_413503.3.1628_x_at	Cmal 825	1628	68.29	AEW61164	phosphoribosyl-dephospho-CoA_transferase		NA	GR34		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
10483	c_413503.3.1629_at	Cmal 825	1629	87.16	ACI09216	malonate_transporter_MdcF;mdcF		NA	GR34		A	A	A	P	P	A	P	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	A	A	A	A
10484	c_413503.3.1629_at	Cmal 825	1629	87.16	ACI09216	malonate_transporter_MdcF;mdcF		NA	GR34		A	A	A	P	P	A	P	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	A	A	A	A
10488	c_413503.3.1631_at	Cmal 825	1631	90.05	AEW61167	malonate_decarboxylase		NA	GR34		A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	A	P	P	A
10489	c_413503.3.1632_x_at	Cmal 825	1632	87.5	ACI10965	"malonate_decarboxylase	_beta_subunit;mdcD"	NA	GR34		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	A	A	A
10490	c_413503.3.1633_x_at	Cmal 825	1633	79.17	ACI11832	"malonate_decarboxylase	_delta_subunit;mdcC"	NA	GR34		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	A	A	A
10491	c_413503.3.1634_x_at	Cmal 825	1634	32.68	ABU75626	2-(5''-triphosphoribosyl)-3'-dephosphocoenzyme-A synthase;Ontology_term=KEGG_ENZYME:2.7.8.25	ESA_00327	294	GR34		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
10492	c_413503.3.1635_at	Cmal 825	1635	96.09	ACI08064	"malonate_decarboxylase	_alpha_subunit;mdcA"	NA	GR34		A	A	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	A	A	A	A
10493	c_413503.3.1635_at	Cmal 825	1635	96.09	ACI08064	"malonate_decarboxylase	_alpha_subunit;mdcA"	NA	GR34		A	A	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	A	A	A	A
12040	c_535744.3.1165_s_at	Cuni	1165	93.83	ACI08064	"malonate_decarboxylase	_alpha_subunit;mdcA"	NA	GR34 - malonate		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	P	A	A	A
12043	c_535744.3.1166_s_at	Cuni	1166	32.68	ABU75626	2-(5''-triphosphoribosyl)-3'-dephosphocoenzyme-A synthase;Ontology_term=KEGG_ENZYME:2.7.8.25	ESA_00327	294	GR34 - malonate		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	P	A	A	A
12044	c_535744.3.1166_s_at	Cuni	1166	32.68	ABU75626	2-(5''-triphosphoribosyl)-3'-dephosphocoenzyme-A synthase;Ontology_term=KEGG_ENZYME:2.7.8.25	ESA_00327	294	GR34 - malonate		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	P	A	A	A
12045	c_535744.3.1167_at	Cuni	1167	83.84	AEW61168	malonate_decarboxylase_delta_subunit		NA	GR34 - malonate		P	P	P	P	A	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	P	A	A	A
12046	c_535744.3.1169_s_at	Cuni	1169	83.46	AEW61166	MdcE		NA	GR34 - malonate		A	A	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	A	A	P	A	A	A
12048	c_535744.3.1170_s_at	Cuni	1170	87.16	ACI09216	malonate_transporter_MdcF;mdcF		NA	GR34 - malonate		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	P	A	A	A
12049	c_535744.3.1171_at	Cuni	1171	68.29	AEW61164	phosphoribosyl-dephospho-CoA_transferase		NA	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
12050	c_535744.3.1171_at	Cuni	1171	68.29	AEW61164	phosphoribosyl-dephospho-CoA_transferase		NA	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
12053	c_535744.3.1172_at	Cuni	1172	36.82	ABU77502	Malonyl CoA-acyl carrier protein transacylase;Ontology_term=KEGG_ENZYME:2.3.1.39	ESA_02253	2043	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
12054	c_535744.3.1173_s_at	Cuni	1173	74.84	ACI08014	malonate_utilization_transcriptional_regulator_MdcR		NA	GR34 - malonate		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	A	P	A	A	A
19105	c_6666.1845.3619_at	Ctur	3619	74.35	ACI08014	malonate_utilization_transcriptional_regulator_MdcR		NA	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A
19110	c_6666.1845.3620_at	Ctur	3620	37.21	ABU77502	Malonyl CoA-acyl carrier protein transacylase;Ontology_term=KEGG_ENZYME:2.3.1.39	ESA_02253	2043	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A
19111	c_6666.1845.3621_at	Ctur	3621	68.29	AEW61164	phosphoribosyl-dephospho-CoA_transferase		NA	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A
19112	c_6666.1845.3622_at	Ctur	3622	87.5	ACI09216	malonate_transporter_MdcF;mdcF		NA	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A
19113	c_6666.1845.3623_at	Ctur	3623	82.71	AEW61166	MdcE		NA	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	P	A	A	A	A
19116	c_6666.1845.3624_s_at	Ctur	3624	36.13	ABU76170	Acetyl-coenzyme A carboxyl transferase beta chain;Ontology_term=KEGG_ENZYME:6.4.1.2	ESA_00900	808	GR34 - malonate		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	A	A	A
19117	c_6666.1845.3624_s_at	Ctur	3624	36.13	ABU76170	Acetyl-coenzyme A carboxyl transferase beta chain;Ontology_term=KEGG_ENZYME:6.4.1.2	ESA_00900	808	GR34 - malonate		A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	A	A	A
19118	c_6666.1845.3625_x_at	Ctur	3625	80.56	ACI11832	"malonate_decarboxylase	_delta_subunit;mdcC"	NA	GR34 - malonate		P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	A	P	P	A	A	A
19119	c_6666.1845.3626_at	Ctur	3626	33.85	ABU75626	2-(5''-triphosphoribosyl)-3'-dephosphocoenzyme-A synthase;Ontology_term=KEGG_ENZYME:2.7.8.25	ESA_00327	294	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
19120	c_6666.1845.3627_at	Ctur	3627	93.65	ACI08064	"malonate_decarboxylase	_alpha_subunit;mdcA"	NA	GR34 - malonate		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

*** P represents presence and A represents absence of the allele. Presence/absence calls were determined using the Affymetrix algorithm as described by Tall et al. [15].**