

Complete genome sequence and transcription profiles of the rock bream iridovirus RBIV-C1

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Supplement. Detailed genome comparison between RBIV-C1 and OSGIV and RBIV sequences in GenBank

Table S1. Predicted open reading frames (ORFs) of RBIV-C1. OSGIV: orange-spotted grouper iridovirus; RBIV: rock bream iridovirus

Gene ID	Position	Protein size (aa)	Predicted structure and/or function	Best-match homolog			Homolog to RBIV		Homolog to OSGIV	
				Accession no.	Species	Identity (%)	ORF no.	Identity (%)	ORF no.	Identity (%)
ORF1L	134..1270	378	Transmembrane amino acid transporter protein	AAX82310.1	OSGIV	100.0	ORF001L	99.7	ORF1L	100.0
ORF2L	1394..1789	131	ORF2R	BAK14281.1	OSGIV	99.0	ORF002L	98.3	ORF2R	99.0
ORF3R	1849..2064	71	ORF003R	AAT71818.1	RBIV	100.0	ORF003R	100.0	ORF3R	100.0
ORF4L	2110..2613	167	ORF004L	AAT71819.1	RBIV	100.0	ORF004L	100.0	ORF4L	100.0
ORF5L	2632..2808	58	ORF005L	AAT71820.1	RBIV	100.0	ORF005L	100.0	ORF5L	100.0
ORF6L	2883..3548	221	Catalytic domain of ctd-like phosphatase	AAT71821.1	RBIV	100.0	ORF006L	100.0	ORF6L	100.0
ORF7L	3793..5154	453	Major capsid protein	AAP37443.1	OSGIV	100.0	ORF007L	99.6	ORF7L	100.0
ORF8L	5171..6628	485	Myristylated membrane protein	AAX82317.1	OSGIV	100.0	ORF008L	99.6	ORF8L	100.0

ORF9R	6699..8246	515	ORF9R	AAX82318.1	OSGIV	100.0	ORF009R	99.8	ORF9R	100.0
ORF10R	8342..8503	53	ORF9R	ADE34354.1	TRBIV	100.0	ORF010R	100.0	ORF10R	100.0
ORF11L	8662..9054	130	ORF011L	AAT71826.1	RBIV	100.0	ORF011L	100.0	ORF11L	100.0
ORF12L	9051..9311	86	ORF011L	NP612233.1	OSGIV	100.0	-	-	ORF13L	100.0
ORF13R	9330..9662	110	RING-finger-containing ubiquitin ligase	AAT71827.1	RBIV	100.0	ORF012R	100.0	ORF14R	100.0
ORF14R	9669..11066	465	Serine/threonine protein kinase catalytic domain	AAT71828.1	RBIV	100.0	ORF013R	100.0	ORF15R	100.0
ORF15R	11321..12295	324	ORF014R	AAT71829.1	RBIV	100.0	ORF014R	100.0	ORF16R	100.0
ORF16R	12301..13092	263	ORF015R	AAT71830.1	RBIV	99.6	ORF015R	99.6	ORF17R	99.6
ORF17L	13150..13737	195	ORF016L	AAT71831.1	RBIV	100.0	ORF016L	100.0	ORF18L	99.5
ORF18L	13752..14090	112	ORF017L	AAT71832.1	RBIV	100.0	ORF017L	100.0	ORF19L	99.1
ORF19R	14096..14353	85	ORF20R	AAX82329.1	OSGIV	100.0	ORF018R	100.0	ORF20R	100.0
ORF20L	14433..14609	58	ORF019L	AAT71834.1	RBIV	100.0	ORF019R	100.0	ORF21L	100.0
ORF21R	14625..17471	948	DNA polymerase	AAX82331.1	OSGIV	99.8	ORF020R	99.8	ORF22R	99.9
ORF22L	17535..17717	60	ORF021L	AAT71836.1	RBIV	100.0	ORF021L	100.0	ORF23L	100.0
ORF23L	17853..17975	40	ORF24L	AAX82333.1	OSGIV	100.0	-	-	ORF24L	100.0
ORF24L	18065..19717	550	Putative phosphatase	AAX82334.1	OSGIV	100.0	ORF022L	99.7	ORF25L	100.0
ORF25R	19790..22924	1044	Laminin-type epidermal growth factor-like protein	AAX82335.1	OSGIV	99.8	ORF023L	100.0	ORF26R	99.8
ORF26R	23209..24147	312	Ribonucleotide reductase small chain	AAX82336.1	OSGIV	100.0	ORF026R	99.0	ORF27R	100.0
ORF27R	24171..24419	82	ORF28R	AAX82337.1	OSGIV	96.0	ORF027R	95.0	ORF28R	96.0
ORF28L	24416..24736	106	ORF29L	AAX82338.1	OSGIV	100.0	-	-	ORF29L	100.0
ORF29L	24758..25654	298	DNA repair protein RAD2	AAX82339.1	OSGIV	100.0	ORF028L	99.7	ORF30L	100.0
ORF30L	25671..29177	1168	Largest subunit of the DNA-dependent RNA polymerase	AAX82340.1	OSGIV	99.8	ORF029L	99.3	ORF31L	99.8
ORF31L	29184..29405	73	Transcription elongation factor SII	AAX82341.1	OSGIV	100.0	-	-	ORF32L	100.0
ORF32R	29696..29938	80	ORF030R	AAT71845.1	RBIV	100.0	ORF030R	100.0	ORF33R	100.0

ORF33R	30033..30665	210	Deoxyribonucleoside kinase	AAT71846.1	RBIV	100.0	ORF031R	100.0	ORF34R	100.0
ORF34L	30756..31697	313	ORF032L	AAT71847.1	RBIV	99.0	ORF032L	99.0	ORF35L	100.0
ORF35R	31743..34904	1053	RNA polymerase beta subunit	AAT71848.1	RBIV	99.4	ORF033R	99.4	ORF36R	98.8
ORF36L	34977..36110	377	ORF034L	AAT71849.1	RBIV	99.4	ORF034L	99.5	ORF37L	99.2
ORF37R	36104..37159	351	ORF38R	AAAX82347.1	OSGIV	99.7	-	-	ORF38R	99.7
ORF38L	37156..38265	369	ORF037L	AAT71852.1	RBIV	100.0	ORF037L	100.0	ORF39L	100.0
ORF39L	38515..39954	479	ORF40L	AAAX82349.1	OSGIV	99.7	ORF038L	100.0	ORF40L	99.8
ORF40R	40019..40897	292	ORF41R	AAAX82350.1	OSGIV	100.0	-	-	ORF41L	100.0
ORF41L	40890..42035	381	ORF42L	AAAX82351.1	OSGIV	99.4	ORF041L	99.2	ORF42L	99.5
ORF42L	42037..43386	449	ORF43L	AAAX82352.1	OSGIV	100.0	ORF042L	99.8	ORF43L	100.0
ORF43R	43401..44000	199	ORF44R	AAAX82353.1	OSGIV	100.0	-	-	ORF44L	100.0
ORF44L	44084..44446	120	Thiol oxidoreductase	AAAX82354.1	OSGIV	100.0	-	-	ORF45L	100.0
ORF45L	44453..45253	266	ORF46L	AAAX82355.1	OSGIV	100.0	ORF044L	99.3	ORF46L	100.0
ORF46L	45258..46172	304	ORF47L	AAAX82356.1	OSGIV	99.0	ORF045L	99.3	ORF47L	99.0
ORF47L	46166..46849	227	Cytosine DNA methyltransferase	AAT71861.1	RBIV	100.0	ORF046L	100.0	ORF48L	100.0
ORF48R	47009..47272	87	ORF49R	AAAX82358.1	OSGIV	100.0	-	-	ORF49R	100.0
ORF49R	47269..47622	117	Vascular endothelial growth factor-like protein	AAAX82359.1	OSGIV	100.0	-	-	ORF50R	100.0
ORF50R	47638..47808	56	ORF51R	AAAX82360.1	OSGIV	100.0	-	-	ORF51R	100.0
ORF51L	47876..48304	142	ORF049L	AAT71864.1	RBIV	100.0	ORF049L	100.0	ORF52L	100.0
ORF52L	48583..49035	150	ORF53L	AAAX82362.1	OSGIV	100.0	ORF050L	98.7	ORF53L	100.0
ORF53R	49037..49231	64	ORF54R	AAAX82363.1	OSGIV	100.0	ORF051R	98.4	ORF54R	100.0
ORF54L	49265..50209	314	ORF55L	AAAX82364.1	OSGIV	100.0	ORF052L	99.7	ORF55L	100.0
ORF55L	50232..51173	313	ORF053L	AAT71868.1	RBIV	100.0	ORF053L	100.0	ORF56L	100.0
ORF56L	51184..51831	215	ORF57L	AAAX82366.1	OSGIV	100.0	ORF054L	99.5	ORF57L	100.0
ORF57L	51838..52098	86	ORF055L	AAT71870.1	RBIV	100.0	ORF055L	100.0	ORF58L	100.0
ORF58L	52363..52875	170	ORF59L	AAAX82368.1	OSGIV	100.0	ORF056L	99.4	ORF59L	100.0
ORF59L	52939..53745	268	Putative replication factor	AAAX82369.1	OSGIV	100.0	ORF057L	98.9	ORF60L	100.0

ORF60L	53742..57590	1282	Putative DNA-binding protein	AAT71873.1	RBIV	99.7	ORF058L	99.8	ORF61L	99.7
ORF61L	57956..60604	882	SNF2 family helicase	AAX82372.1	OSGIV	99.8	ORF059L	99.3	ORF63L	99.9
ORF62L	60672..62144	490	mRNA capping enzyme	AAX82373.1	OSGIV	100.0	ORF060L	99.5	ORF64L	100.0
ORF63L	62186..62656	156	RING-finger-containing E3 ubiquitin ligase	AAX82374.1	OSGIV	99.3	ORF061L	98.7	ORF65L	99.4
ORF64L	62707..63789	360	RING-finger-containing E3 ubiquitin ligase	AAX82375.1	OSGIV	100.0	ORF062L	99.7	ORF66L	100.0
ORF65L	63941..64174	77	ORF063L	AAT71878.1	RBIV	100.0	ORF063L	100.0	ORF67L	100.0
ORF66R	64168..64293	41	ORF68R	AAX82377.1	OSGIV	100.0	-	-	ORF68R	100.0
ORF67L	64529..65962	477	ORF69L	AAX82378.1	OSGIV	99.7	ORF064L	98.9	ORF69L	99.8
ORF68L	65974..66480	168	ORF065L	AAT71880.1	RBIV	100.0	ORF065L	100.0	ORF70L	100.0
ORF69L	66728..66895	55	ORF066L	AAT71881.1	RBIV	92.1	ORF066L	92.1	-	-
ORF70L	67146..68756	536	ORF 018R	BAK14217.1	OSGIV	99.2	ORF068L	100.0	ORF71L	100.0
ORF71L	68739..69227	162	ORF069L	AAT71884.1	RBIV	100.0	ORF069L	100.0	-	-
ORF72R	69276..70298	340	ORF070R	AAT71885.1	RBIV	100.0	ORF070R	100.0	ORF73R	99.7
ORF73L	70399..70668	89	ORF74L	AAX82383.1	OSGIV	100.0	ORF071L	98.9	ORF74L	100.0
ORF74L	70670..73639	989	ORF75L	AAX82384.1	OSGIV	99.3	ORF072L	95.9	ORF75L	99.4
ORF75R	73573..74991	472	ORF 641L	BAK14328.1	OSGIV	100.0	-	-	ORF76R	100.0
ORF76R	74988..75449	153	ORF075R	AAT71890.1	RBIV	100.0	ORF075R	100.0	ORF77R	100.0
ORF77L	75454..75678	74	ORF076L	AAT71891.1	RBIV	100.0	ORF076L	100.0	ORF78L	100.0
ORF78R	75607..76236	209	Hypothetical protein ORF 632L	BAK14325.1	OSGIV	100.0	ORF077R	100.0	ORF79R	100.0
ORF79R	76252..76749	165	ORF80R	AAX82389.1	OSGIV	100.0	ORF078R	98.8	ORF80R	100.0
ORF80L	76798..77904	368	ORF81L	AAX82390.1	OSGIV	100.0	ORF079L	99.7	ORF81L	100.0
ORF81R	77929..78327	132	ORF82R	AAX82391.1	OSGIV	100.0	ORF080R	98.5	ORF82R	100.0
ORF82L	78354..79658	434	ORF83L	AAX82392.1	OSGIV	99.7	ORF081L	99.3	ORF83L	99.8
ORF83R	79745..80275	176	ORF082R	AAT71897.1	RBIV	100.0	ORF082R	100.0	ORF84R	100.0
ORF84R	80705..81502	265	Ribonuclease III	AAX82394.1	OSGIV	99.6	ORF083R	98.9	ORF85R	99.6
ORF85R	81605..82006	133	ORF86R	AAX82395.1	OSGIV	100.0	ORF084R	99.1	ORF86R	100.0

ORF86R	81961..83532	523	ORF87R	AAX82396.1	OSGIV	99.8	ORF084R	97.7	ORF87R	99.8
ORF87L	83727..83861	44	ORF88L	AAX82397.1	OSGIV	100.0	-	-	ORF88L	100.0
ORF88R	84537..84722	61	ORF89R	AAX82398.1	OSGIV	100.0	-	-	ORF89R	100.0
ORF89L	84719..85645	308	ORF90L	AAX82399.1	OSGIV	100.0	ORF086L	99.4	ORF90L	100.0
ORF90L	85655..86155	166	ORF91L	AAX82400.1	OSGIV	100.0	ORF087L	99.4	ORF91L	100.0
ORF91L	86180..87343	387	ORF92L	AAX82401.1	OSGIV	100.0	ORF088L	99.7	ORF92L	100.0
ORF92L	87351..88103	250	Hypothetical protein ORF550R	BAK14310.1	RSIV	100.0	-	-	ORF93L	100.0
ORF93L	88094..88585	163	ORF94L	AAX82403.1	OSGIV	100.0	ORF090L	99.4	ORF94L	100.0
ORF94L	88634..88957	107	RING-finger domain-containing protein	AAT71906.1	RBIV	100.0	ORF091L	100.0	ORF95L	99.0
ORF95L	89011..89658	215	ORF092L	AAT71907.1	RBIV	99.5	ORF092L	99.5	ORF96L	99.1
ORF96L	89627..90142	171	ORF97L	AAX82406.1	OSGIV	100.0	-	-	ORF97L	100.0
ORF97R	90211..91656	481	Ankyrin repeat-containing protein	AAT71909.1	RBIV	100.0	ORF094R	100.0	ORF98R	100.0
ORF98R	91663..92076	137	Suppressor of cytokine signalling protein	AAX82408.1	OSGIV	100.0	-	-	ORF99R	100.0
ORF99R	92135..92914	259	ORF100R	AAX82409.1	OSGIV	100.0	ORF096R	99.6	ORF100R	100.0
ORF100R	92916..93287	123	ORF097R	AAT71912.1	RBIV	100.0	ORF097R	100.0	ORF101R	99.0
ORF101R	93381..94268	295	ORF098R	AAT71913.1	RBIV	100.0	ORF098R	100.0	ORF102R	99.0
ORF102L	94310..95182	290	ORF103L	AAX82412.1	OSGIV	100.0	ORF099L	98.4	ORF103L	100.0
ORF103L	95433..95570	45	ORF104L	AAX82413.1	OSGIV	100.0	-	-	ORF104L	100.0
ORF104R	95626..95910	94	ORF105R	AAX82414.1	OSGIV	100.0	ORF100R	100.0	ORF105R	100.0
ORF105L	95932..98694	920	D5 family NTPase	AAX82415.1	OSGIV	100.0	-	-	ORF106L	100.0
ORF106L	98900..99796	298	Hypothetical protein	BAD98248.1	RSIV	99.6	-	-	ORF108L	98.4
ORF107R	99816..100559	247	Proliferating cell nuclear antigen	AAX82418.1	OSGIV	100.0	-	-	ORF109R	100.0
ORF108R	100631..101047	138	ORF110R	AAX82419.1	OSGIV	100.0	-	-	ORF110R	100.0
ORF109L	101091..103673	860	CAP10, tyrosine kinase	BAK14293.1	OSGIV	98.6	-	-	ORF111L	100.0
ORF110R	104108..105118	336	Immediate early protein ICP-46	AAX82421.1	OSGIV	100.0	-	-	ORF112R	100.0
ORF111R	105179..106621	480	Hypothetical protein ORF450L	BAK14291.1	RSIV	99.0	-	99.0	ORF113R	98.7

ORF112L	106675..107349	224	Early 31kDa-protein	AAX82422.1	OSGIV	100.0	-	ORF114L	100.0
ORF113L	107683..108996	437	Ankyrin repeat-containing protein	AAX82423.1	OSGIV	99.3	ORF112L	ORF115L	99.3
ORF114R	108805-109350	182	RING-finger domain-containing E3 protein	ADE34454.1	OSGIV	99.0	ORF113R	ORF116R	100.0
ORF115R	109384..109890	168	ORF117R	AAX82425.1	OSGIV	100.0	-	ORF117R	100.0
ORF116L	109911..110546	211	ORF118L	AAX82426.1	OSGIV	100.0	-	ORF118L	100.0
ORF117R	110556..111275	239	ATPase	AAL68653.1 AF462344_1	OSGIV	100.0	-	ORF119R	100.0
ORF118R	111353..111547	64	ORF120R	AAX82428.1	OSGIV	100.0	-	ORF120R	100.0
ORF119L	111636..112322	228	Ankyrin repeat-containing protein	BAK14283.1	RSIV	100.0	ORF118L	ORF121L	99.0