

Table 13. Transcripts that are significantly changed in the ChAG-associated Kx1 isolate after mGEP infection.

HPAG1 homolog	26695 homolog	J99 homolog	Annotation	Gene symbol	COG*/NOG** number	COG category	EC† number	Fold change compared to non-infecting Kx1
HPAG1_0001	HP0001	JHP0001	N utilization substance protein B	nusB	COG0781	K		-2.8
HPAG1_0045	HP0049	JHP0042	hypothetical protein		COG2957	E		3.1
HPAG1_0054	HP0057	JHP0049	hypothetical protein					4.1
HPAG1_0114	HP0114	JHP0106	hypothetical protein		COG2604	S		2.8
HPAG1_0121	HP0122	JHP0112	hypothetical protein					2.5
HPAG1_0158	HP0160	JHP0148	cysteine-rich protein D	hcpD	COG0790	R		3.7
HPAG1_0188	HP0194	JHP0180	triosephosphate isomerase	tpi	COG0149	G	5.3.1.1	3.3
HPAG1_0209	HP0208	JHP0194	lipopolysaccharide 1,2-glycosyltransferase	rfaj2	COG1442	M		3.7
HPAG1_0212	HP0211	JHP0197	cysteine-rich protein A	hcpA	COG0790	R		7.5
HPAG1_0220	HP0218	JHP0204	phospholipid-binding protein		COG1881	R		3.5
HPAG1_0238	HP0235	JHP0220	cysteine-rich protein E	hcpE	COG0790	R		2.8
HPAG1_0296	HP0294	JHP0279	aliphatic amidase	amiE	COG0388	R	3.5.1.4	3.4
HPAG1_0303	HP0301	JHP0286	dipeptide ABC transporter	dppD	COG0444	E	2.7.2.3	-2.4
HPAG1_0305	HP0303	JHP0288	GTP-binding protein		COG0536	R		-2.9
HPAG1_0314			DNA methylase		COG0863	L	2.1.1.-	2.8
HPAG1_0495	HP0520	JHP0469	caq pathogenicity island protein 1	caq1				2.4
HPAG1_0496	HP0521B		HP0521B protein	caq2				3.0
HPAG1_0509	HP0533		hypothetical protein					4.2
HPAG1_0511	HP0535	JHP0483	caq pathogenicity island protein Q	caqQ				2.5
HPAG1_0568	HP0588	JHP0536	2-oxooglutarate oxidoreductase OorD subunit	oorD	COG1146	C	1.2.7.3	-6.0
HPAG1_0570	HP0590	JHP0538	2-oxooglutarate oxidoreductase OorB subunit	oorB	COG1013	C	1.2.7.3	-3.0
HPAG1_0571	HP0591	JHP0539	2-oxooglutarate oxidoreductase OorC subunit	oorC	COG1014	C	1.2.7.3	-3.6
HPAG1_0574	HP0594	JHP0541	hypothetical protein					3.7
HPAG1_0603	HP0620	JHP0564	inorganic pyrophosphatase	ppa	COG0221	C	3.6.1.1	-3.5
HPAG1_0621	HP0638	JHP0581	outer membrane protein HopH	hopH				2.5
HPAG1_0626	HP0642	JHP0586	NAD(P)H-flavin oxidoreductase	frxA	COG0778	C		-2.7
HPAG1_0637	HP0652	JHP0597	phosphoserine phosphatase	serB	COG0560	F	3.1.3.3	4.1
HPAG1_0662	HP0680	JHP0621	ribonucleoside-diphosphate reductase 1 alpha subunit	nrdA	COG0209	F	1.17.4.1	-2.5
HPAG1_0682	HP0697	JHP0631	acetone carboxylase, gamma subunit		COG4647	Q		-2.5
HPAG1_0743	HP0758	JHP0695	conserved hypothetical integral membrane protein		COG2056	R		-2.4
HPAG1_0796	HP0811	JHP0747	hypothetical protein		NOG40717			2.8
HPAG1_0859	HP0876	JHP0810	iron-regulated outer membrane protein	frpB	COG1629	P		6.1
HPAG1_0889	HP0907	JHP0843	hook assembly protein, flagella	fliD	COG1843	N		3.6
HPAG1_0930	HP0946	JHP0880	conserved hypothetical integral membrane protein		COG1757	C		2.5
HPAG1_0986	HP0406	JHP0975	hypothetical protein		NOG13219			-2.7
HPAG1_0987	HP0405	JHP0976	nifS-like protein		COG0520	E	4.4.1.16	-2.8
HPAG1_0989	HP0403	JHP0978	phenylalaninyl-tRNA synthetase, alpha subunit	pheS	COG0016	J	6.1.1.20	-2.7
HPAG1_0992	HP0400	JHP0981	isoprenyl pyrophosphate and dimethylallyl diphosphate synthetase	lvtB	COG0761	I	1.17.1.2	-2.9
HPAG1_1004	HP0388	JHP0993	hypothetical protein		COG0500	Q	2.1.1.-	-3.7
HPAG1_1017	HP0375	JHP1006	hypothetical protein		NOG44864			3.4
HPAG1_1027	HP0367	JHP1014	hypothetical protein					2.2
HPAG1_1028	HP0366	JHP1015	spore coat polysaccharide biosynthesis protein C		COG0399	M	2.6.1.50	4.6
HPAG1_1033	HP0360	JHP1020	UDP-glucose 4-epimerase	qaIE	COG1087	M	5.1.3.2	4.5
HPAG1_1081	HP1143	JHP1071	hypothetical protein		COG4487	S		3.2
HPAG1_1084	HP1145	JHP1073	hypothetical protein		COG1432	S		2.6
HPAG1_1094	HP1155	JHP1082	UDP-N-acetylglucosamine lipid transferase	murG	COG0707	M	2.4.1.227	3.5
HPAG1_1125	HP1185	JHP1111	sugar efflux transporter protein	sotB	COG2814	G		2.3
HPAG1_1155	HP1214	JHP1137	hypothetical protein		COG1926	R	2.4.2.-	3.3
HPAG1_1158	HP1218	JHP1140	glycinamide ribonucleotide synthetase	purD	COG0151	F	6.3.4.13	3.3
HPAG1_1248	HP1303	JHP1223	ribosomal protein L18	rpl18	COG0256	J		-2.3
HPAG1_1253	HP1308	JHP1228	ribosomal protein L24	rpl24	COG0198	J		-2.5
HPAG1_1254	HP1309	JHP1229	ribosomal protein L14	rpl14	COG0093	J		-2.9
HPAG1_1261	HP1316	JHP1236	ribosomal protein L2	rpl2	COG0090	J		-3.8
HPAG1_1271	HP1326	JHP1246	hypothetical protein					-2.2
HPAG1_1323	HP1377	JHP1291	hypothetical protein		COG1699	S		-2.7
HPAG1_1353	HP1428	JHP1325	hypothetical protein		COG0820	R		-2.5
HPAG1_1354	HP1429	JHP1324	polysialic acid capsule expression protein	kpsF	COG0517/COG0794	R/M	5.3.1.13	-5.0
HPAG1_1357	HP1432	JHP1321	histidine and glutamine-rich metal binding protein					3.6
HPAG1_1411	HP1501	JHP1394	outer membrane protein HopK	hopK				2.6
HPAG1_1472	HP1398	JHP1428	alanine dehydrogenase	ald	COG0686	E	1.4.1.1	-2.3
HPAG1_1534			hypothetical protein					5.5

*Cluster of Orthologous Groups

**Non-supervised Orthologous Group

†Enzyme Commission