

## Supporting Information

### Pa0148 from *Pseudomonas aeruginosa* Catalyzes the Deamination of Adenine

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**Supplementary Information Table S1: Predicted Adenine Deaminases from cog1816.**

Genus	Species	Locus Tag	GI
<i>Acidithiobacillus</i>	<i>ferrooxidans</i> ATCC 23270	AFE_0773	218666581
<i>Acidithiobacillus</i>	<i>ferrooxidans</i> ATCC 53993	Lferr_0916	198283050
<i>Acidovorax</i>	<i>avenae</i> subsp. Citrulli	Aave_1138	120609828
<i>Acinetobacter</i>	<i>baumannii</i> AB0057	AB57_1219	213156180
<i>Acinetobacter</i>	<i>baumannii</i> ACICU	ACICU_01148	184157468
<i>Acinetobacter</i>	<i>baumannii</i> ATCC 17978	A1S_1137	162286739
<i>Acinetobacter</i>	<i>baumannii</i> AYE	ABAYE2601	169796622
<i>Acinetobacter</i>	<i>baumannii</i> SDF	ABSDF1427	169633127
<i>Acinetobacter</i>	sp. ADP1	ACIAD1245	50084431
<i>Aeromonas</i>	<i>hydrophila</i> subsp. <i>Hydrophila</i> ATCC 7966	AHA_2653	117621168
<i>Aeromonas</i>	<i>salmonicida</i> subsp. <i>salmonicida</i> A449	ASA_2506	145299444
<i>Alteromonas</i>	<i>macleodii</i> 'Deep ecotype'	MADE_02509	196157310
<i>Arthrobacter</i>	<i>aurescens</i> TC1	AAur1117	119963047
<i>Arthrobacter</i>	<i>chlorophenolicus</i> A6	Achl_0997	220911771
<i>Arthrobacter</i>	sp. FB24	Arth0907	116669471
<i>Azoarcus</i>	sp. BH72	azo0236	119896527
<i>Bifidobacterium</i>	<i>animalis</i> subs. <i>Lactis</i> AD011	BLA_1473	219683948
<i>Bordetella</i>	<i>avium</i> 197N	BAV0774	187477281
<i>Bordetella</i>	<i>bronchiseptica</i> RB50	BB1254	33600240
<i>Bordetella</i>	<i>petrii</i> DSM 12804	Bpet3978	163858294
<i>Bordetella</i>	<i>parapertussis</i> 12822	BPP1038	33595716
<i>Burkholderia</i>	<i>ambifaria</i> AMMD	Bamb_0883	115350937
<i>Burkholderia</i>	<i>ambifaria</i> MC40-6	BamMC406_0895	172059950
<i>Burkholderia</i>	<i>cenoepecia</i> AU 1054	Bcen_0541	107022098
<i>Burkholderia</i>	<i>cenoepecia</i> HI2424	Bcen2424_1020	116689043
<i>Burkholderia</i>	<i>cenoepecia</i> J2315	BCAL2989	206561334
<i>Burkholderia</i>	<i>cenoepecia</i> MC0-3	Bcenmc03_0978	170732330
<i>Burkholderia</i>	<i>mallei</i> ATCC 23344	BMA0461	53725191
<i>Burkholderia</i>	<i>mallei</i> NCTC 10247	BMA10247_0168	126449325
<i>Burkholderia</i>	<i>mallei</i> SAVP1	BMASAVP1_A2607	121600394
<i>Burkholderia</i>	<i>multivorans</i> ATCC 17616 chromosome 3	BMULJ_00865	189349726
<i>Burkholderia</i>	<i>multivorans</i> ATCC 17616 chromosome 2	Bmul_2376	161525546

<i>Burkholderia</i>	<i>phydatum</i> STM815 chromosome 1	Bphy_0710	186475475
<i>Burkholderia</i>	<i>phytofirmans</i> PsJN chromosome 1	Bphyt_3044	187925018
<i>Burkholderia</i>	<i>pseudomallei</i>	BPSL2539	53720149
<i>Burkholderia</i>	<i>pseudomallei</i> 1106a chromosome I	BUPRS1106A_2976	126455345
<i>Burkholderia</i>	<i>pseudomallei</i> 668	BURPS668_2916	126439627
<i>Burkholderia</i>	sp. 383	Bcep18194_A4131	78065603
<i>Burkholderia</i>	<i>thailandensis</i> E264	BTH_I1612	83721046
<i>Burkholderia</i>	<i>vietnamiensis</i> G4	Bcep1808_0939	134295050
<i>Burkholderia</i>	<i>xenovorans</i> LB416	Bxe_A0947	91784845
<i>Caldivirga</i>	<i>maquilingensis</i> IC-167	Cmaq1623	159042184
<i>Campylobacter</i>	<i>lari</i> RM1200	Cla_0004	222823050
<i>Caulobacter</i>	<i>crecenscentus</i> CB15	CC3180	16127410
<i>Caulobacter</i>	<i>crecenscentus</i> NA1000	CCNA_03284	221236219
<i>Caulobacter</i>	sp. K31	Caul_0816	167644782
<i>Cellvibrio</i>	<i>japonicus</i> Ueda 107	CJA_0578	192359911
<i>Chlorobium</i>	<i>phaeobacteroides</i> BS1	Cphamn1_1745	189500674
<i>Chlorobium</i>	<i>phaeobacteroides</i> DSM 266	Cpha266_1916	119357712
<i>Chromohalobacter</i>	<i>salexigens</i> DSM 3043	Csal_1983	92114106
<i>Clavibacter</i>	<i>michiganensis</i> subsp. <i>michiganensis</i> NCPPB 382	CMM_0659	148271838
<i>Colwellia</i>	<i>psychrerythraea</i> 34H	CPS_1359	71279112
<i>Cupriavidus</i>	<i>taiwanensis</i>	RALTA_A0998	194289123
<i>Cyanothece</i>	sp. ATCC 51142	cce_0747	172035663
<i>Delftia</i>	<i>acidovorans</i> SPH-1	Daci_2144	160897587
<i>Diaphorobacter</i>	sp. TPSY	Dtpsy_2442	222111614
Environmental	sequence		44348236
<i>Francisella</i>	<i>tularensis</i> subsp. <i>tularensis</i> FSC198	FTF0939c	110670507
<i>Francisella</i>	<i>tularensis</i> subsp. <i>tularensis</i> SCHU S4	FTT0939c	56708036
<i>Francisella</i>	<i>tularensis</i> subsp. <i>tularensis</i> WV96-3418	FTW_0833	134301850
<i>Geobacter</i>	<i>lovleyi</i> SZ	Glov_1001	189424067
<i>Geobacter</i>	<i>uraniireducens</i> Rf4	Gura_2399	148264445
<i>Hahella</i>	<i>chejuensis</i> KCTC 2396	HCH_01503	83644351
<i>Hyphomonas</i>	<i>neptunium</i> ATCC 15444	HNE_1938	114797828
<i>Janthinobacterium</i>	sp. Marseille	mma_1581	152980106
<i>Leifsonia</i>	<i>xyli</i> subsp. <i>xyli</i> str. CTCB07	Lxx13430	50954990
<i>Leptothrix</i>	<i>cholodnii</i> SP-6	Lcho_3742	171060412
<i>Maricaulis</i>	<i>maris</i> MCS10	Mmar101236	114569787
<i>Marinomonas</i>	sp. MWYL1	Mmwy111922	152995946
<i>Methylibium</i>	<i>petroleiphilum</i> PM1	MpeA0809	124266002
<i>Pelodictyon</i>	<i>luteolum</i> DSM 273	Plut1524	78187381
<i>Phenylobacterium</i>	<i>zucineum</i> HLK1	PHZ_c3010	197106471
<i>Photobacterium</i>	<i>profundum</i> SS9	PBPRB1184	54302863
<i>Photobacterium</i>	<i>profundum</i> SS9	PBPRB1379	54303053
<i>Polaromonas</i>	<i>naphthalenivorans</i> CJ2	Pnap1040	121603949
<i>Polaromonas</i>	sp. JS666	Bpro1487	91787381

<i>Pseudoalteromonas</i>	<i>atlantica</i> T6c	Patl2420	109898735
<i>Pseudomonas</i>	<i>aeruginosa</i> LESB58	PLES_01491	218888893
<i>Pseudomonas</i>	<i>aeruginosa</i> PA7	PSPA70226	152986046
<i>Pseudomonas</i>	<i>aeruginosa</i> PAO1	PA0148	15595346
<i>Pseudomonas</i>	<i>aeruginosa</i> UCBPP-PA14	PA1401830	116053869
<i>Pseudomonas</i>	<i>fluorescens</i> Pf-5	PFL0719	70734221
<i>Pseudomonas</i>	<i>fluorescens</i> PfO-1	Pflu010671	77456899
<i>Pseudomonas</i>	<i>mendocina</i> ymp	Pmen3706	146308721
<i>Pseudomonas</i>	<i>putida</i> F1	Pput0631	148545881
<i>Pseudomonas</i>	<i>putida</i> GB-1	PputGB10636	167031652
<i>Pseudomonas</i>	<i>putida</i> KT2440	PP0591	26987329
<i>Pseudomonas</i>	<i>putida</i> W619	PputW619_4572	170723733
<i>Pseudomonas</i>	<i>syringae</i> pv. <i>phaseolicola</i> 1448A	PSPPH4636	71735362
<i>Pseudomonas</i>	<i>syringae</i> pv. <i>syringae</i> B728a	Psyr0661	66043928
<i>Pseudomonas</i>	<i>syringae</i> tomato DC3000	PSPTO0757	28867985
<i>Pseudomonas</i>	<i>entomophila</i> L48	PSEEN0674	104779927
<i>Psychrobacter</i>	<i>cryohalolentis</i> K5	Pcryo0456	93005286
<i>Psychromonas</i>	<i>ingrahamii</i> 37	Ping0692	119944464
<i>Ralstonia</i>	<i>eutropha</i> JMP134	Reut_A2428	73542114
<i>Ralstonia</i>	<i>metallidurans</i> CH34	Rmet_0890	94309835
<i>Ralstonia</i>	<i>pickettii</i> 12J	Rpic_2249	187929328
<i>Ralstonia</i>	<i>solanacearum</i> GMI1000	RSc2098	17546817
<i>Rhodococcus</i>	<i>erythropolis</i> PR4	RER_41080	226307595
<i>Rhodococcus</i>	<i>opacus</i> B4	ROP_60860	226365495
<i>Rhodococcus</i>	sp. RHA1	RHA1ro06027	111022990
<i>Rhodoferax</i>	<i>ferrireducens</i> T118	Rfer3297	89902066
<i>Rhodospirillum</i>	<i>rubrum</i> ATCC 11170	RruA0766	83592105
<i>Saccharopolyspora</i>	<i>erythraea</i> NRRL 2338	SACE1513	134098099
<i>Shewanella</i>	<i>sediminis</i> HAW-EB3	Ssed2715	157375850
<i>Sphigomonas</i>	<i>wittichii</i> RW1	Swit2485	148555400
<i>Sphingopyxis</i>	<i>alaskensis</i> RB2256	Sala2009	103487492
<i>Streptomyces</i>	<i>avermitilis</i> MA-4680	SAV5577	29832120
<i>Streptomyces</i>	<i>coelicolor</i> A3(2)	SCO2546	21221005
<i>Streptomyces</i>	<i>griseus</i> subsp. <i>griseus</i> NBRC 13358	SGR_4999	182438792
<i>Verminophrobacter</i>	<i>eiseniae</i> EF01-2	Veis1083	121608070
<i>Vibrio</i>	<i>harveyi</i> ATCC BAA-1122	VIBHAR_06421	156977633
<i>Vibrio</i>	<i>parahaemolyticus</i> RIMD 2210633	VPA1292	28901147
<i>Wolinella</i>	<i>succinogenes</i> DSM 1740	WS0737	34557141
<i>Zymomonas</i>	<i>mobilis</i> subsp. <i>mobilis</i> ZM4	ZMO0971	56551867