

Table 5: Regions and genes (or domains of functional genes) specific to CO92 and KIM10+ when compared with IP32953

Regions	Gene	Location	CO92 annotation	Product	Gene	Location	KIM10+ annotation	Product	Putative regions of lateral transfer
1	YPO0387	405049..405112		hypothetical protein	y3797	complement(4215478..4217544)		hypothetical	
	YPO0388	405109..406425		conserved hypothetical protein	y3796	complement(4214165..4215481)		hypothetical	
	YPO0389	406492..406722		hypothetical protein	NC				
	YPO0390	406669..407436		hypothetical protein	y3794	complement(4213154..4213621)		hypothetical	
	YPO0391	407449..408874		modification methylase	y3792	complement(4211816..4213141)		putative methyltransferase	
	YPO0392	408824..409546		hypothetical protein	y3791	complement(4211044..4211766)		hypothetical	
	YPO0393	409656..410891		hypothetical protein	y3790	complement(4209699..4211072)		hypothetical	
	YPO0394	complement(411235..411522)		hypothetical protein	y3789	4209068..4209355		hypothetical	
	YPO0396	412139..413551		hypothetical protein	y3786	complement(4207039..4208427)		hypothetical	
	YPO0397	413548..414702		hypothetical protein	y3785	complement(4205888..4207042)		hypothetical	
	YPO0523	567541..567825		putative membrane protein	NC				
	3	YPO1087	1234752..1235063		putative prophage protein	NC			
YPO1088		1235071..1235391		putative DNA-binding prophage protein	y3089	complement(3399434..3399754)		hypothetical	
YPO1089		complement(1235740..1236828)		putative regulatory prophage protein	y3088	3397991..3399085		hypothetical	
YPO1090		complement(1236825..1237784)		putative prophage DNA primase	y3087	3397011..3398000		hypothetical	
YPO1091		complement(1237777..1238319)		putative prophage protein	y3086	3396506..3397048		hypothetical	
YPO1092		complement(1238512..1239408)		putative DNA-binding prophage protein	y3085	3395417..3396313		hypothetical	
YPO1092a		complement(1239421..1239711)		hypothetical protein	y3084	3395114..3395404		hypothetical	phage
YPO1094		complement(1239803..1239976)		hypothetical protein	y3083	3392560..3394050		hypothetical	
YPO1095		1240207..1240434		hypothetical protein	NC				
YPO1096		complement(1240596..1242266)		putative phage protein	y3083	3392560..3394050		hypothetical	
YPO1097	complement(1242317..1243405)		putative phage protein	y3082	3391421..3392509		hypothetical		
YPO1098	complement(1243484..1244683)		putative prophage integrase	y3081	3390110..3391342		prophage CP4-57 integrase		
4	YPO1252	1409403..1410182		putative bacteriophage tail fiber protein	y2934	complement(3237524..3238303)		hypothetical	phage
	YPO1257	complement(1414135..1414623)		hypothetical protein	y2929	3233073..3233571		hypothetical	
5	YPO1258	complement(1414636..1415784)		conserved hypothetical protein	y2928	3231922..3233070		hypothetical	
	YPO1473	1668162..1670462		hypothetical protein	y2697	complement(2977173..2979473)		hypothetical	
6	YPO1474	1670459..1671232		putative exported protein	y2696	complement(2976403..2977176)		hypothetical	
	YPO1475	1671386..1671646		hypothetical protein	y2695	complement(2975989..2976249)		hypothetical	other
	YPO1476	1671662..1673845		hypothetical protein	y2694	complement(2973790..2975952)		hypothetical	
	YPO1477	1674018..1674488		hypothetical protein	y2692	complement(2973147..2973617)		hypothetical	
	YPO1480	complement(1674956..1675823)		transposase (partial)	y2690	2972094..2972414		putative transposase	
	YPO1668	complement(1898862..1900097)		putative membrane protein	y1829	complement(2014178..2015413)		putative resistance protein, transport	
7	YPO1669	complement(1900110..1900487)		YjgF-family lipoprotein	y1830	complement(2015426..2015833)		hypothetical protein	
	YPO1670	complement(1900484..1901470)		conserved hypothetical protein	y1831	complement(2015800..2016786)		hypothetical	
	YPO1671	1901648..1902325		putative DNA-binding protein	y1832	2016964..2017641		hypothetical	
	YPO1672	1902800..1906606		conserved hypothetical protein	y1834	2018786..2021923		hypothetical	
8	YPO1817	complement(2064772..2065191)		conserved hypothetical protein	y2490	2751668..2752087		hypothetical	
	YPO1818	complement(2065236..2065604)		conserved hypothetical protein	y2489	2751255..2751623		hypothetical	
9	YPO2006	2279186..2279722		hypothetical protein	y2302	complement(2537129..2537785)		hypothetical	
	YPO2007	2279719..2280549		putative esterase	y2301	complement(2536970..2537123)		hypothetical	
	YPO2008	2280557..2280955		putative rhodanese-like protein	y2300	complement(2535896..2536348)		hypothetical	
	YPO2009	complement(2281003..2281512)		putative integrase core domain protein	y2299	2535339..2535848		putative recombinase	
	YPO2009a	complement(2281533..2281844)		conserved hypothetical protein	NC				
	YPO2084	join(complement(2363019..2364233))		putative phage integrase (pseudogene)	y2227	2455229..2456467		putative transposase	
	YPO2087	complement(2366293..2366553)		putative phage excisionase	NC				
	YPO2087a	complement(2366634..2366834)		putative phage protein	NC				
	YPO2088	complement(2366853..2367497)		putative methyltransferase	y2224	2451986..2452630		putative DNA methyltransferase	
	YPO2089	2367596..2368024		putative phage protein	y2223	complement(2451459..2451905)		putative phage nin-region protein	
	YPO2090	2368098..2368416		putative phage protein	y2222	complement(2450780..2451385)		putative phage nin-G-like protein	
	YPO2091	2368740..2369093		putative phage antitermination protein	y2220	complement(2450590..2450779)		hypothetical protein	
YPO2092	2369097..2369315		hypothetical phage protein	y2219	complement(2450268..2450393)		hypothetical		
YPO2093	2369364..2369927		putative phage protein	y2218	complement(2449556..2450119)		putative phage protein		
YPO2094	complement(2370012..2370194)		hypothetical phage protein	NC					
YPO2095	2370351..2370560		hypothetical phage protein	y2217	complement(2448923..2449132)		hypothetical		
YPO2096	complement(2370557..2370832)		hypothetical phage protein	NC					
YPO2097	2370955..2371275		putative phage protein	NC					
YPO2098	2371306..2371818		putative phage lysozyme	y2216	complement(2447665..2447820)		hypothetical	phage endopeptidase Rz	
YPO2099	2371803..2372261		putative prophage endonuclease	y2215	complement(2447222..2447680)		putative phage antirepressor		
YPO2100	2372723..2373620		phage regulatory protein	y2214	complement(2445967..2446700)		putative phage antirepressor		
YPO2101	2373977..2374612		hypothetical phage protein	y2213	complement(2444871..2445506)		hypothetical		
YPO2102	2374643..2375092		hypothetical phage protein	y2212	complement(2444391..2444640)		hypothetical		
YPO2103	join(2375102..2375656,2376971..2377915)		putative phage terminase (pseudogene)	y2211					
YPO2106	join(2377915..2378640,2378644..2379300)		putative phage protein (pseudogene)	y2209	complement(2440840..2441568)		hypothetical		
YPO2108	2379304..2380416		hypothetical phage protein	y2207	complement(2439067..2440179)		hypothetical		
YPO2109	2380388..2381311		hypothetical phage protein	y2206	complement(2438172..2439458)		hypothetical		
YPO2110	2381325..2382530		putative phage protein	y2205	complement(2436953..2438158)		hypothetical		
YPO2111	2382530..2383060		hypothetical phage protein	y2204	complement(2436423..2436980)		hypothetical	phage	
YPO2112	2383057..2383311		conserved hypothetical phage protein	y2203	complement(2436172..2436426)		hypothetical		
YPO2113	2383313..2383663		hypothetical phage protein	y2202	complement(2435820..2436170)		hypothetical		
YPO2114	2383665..2384249		hypothetical phage protein	y2201	complement(2435234..2435818)		hypothetical		
YPO2115	2384246..2384653		hypothetical phage protein	y2200	complement(2434830..2435237)		hypothetical		
YPO2116	2384719..2385639		putative phage protein	y2199	complement(2433844..2434764)		hypothetical		
YPO2117	2385652..2385963		hypothetical phage protein	y2198	complement(2433520..2433831)		hypothetical		
YPO2118	2386020..2386271		hypothetical phage protein	NC					
YPO2119	2386272..2389775		putative phage tail protein	y2197	complement(2429708..2433211)		putative tail length tape measure protein		
YPO2120	2389778..2390119		putative phage protein	y2196	complement(2429564..2429705)		putative phage tail protein		
YPO2122	2391003..2391755		putative phage protein	y2195	complement(2428438..2429190)		putative phage tail protein		
YPO2123	2391758..2392468		putative phage minor tail protein	y2194	complement(2427725..2428435)		putative phage tail protein		
YPO2125	complement(2393440..2393979)		putative phage regulatory protein	y2192	2426322..2426753		hypothetical		
YPO2126	2394149..2395243		putative phage protein	y2191	complement(2424950..2426044)		putative phage antirepressor		
YPO2127	2395342..2395893		putative phage-related membrane protein	y2190	complement(2424300..2424851)		hypothetical		
YPO2128	2395901..2396251		putative phage-related lipoprotein	NC					
YPO2129	2396307..2396927		putative phage tail assembly protein	y2189	complement(2423266..2423886)		putative phage tail protein		
YPO2130	complement(2397102..2397413)		hypothetical phage protein	NC					
YPO2131	2397499..4400702		putative phage host specificity protein	y2188	complement(2419491..2422694)		putative phage tail protein		
YPO2132	2400702..2401700		hypothetical phage protein	y2187	complement(2418493..2419506)		hypothetical		
YPO2133	2401717..2402634		hypothetical phage protein	y2186	complement(2417559..2418476)		putative phage tail protein		
YPO2134	2402645..2403064		putative phage tail fiber assembly protein	y2185	complement(2417129..2417548)		putative phage tail protein		
YPO2135	2403061..2403216		hypothetical phage protein	NC					
YPO2261	2511331..2511933		hypothetical protein	y2103	2317222..2318321		hypothetical		
YPO2466	complement(2764300..2764554)		hypothetical protein	NC					
13	YPO2483	complement(2785296..2785700)		hypothetical protein	y1703	1886401..1886805		hypothetical	
	YPO2484	complement(2785842..2786009)		hypothetical protein	NC				
	YPO2485	complement(2786212..2786409)		conserved hypothetical protein	y1702	1885692..1885889		hypothetical	
	YPO2486	complement(2786419..2788452)		conserved hypothetical protein	y1701	1883637..1885682		putative hemagglutinin-like secreted protein	
14	YPO2501	complement(2813712..2814380)		hypothetical protein	y1685	1877326..1888458		hypothetical	
	YPO2574	complement(2894374..2894928)		putative membrane protein	y1144	complement(1290571..1291125)		hypothetical	
16	YPO3436	complement(3838865..3839599)		hypothetical protein (pseudogene)	y0751	838498..839619		hypothetical	
	YPO3437	complement(3839952..3841862)		conserved hypothetical protein	y0750	836505..838517		hypothetical	
17	YPO3609	4023133..4024503		conserved hypothetical protein	y0265	complement(278802..280172)		rfsD protein	
	YPO3610	4024505..4024990		conserved hypothetical protein	y0264	complement(278315..278890)		hypothetical	
18	YPO3616	4023596..4024390		conserved hypothetical protein	y0254	complement(268916..269710)		hypothetical	
	YPO3945	4445294..4445668		hypothetical protein	y3883	complement(4323415..4323789)		hypothetical	
19	YPO3946	complement(4445759..4446046)		hypothetical protein	y3882	4323037..4323324		hypothetical	
	YPO3947	complement(4446053..4446427)		hypothetical protein	y3881	4322656..4323030		hypothetical	
	YPO3948	complement(4446668..4446949)		hypothetical protein	NC				
20	YPO4018	4533313..4534350		putative phosphatase-dependent protein	y4039	4480139..4481146		cysteine synthase	
	YPO4028	4543227..4543589		putative regulator	y4049	4490014..4490376		hypothetical	
	YPO4029	4543628..4544560		IS903 transposase (pseudogene)	y4050	4490548..4491054		putative transposase	
	YPO4031	4544734..4544979		putative regulatory protein	NC				other
	YPO4032	complement(4545247..4546554)		hypothetical protein	y4051	complement(4492034..4493506)		hypothetical	
*only in CO92	YPO2271	complement(2554373..2554636)		phage hypothetical protein	Absent				
	YPO2272	complement(2554638..							