

orf19 name	S. cerevisiae ortholog	intron #	5' splice site	branch site	intron length	bp-3'ss length	orf19 contig	orf19 ORF coordinates	coordinates of 5' UTR intron	source of annotation
orf19.1032	SKO1	1	GTAAAGT	TACTAAC	110	40	Contig19-10087	complement(join(15338..17062,17173..17184))		identified by D. hansenii candidate approach
orf19.1039	BET4	1	GTAGGT	TACTAAC	84	31	Contig19-10087	complement(join(31624..32727,32812..32814))		previously published annotation
orf19.1055	CDC3	1	GTATGT	TACTAAC	110	22	Contig19-10087	complement(join(52162..53438,53549..53558))		previously published annotation
orf19.1058	RPN13	1	GTAAAGT	TACTAAC	147	11	Contig19-10087	join(55401..55867,56015..56381)		previously published annotation
orf19.10708	MATALPHA2	1	GTATGT	TACTAAC	59	11	Contig19-20170	complement(join(71067..71142,71202..71687))		previously published annotation
orf19.1114	YML030W	1	GTATGT	TACTAAC	117	23	Contig19-10093	complement(join(19038..19461,19579..19622))		previously published annotation
orf19.115	SYF1	1	GTATGT	AACTAAC	67	11	Contig19-10035	complement(join(52531..53348,53416..53452))		identified by computational approach (r.1)
orf19.1162.1	YJR112W-A	1	GTACGT	TACTAAC	80	18	Contig19-10097	complement(join(47958..48460,48541..48571))		identified by computational approach (r.1)
orf19.1166	EDE1	1	GTATGT	TACTAAC	102	15	Contig19-10097	join(50968..50983,51086..54960)		previously published annotation
orf19.1203.1	--	1	GTATGT	TATTAAAC	86	23	Contig19-10099	join(53906..53908,53995..54249)		identified by computational approach (r.1)
orf19.1212	SCS22	1	GTATGT	TACTAAC	297	21	Contig19-10101	complement(join(3201..4276,4574..4607))		previously published annotation
orf19.1238	TUB4	1	GTAAAGT	TACTAAC	80	17	Contig19-10104	complement(join(37840..39328,39409..39416))		previously published annotation
orf19.131.2	YPR063C	1	GTATGA	TACTAAC	65	18	Contig19-10035	77391..77425,77491..77803		identified by S. cerevisiae candidate approach
orf19.1409.1	RPL22A	1	GTATGT	GGCTAAC	572	19	Contig19-10115	complement(join(4815..5179,5752..5763))		identified by D. hansenii candidate approach; new gene
orf19.1448.1	DYN2	1	GTACGT	TACTAAC	129	67	Contig19-10119	complement(join(20470..20723,20853..20874))		identified by D. hansenii candidate approach; new gene
orf19.1470	RPS26A	1	GTATGT	TACTAAC	404	15	Contig19-10119	complement(50898..51257)	complement(51264..51667)	identified by S. cerevisiae candidate approach
orf19.1471	COX4	1	GTATGT	TACTAAC	320	15	Contig19-10119	52934..53407	52604..52923	identified by S. cerevisiae candidate approach
orf19.1494	RAD23	1	GTATGT	TACTAAC	185	13	Contig19-10119	join(104269..104334,104520..105707)		identified by computational approach (r.1)
orf19.1517	ARO3	1	GTATGT	TACTAAC	113	22	Contig19-10119	join(155696..155750,155864..156924)		identified by computational approach (r.1)
orf19.1553	ENT3	1	GTATGT	TACTAAC	86	34	Contig19-10119	complement(join(225460..226747,226834..226909))		correction to previously published annotation
orf19.1571	ADY2	1	GTATGT	TACTAAC	68	15	Contig19-10119	complement(join(257340..257752,257821..258190))		identified by computational approach (r.1)
orf19.1582	HOL1	1	GTACGT	TACTAAC	66	14	Contig19-10119	join(282146..282742,282809..283873)		identified by computational approach (r.1)
orf19.1593	MRK1	1	GTATGT	TACTAAC	804	23	Contig19-1800	complement(join(4684..5897,6702..7575))		identified by debranchase approach
orf19.1604	--	1	GTATGT	TACTAAC	235	10	Contig19-10122	complement(join(17756..20680,20916..20961))		identified by computational approach (r.1)
orf19.1624	MAK10	1	GTATGA	TACTAAC	80	22	Contig19-10123	join(48757..48775,48856..51242)		correction to previously published annotation
orf19.1630	PSP2	1	GTATGT	TACTAAC	152	16	Contig19-10123	join(56434..56437,56590..56634,56725..58958)		previously published annotation
orf19.1630	PSP2	2	GTATGT	TACTAAC	90	21	Contig19-10123	join(56434..56437,56590..56634,56725..58958)		previously published annotation
orf19.1634	ACB1	1	GTATGT	TACTAAC	70	19	Contig19-10123	complement(join(65561..66675,66746..66761))		previously published annotation
orf19.1647	MUM3	1	GTACGT	AACTAAC	82	14	Contig19-10123	join(83416..83649,83732..84523)		identified by computational approach (r.2) ^c
orf19.1658	YDR348C	1	GTATGT	TACTAAC	556	14	Contig19-10123	join(109506..109798,110355..111393)		previously published annotation
orf19.1680	TFP1	1	GTATGT	TACTAAC	77	21	Contig19-10123	complement(join(168234..170086,170164..170166))		correction to previously published annotation
orf19.1702	ARF3	1	GTATGT	TACTAAC	113	35	Contig19-10123	complement(join(210340..210852,210966..210980))		identified by computational approach (r.1)
orf19.171	DBP2	1	GTATGT	TACTAAC	1063	26	Contig19-10040	complement(join(12980..13353,14417..15731))		previously published annotation
orf19.1730	NHP10	1	GTATGT	TACTAAC	74	14	Contig19-10123	join(267503..267542,267617..268119,268118..268513)		previously published annotation
orf19.1738	UGP1	1	GTATGT	AACTAAC	140	17	Contig19-10124	join(7914..7958,8099..9556)		identified by computational approach (r.1)
orf19.18	IMD4	1	GTATGT	TACTAAC	247	19	Contig19-10014	complement(join(1292..2406,2654..3104))		previously published annotation
orf19.1848.1	YNL024C-A	1	GTATGT	TACTAAC	69	10	Contig19-10133	join(18645..18647,18717..18929)		previously published annotation
orf19.1856	SDS3	1	GTATGT	TACTAAC	93	24	Contig19-10133	complement(join(29434..30419,30513..30549))		previously published annotation
orf19.1860	LSC2	1	GTATGT	TACTAAC	391	15	Contig19-10133	join(33030..33062,33454..>33720)		previously published annotation
orf19.1874	MEK1	1	GTTAGT	TACTAAC	67	15	Contig19-10135	join(24460..25074,25142..25864)		previously published annotation
orf19.1955	SHR5	1	GTATGT	TACTAAC	74	11	Contig19-10137	complement(join(47705..47734,47809..48435))		identified by computational approach (r.1)
orf19.1967	IMG1	1	GTATGT	TACTAAC	64	14	Contig19-10137	join(89970..90048,90113..90576)		identified by computational approach (r.1)
orf19.201	CDC47	1	GTACGT	TACTAAC	74	26	Contig19-10045	complement(join(6435..6782,6857..7012))		correction to previously published annotation
orf19.2012	NOT3	1	GTATGT	TACTAAC	138	10	Contig19-10139	complement(join(50831..53066,53205..53227))		identified by debranchase approach
orf19.2018.1	--	1	GTATGT	TACTAAC	58	12	Contig19-10139	complement(join(63103..63221,63280..63475))		identified by computational approach (r.2); new gene
orf19.2031	VPS24	1	GTATGT	AACTAAC	71	13	Contig19-10139	join(81362..81409,81481..82104)		identified by computational approach (r.1)
orf19.2051	RPN4	1	GTATGT	TACTAAC	213	17	Contig19-10139	join(109813..109848,110062..112913)		identified by computational approach (r.1)
orf19.2066.1	ATP18	1	GTATGT	TACTAAC	257	16	Contig19-10139	join(138216..138279,138537..138667)		identified by computational approach (r.2); new gene
orf19.2070	RSC58	1	GTATGT	GACTAAC	73	14	Contig19-10139	complement(join(144199..145871,145945..145978))		identified by computational approach (r.1)
orf19.2089	NYV1	1	GTACGT	GTCTAAC	75	18	Contig19-10139	complement(172453..173270,173346..173373)		identified by S. cerevisiae candidate approach
orf19.2099	HIR1	1	GTATGT	AACTAAC	66	16	Contig19-10139	join(194685..194721,194788..197474)		identified by computational approach (r.1)
orf19.2107	MUQ1	1	GTATGT	TACTAAC	56	11	Contig19-10139	join(201774..201846,201903..202948)		identified by computational approach (r.1)
orf19.2167	RRP14	1	GTATGT	TACTAAC	83	20	Contig19-10141	join(10061..10078,10162..11514)		identified by computational approach (r.1)
orf19.2168.3	YOP1	1	GTATGT	TACTAAC	157	16	Contig19-10141	join(14370..14420,14578..15048)		previously published annotation
orf19.2173	MAF1	1	GTATGT	TACTAAC	185	19	Contig19-10141	complement(join(22663..23799,23985..23990))		previously published annotation
orf19.2179.2	RPS10A	1	GTATGT	TACTAAC	319	14	Contig19-10141	join(36075..36126,36446..36750)		previously published annotation
orf19.2232	RPL11B	1	GTATGT	TACTAAC	393	20	Contig19-10143	complement(join(7382..7903,8297..8299))		previously published annotation
orf19.2237.1	SLX9	1	GTATGT	TACTAAC	74	15	Contig19-10143	join(16152..16154,16229..16831)		identified by computational approach (r.2); new gene ^c
orf19.2257	YNR021W	1	GTATGT	TACTAAC	68	23	Contig19-10143	join(49305..49354,49423..49456,49457..50476)		previously published annotation
orf19.229	PSH1	1	GTATGT	TACTAAC	281	30	Contig19-10046	complement(join(810..2060,2342..2344))		identified by computational approach (r.1)
orf19.2309.2	RPL2A	1	GTATGT	TACTAAC	404	17	Contig19-10146	join(24017..24020,24425..25185)		previously published annotation
orf19.2310	YFR032C	1	GTAAAGT	TACTAAT	82	34	Contig19-10146	complement(join(25425..26220,26303..26403))		identified by computational approach (r.2) ¹
orf19.2310.1	RPL29	1	GTATGT	TACTAAC	200	15	Contig19-10146	complement(26739..26930)	complement(26935..27134)	identified by S. cerevisiae candidate approach
orf19.2311	RPL8A	1	GTATGT	AACTAAC	337	18	Contig19-10146	complement(27486..28265,28603..28605)		identified by debranchase approach

orf19 name	S. cerevisiae ortholog	intron #	5' splice site	branch site	intron length	bp-3'ss length	orf19 contig	orf19 ORF coordinates	coordinates of 5' UTR intron	source of annotation
orf19.2318.1	<i>YDR367W</i>	1	GTATGT	CACTAAC	70	20	Contig19-10146	complement(join(41755..42411,42482..42520))		previously published annotation
orf19.2322.3	<i>ERP5</i>	1	GTATGT	TACTAAC	62	13	Contig19-10146	join(44431..44652,44715..45149)		previously published annotation
orf19.2329.1	<i>RPS17B</i>	1	GTATGT	TACTAAC	379	20	Contig19-10146	complement(join(53676..54086,54466..54468))		previously published annotation
orf19.233.1	<i>HRT1</i>	1	GTATGT	TACTAAC	74	19	Contig19-10046	join(10141..10174,10249..10586)		previously published annotation
orf19.234	<i>PHA2</i>	1	GTATGT	TACTAAC	78	14	Contig19-10046	complement(join(10846..11724,11803..11853))		previously published annotation
orf19.2353	<i>TCB1</i>	1	GTATGT	TACTAAC	91	29	Contig19-10146	join(87525..87563,87655..89964)		identified by computational approach (r.1)
orf19.2360	<i>URA2</i>	1	GTATGT	TACTAAC	542	21	Contig19-10147	18892..25542	18182..18723	identified by debranchase approach
orf19.2379	<i>MOT2</i>	1	GTATGT	TATTAAC	82	19	Contig19-10148	join(2340..2389,2472..4152)		identified by computational approach (r.1)
orf19.2393	<i>YTH1</i>	1	GTAAGT	TACTAAC	58	11	Contig19-10148	join(18096..18742,18801..18838,18941..19647)		identified by computational approach (r.1)
orf19.2393	<i>YTH1</i>	2	GTATGT	TACTAAC	102	50	Contig19-10148	join(18096..18742,18801..18838,18941..19647)		identified by computational approach (r.1)
orf19.2397.3	<i>YGR127W</i>	1	GTATGT	TACTAAC	65	19	Contig19-10148	complement(join(28980..29761,29827..30061))		previously published annotation
orf19.2416.1	<i>MLC1</i>	1	GTATGT	TACTAAC	67	16	Contig19-10148	join(59549..59551,59619..60047)		previously published annotation
orf19.2423	<i>YBR239C</i>	1	GTATGT	TACTAAC	99	27	Contig19-10148	join(64359..64433,64533..66143)		previously published annotation
orf19.2425.2	<i>RPL28</i>	1	GTATGT	TACTAAC	351	17	Contig19-10148	join(68344..68392,68744..69144)		previously published annotation
orf19.2439.1	<i>QCR10</i>	1	GTATGT	TACTAAC	105	21	Contig19-10150	join(19684..19692,19798..20025)		previously published annotation
orf19.2478.1	<i>RPL7A</i>	1	GTATGT	TACTAAC	588	13	Contig19-10150	complement(join(94621..95247,95472..95562,96151..96158))		correction to previously published annotation
orf19.2478.1	<i>RPL7A</i>	2	GTATGT	TACTAAC	224	17	Contig19-10150	complement(join(94621..95247,95472..95562,96151..96158))		correction to previously published annotation
orf19.2480.1	<i>ATG8</i>	1	GTATGT	TACTAAC	174	10	Contig19-10150	complement(join(99257..99630,99715..99748))	complement(99763..99936)	identified by debranchase approach
orf19.2480.1	<i>ATG8</i>	2	GTATGT	TACTAAC	84	28	Contig19-10150	complement(join(99257..99630,99715..99748))		previously published annotation
orf19.2508	<i>NIP1</i>	1	GTAAGT	TATTAAC	72	22	Contig19-10150	complement(join(147974..149132,149205..149728))		identified by computational approach (r.1)
orf19.2533.1	<i>SBH1</i>	1	GTATGT	TGCTAAC	90	26	Contig19-10151	complement(join(22758..23042,23133..23135))		identified by computational approach (r.1)
orf19.2546	<i>TRP2</i>	1	GTATGT	AACTAAC	70	16	Contig19-10151	complement(join(40156..41718,41789..41794))		identified by computational approach (r.1)
orf19.255	--	1	GTATGT	TACTAAC	697	15	Contig19-10046	complement(43886..46402)	complement(46472..47168)	identified by computational approach (r.2) ^f
orf19.2583	<i>PTR2</i>	1	GTATGT	TACTAAC	84	14	Contig19-10151	complement(join(92289..92735,92820..94244))		previously published annotation
orf19.2584	<i>OPT1</i>	1	GCATGT	TACTAAC	58	15	Contig19-10151	join(96180..96194,96253..96978)		identified by computational approach (r.1) ^f
orf19.2598	<i>VMA4</i>	1	GTATGT	TACTAAC	68	13	Contig19-10151	complement(join(108576..109235,109304..109324))		previously published annotation
orf19.2613	<i>ECM4</i>	1	GTATGT	TACTAAC	81	35	Contig19-10151	join(141987..141995,142077..143072)		previously published annotation
orf19.2614	<i>RSR1</i>	1	GTATGT	TACTAAC	74	17	Contig19-10151	join(143735..143741,143816..144555)		previously published annotation
orf19.2621	<i>SMB1</i>	1	GTATGT	TACTAAC	73	26	Contig19-10152	join(930..932,1006..1380)		previously published annotation
orf19.263.1	<i>YDR210W</i>	1	GTATGT	TACTAAC	618	12	Contig19-10046	join(62090..62092,62711..62920)		identified by D. hansenii candidate approach; new gene
orf19.2639.1	<i>LSM7</i>	1	GTAAGT	TACTAAC	86	29	Contig19-10155	join(11435..11443,11530..11752,11823..11962)		previously published annotation
orf19.2639.1	<i>LSM7</i>	2	GTATGT	TACTAAC	70	18	Contig19-10155	join(11435..11443,11530..11752,11823..11962)		previously published annotation
orf19.27	<i>MIH1</i>	1	GTATGT	TACTAAC	63	18	Contig19-10014	join(20824..20886,20950..22131)		identified by computational approach (r.1)
orf19.2711.1	<i>SRB2</i>	1	GTATGT	TACTAAC	78	30	Contig19-10158	join(101375..101385,101464..102166)		previously published annotation
orf19.2713	<i>MSH5</i>	1	GTATGT	GACTAAC	64	18	Contig19-10158	complement(join(104754..106736,106801..107226))		identified by computational approach (r.1) ^f
orf19.2735	<i>SEN2</i>	1	GTATGT	TACTAAC	232	13	Contig19-10158	144474..145643	144225..144456	identified by debranchase approach
orf19.2770.1	<i>SOD1</i>	1	GTATGT	TACTAAC	245	28	Contig19-10158	join(231911..231923,232169..232620)		previously published annotation
orf19.2804	<i>MET18</i>	1	GTACGT	AACTAAC	93	17	Contig19-10160	complement(join(5585..6280,6374..6544))		identified by computational approach (r.1) ^f
orf19.2863.1	<i>ERV1</i>	1	GTAAGT	AACTAAC	59	12	Contig19-10161	complement(113684..114134,114194..114291)		identified by S. cerevisiae candidate approach
orf19.2864.1	<i>RPL28</i>	1	GTATGT	TACTAAC	352	17	Contig19-10161	complement(join(115954..116354,116707..116755))		previously published annotation
orf19.2876	<i>CBF1</i>	1	GTATGT	GACTAAC	279	30	Contig19-10162	complement(15566..16312,16592..16600)		identified by debranchase approach
orf19.2922	<i>HOP2</i>	1	GTATGT	TACTAAC	51	12	Contig19-10162	join(108710..109034,109086..109288)		previously published annotation
orf19.2929	<i>GSC2</i>	1	GTATGT	TACTAAC	1182	22	Contig19-10163	complement(8670..14363)	complement(14364..15545)	identified by debranchase approach
orf19.2935	<i>RPL10</i>	1	GTATGT	TACTAAC	347	21	Contig19-10163	24005..24667	23653..23999	identified by debranchase approach
orf19.2965.1	<i>YDL085C-A</i>	1	GTATGT	TACTAAC	105	20	Contig19-10163	join(83934..84075,84181..84230)		identified by computational approach (r.1); new gene
orf19.297	<i>DTD1</i>	1	GTATGT	CACTAAC	81	15	Contig19-10046	complement(112519..112945,113027..113091)		identified by S. cerevisiae candidate approach
orf19.2994.1	<i>RPS16B</i>	1	GTATGT	TACTAAC	327	20	Contig19-10163	join(134804..134824,135152..135559)		previously published annotation
orf19.3001	<i>TEM1</i>	1	GTATGT	TACTAAC	78	12	Contig19-10163	complement(join(144687..145254,145333..145367))		identified by computational approach (r.1)
orf19.3003	<i>TCB3</i>	1	GTATGT	TACTAAC	193	12	Contig19-10163	join(147830..147844,148038..152276)		previously published annotation
orf19.3003.1	<i>RPL6B</i>	1	GTATGT	TACTAAC	362	21	Contig19-10163	join(152791..152802,153165..153683)		previously published annotation
orf19.3007.2	<i>YLR326W</i>	1	GTATGT	TACTAAC	90	28	Contig19-10163	complement(join(159173..159802,159893..159928))		previously published annotation
orf19.3010.1	<i>ECM33</i>	1	GTATGT	TACTAAC	889	14	Contig19-10163	complement(164904..166114,167004..167064)		identified by S. cerevisiae candidate approach
orf19.3013	<i>CDC12</i>	1	GTATGT	TACTAAC	162	18	Contig19-10163	complement(join(175216..176368,176531..176571))		correction to previously published annotation
orf19.3014	<i>BMH2</i>	1	GTATGT	TACTAAC	743	14	Contig19-10163	complement(177807..178601)	complement(178687..179429)	identified by S. cerevisiae candidate approach
orf19.3021	<i>YMR114C</i>	1	GTATGT	TACTAAC	74	29	Contig19-10163	join(186634..186660,186735..187838)		previously published annotation
orf19.3055	<i>SRB4</i>	1	GTATGT	TACTAAC	67	11	Contig19-10163	join(244956..245029,245097..246720)		correction to previously published annotation
orf19.3123.2	<i>CDD1</i>	1	GTATGT	TGCTAAC	70	13	Contig19-10166	join(70806..70884,70955..70991,71058..71172,71240..71452)		correction to previously published annotation
orf19.3123.2	<i>CDD1</i>	2	GTATGT	GACTAAC	66	25	Contig19-10166	join(70806..70884,70955..70991,71058..71172,71240..71452)		correction to previously published annotation
orf19.3123.2	<i>CDD1</i>	3	GTATGT	TACTAAC	67	23	Contig19-10166	join(70806..70884,70955..70991,71058..71172,71240..71452)		previously published annotation
orf19.3140.1	<i>UMP1</i>	1	GTATGT	TACTAAC	68	15	Contig19-10166	join(108532..108534,108603..109049)		previously published annotation
orf19.3200	--	1	GTATGT	TACTAAC	55	12	Contig19-10170	join(77003..77272,77328..77663)		previously published annotation
orf19.3201	<i>HIMRA1</i>	1	GTATGT	TACTAAC	74	10	Contig19-10170	join(77768..77959,78034..78438)		previously published annotation
orf19.3211	<i>RFC3</i>	1	GTATGT	TACTAAT	71	15	Contig19-10171	complement(join(8054..9065,9137..9168))		identified by computational approach (r.1)
orf19.3223	<i>ATP3</i>	1	GTATGT	TACTAAC	256	34	Contig19-10172	complement(join(8999..9837,10094..10140))		identified by computational approach (r.1)

orf19 name	S. cerevisiae ortholog	intron #	5' splice site	branch site	intron length	bp-3'ss length	orf19 contig	orf19 ORF coordinates	coordinates of 5' UTR intron	source of annotation
orf19.3223.1	--	1	GTATGT	AACTAAC	81	30	Contig19-10172	complement(join(10935..11227,11309..11312))		identified by computational approach (r.1); new gene
orf19.3251	ARC19	1	GTACGT	TACTAAC	81	28	Contig19-10172	join(86979..86981,87063..87581)		identified by computational approach (r.1)
orf19.3273	YIH1	1	GTATGT	TACTAAC	91	28	Contig19-10172	join(131483..132181,132273..132464)		previously published annotation
orf19.3325.3	RPS21B	1	GTATGT	TACTAAC	377	15	Contig19-10173	complement(join(69682..69921,70299..70322))		previously published annotation
orf19.3351	DON1	1	GTACGT	AACTAAC	178	14	Contig19-10173	complement(125205..126057,126236..126258)		identified by debranchase approach
orf19.3354	RPS4B	1	GTATGT	CACTAAC	569	19	Contig19-10173	133040..133053,133623..134397		identified by debranchase approach
orf19.3366.1	PRM8	1	GTATGT	TACTAAC	276	20	Contig19-10174	join(9088..9144,9421..9615)		previously published annotation
orf19.337	VTI1	1	GTATGT	TACTAAC	123	68	Contig19-10046	complement(join(191403..191962,192086..192179))		identified by computational approach (r.1)
orf19.3396	HCH1	1	GTATGT	TACTAAC	83	14	Contig19-10176	join(8503..8528,8612..9044)		previously published annotation
orf19.3402	YDR051C	1	GTACGT	GACTAAC	67	10	Contig19-10176	join(13408..13425,13493..14593)		identified by computational approach (r.1)
orf19.3405	LYS14	1	GTATGT	TACTAAC	60	11	Contig19-10176	join(16931..17008,17069..18523)		correction to previously published annotation
orf19.3415.1	RPL32	1	GTATGT	TACTAAC	442	19	Contig19-10176	complement(join(37307..37701,38144..38144))		correction to previously published annotation
orf19.3421.1	ROX3	1	GTATGT	TACTAAC	78	23	Contig19-10176	complement(join(54915..55363,55442..55499))		previously published annotation
orf19.3426	HYP2	1	GTATGT	TACTAAC	717	23	Contig19-10176	complement(join(62706..63167,63885..63899))		identified by debranchase approach
orf19.3449.2	YHR100C	1	GTATGT	TACTAAC	90	19	Contig19-10176	join(127161..127376,127467..127868)		previously published annotation
orf19.3450.1	--	1	GTATGT	TACTAAC	80	21	Contig19-10176	join(128239..128481,128562..128978)		previously published annotation
orf19.3462	SAR1	1	GTATGT	TACTAAC	158	34	Contig19-10177	17044..17062,17221..17774		identified by S. cerevisiae candidate approach
orf19.3504	RPL23A	1	GTATGT	TACTAAC	515	23	Contig19-10181	join(18183..18224,18740..19111)		previously published annotation
orf19.3534	RHO3	1	GTATGT	TACTAAC	91	19	Contig19-10183	complement(join(20282..20883,20975..21005))		previously published annotation
orf19.3559	MRPS35	1	GTATGT	TACTAAC	282	24	Contig19-10183	complement(join(68572..69027,69310..69798))		previously published annotation
orf19.356	GTT1	1	GTATGT	AACTAAC	109	11	Contig19-10046	complement(join(232986..233736,233846..233886))		identified by computational approach (r.1)
orf19.3572.3	RPL31A	1	GTATGT	TACTAAC	482	21	Contig19-10183	join(87227..87280,87763..88047)		previously published annotation
orf19.3582	YIL064W	1	GTAAGT	CACTAAC	59	15	Contig19-10183	join(102038..102087,102147..102837)		identified by computational approach (r.1)
orf19.359	GTT1	1	GTATGT	TACTAAC	77	16	Contig19-10046	complement(join(236125..236845,236923..236951))		previously published annotation
orf19.3641	CAN1	1	GTATGT	TGCTAAC	96	11	Contig19-10185	join(576..787,884..933,1017..2455)		correction to previously published annotation
orf19.3641	CAN1	2	GTATGT	TACTAAC	83	14	Contig19-10185	join(576..787,884..933,1017..2455)		correction to previously published annotation
orf19.3642	SUN4	1	GTATGT	TACTAAC	1021	22	Contig19-10185	complement(2766..4022)	complement(4112..5132)	identified by debranchase approach
orf19.3648	MMS4	1	GTATGT	TACTAAC	85	17	Contig19-10185	join(25304..25419,25505..27152)		correction to previously published annotation
orf19.3663.1	YBL029C-A	1	GTATGT	TACTAAC	364	17	Contig19-10186	join(8149..8176,8541..8779)		identified by D. hansenii candidate approach; new gene
orf19.3690.2	RPL26A	1	GTATGA	TACTAAC	466	20	Contig19-10186	complement(join(69527..69891,70358..70376))		previously published annotation
orf19.3728	FUN21	1	GTATGT	TACTAAC	551	18	Contig19-10190	complement(join(17303..17442,17994..20556))		previously published annotation
orf19.3735	VPS45	1	GTATGT	TACTAAC	71	11	Contig19-10190	complement(join(31022..32170,32242..32349))		identified by computational approach (r.1)
orf19.3760	DMC1	1	GTACGT	TACTAAT	81	15	Contig19-10191	join(7740..7844,7926..8021,8081..8854)		identified by S. cerevisiae candidate approach
orf19.3760	DMC1	2	GTATGT	TATTAAC	59	9	Contig19-10191	join(7740..7844,7926..8021,8081..8854)		identified by S. cerevisiae candidate approach
orf19.377	GAS4	1	GTATGT	TACTAAC	52	11	Contig19-10048	join(12792..12902,12955..14307)		identified by computational approach (r.1)
orf19.3782.2	YCL057C-A	1	GTATGT	TACTAAC	168	16	Contig19-10192	27218..27481	27036..27203	identified by computational approach (r.1) ¹
orf19.3788.1	RPL30	1	GTCAGT	TACTAAC	181	21	Contig19-10192	complement(join(34267..34584,34766..34768))		correction to previously published annotation
orf19.3789	RPL24A	1	GTATGT	TACTAAC	352	19	Contig19-10192	35592..36059	35234..35585	identified by S. cerevisiae candidate approach
orf19.3838	EFB1	1	GTAAGT	TACTAAC	365	12	Contig19-10192	join(126450..126529,126895..127456)		previously published annotation
orf19.3856	CDC28	1	GTATGT	TACTAAC	91	10	Contig19-10193	17072..18025	16942..17032	identified by debranchase approach
orf19.393	APS3	1	GTATGT	TACTAAC	68	16	Contig19-10051	complement(20148..20653,20722..20743)		identified by S. cerevisiae candidate approach
orf19.3930	YUH1	1	GTATGA	TACTAAC	69	13	Contig19-10194	complement(join(58334..59236,59306..59344))		identified by computational approach (r.1)
orf19.3942.1	RPL43B	1	GTATGT	TACTAAC	371	23	Contig19-10194	complement(join(79721..79997,80369..80370))		correction to previously published annotation
orf19.3972	GOT1	1	GTATGT	TACTAAC	98	34	Contig19-10194	complement(142583..142980,143079..143103)		identified by S. cerevisiae candidate approach
orf19.4002	DUN1	1	GTATGT	TACTAAC	96	24	Contig19-10194	complement(join(205530..207101,207198..207218))		previously published annotation
orf19.4067	VTC3	1	GTATGT	TACTAAC	116	17	Contig19-10196	complement(join(5686..6048,6165..6314))		previously published annotation
orf19.4090.1	VMA21	1	GTATGT	TACTAAC	73	20	Contig19-10196	join(45722..45744,45818..46034)		previously published annotation
orf19.410.3	RIB4	1	GTATGT	TACTAAC	83	14	Contig19-10052	complement(join(1832..2283,2367..2535))		identified by computational approach (r.1)
orf19.412	SSH1	1	GTATGT	AACTAAC	110	23	Contig19-10052	join(6520..6529,6640..8129)		identified by computational approach (r.1)
orf19.4127	YSC84	1	GTATGT	TACTAAC	78	27	Contig19-2119	join(8640..8686,8765..10046)		previously published annotation
orf19.4132	SNA2	1	GTATGT	TACTAAC	68	12	Contig19-10198	join(3547..3589,3658..3866)		identified by computational approach (r.1)
orf19.4149.1	RPS11B	1	GTTTGT	TACTAAC	383	18	Contig19-10198	28097..28141,28525..28947		identified by S. cerevisiae candidate approach
orf19.4151	SPO1	1	GTACGT	TACTAAC	96	18	Contig19-10198	complement(30421..32463,32560..32751)		identified by S. cerevisiae candidate approach
orf19.4182	YLR426W	1	GTACGT	TACTAAC	67	13	Contig19-10200	complement(join(41512..42424,42492..42568))		identified by S. cerevisiae candidate approach
orf19.4192	CDC14	1	GTATGT	TACTAAC	75	15	Contig19-10201	complement(join(947..2529,2605..2650))		previously published annotation
orf19.4192.1	--	1	GTATGT	TATTAAC	76	13	Contig19-10201	join(256..258,335..796)		identified by D. hansenii candidate approach; new gene
orf19.4193	YDR063W	1	GTACGT	TACTAAC	64	18	Contig19-10201	join(3066..3068,3133..3229,3298..3550,3613..3670)		identified by computational approach (r.1)
orf19.4193	YDR063W	2	GTATGT	TACTAAC	68	14	Contig19-10201	join(3066..3068,3133..3229,3298..3550,3613..3670)		identified by computational approach (r.1)
orf19.4193	YDR063W	3	GTACGT	TACTAAC	62	11	Contig19-10201	join(3066..3068,3133..3229,3298..3550,3613..3670)		identified by computational approach (r.1)
orf19.4193.1	RPS13	1	GTATGT	TACTAAC	404	15	Contig19-10201	join(3953..3973,4378..4812)		previously published annotation
orf19.4195.1	FCY1	1	GTATGT	TACTAAC	70	16	Contig19-10201	complement(join(6714..7111,7182..7236))		previously published annotation
orf19.4239	ZIP2	1	GTATGT	TACTAAC	84	17	Contig19-10202	complement(join(38252..38287,38372..40267))		identified by computational approach (r.2) ¹
orf19.4257	BUD4	1	GTATGT	TACTAAC	435	32	Contig19-10202	74301..74424,74860..79871		identified by debranchase approach
orf19.4266	SPR28	1	GTATGT	TATTAAC	120	55	Contig19-10202	complement(join(93297..93825,93899..94118,94239..94671))		previously published annotation

orf19 name	S. cerevisiae ortholog	intron #	5' splice site	branch site	intron length	bp-3'ss length	orf19 contig	orf19 ORF coordinates	coordinates of 5' UTR intron	source of annotation
orf19.4266	<i>SPR28</i>	2	GTGAGT	TACTAAC	73	12	Contig19-10202	complement(join(93297..93825,93899..94118,94239..94671))		previously published annotation
orf19.4305.1	<i>LSM1</i>	1	GTATGT	TACTAAC	69	16	Contig19-10202	join(155835..155994,156064..156344)		previously published annotation
orf19.4340.1	<i>SMX3</i>	1	GTATGT	TACTAAC	74	19	Contig19-10202	complement(join(217271..217645,217720..217728))		previously published annotation
orf19.4375.1	<i>RPS30A</i>	1	GTATGT	TACTAAC	336	19	Contig19-10203	complement(join(60354..60542,60879..60881))		previously published annotation
orf19.4378	<i>PPH3</i>	1	GTATGT	TACTAAC	75	16	Contig19-10203	complement(join(67898..68801,68877..68893))		identified by computational approach (r.2)
orf19.4384	<i>HXT5</i>	1	GTATGT	TACTAAC	100	15	Contig19-10203	join(79888..80360,80461..81676)		previously published annotation
orf19.4393	<i>CIT2</i>	1	GTATGT	TACTAAC	93	13	Contig19-10203	join(95560..95649,95743..97056)		previously published annotation
orf19.4406	<i>NIF3</i>	1	GTATGT	TACTAAC	72	26	Contig19-10204	join(18355..18391,18464..19269)		identified by computational approach (r.1)
orf19.4413	<i>CMD1</i>	1	GTATGT	TACTAAC	222	17	Contig19-10204	join(30909..30911,31134..31580)		identified by debranchase approach
orf19.4437	<i>ISW1</i>	1	GTATGT	TACTAAC	70	18	Contig19-10205	complement(join(30548..33583,33654..33671))		previously published annotation
orf19.446.1	--	1	GTATGT	TACTAAC	102	18	Contig19-10052	join(70822..70858,70961..71154)		identified by D. hansenii candidate approach; new gene
orf19.446.2	--	1	GTATGT	TACTAAC	153	31	Contig19-10052	join(71882..71909,72063..72268)		identified by D. hansenii candidate approach; new gene
orf19.4524	<i>ASG1</i>	1	GTAAAGT	TACTAAC	78	16	Contig19-10209	join(1374..1432,1511..3557)		previously published annotation
orf19.4530.1	<i>CRP1</i>	1	GTATGT	TACTAAC	286	16	Contig19-10209	complement(join(15674..16745,17032..17060))		previously published annotation
orf19.4545	<i>SWI4</i>	1	GTATGT	TACTAAC	156	15	Contig19-10209	complement(42212..45229,45386..45427)		identified by debranchase approach
orf19.4575	<i>YPL109C</i>	1	GTTTGT	TACTAAC	150	23	Contig19-10212	20561..22479,22630..22765,22831..22875		identified by S. cerevisiae candidate approach
orf19.4575	<i>YPL109C</i>	2	GTACGT	TACTAAC	65	14	Contig19-10212	20561..22479,22630..22765,22831..22875		identified by S. cerevisiae candidate approach
orf19.4608	<i>PDC1</i>	1	GTATGT	TACTAAC	120	11	Contig19-10212	join(86155..86408,86529..88074)		previously published annotation
orf19.4623.3	<i>NHP6B</i>	1	GTTTGT	TACTAAC	224	19	Contig19-10212	112939..113217	112706..112929	identified by S. cerevisiae candidate approach
orf19.4632	<i>RPL20A</i>	1	GTATGT	TACTAAC	389	21	Contig19-10212	134257..134775	133864..134252	identified by debranchase approach
orf19.4647	<i>HAP3</i>	1	GTATGT	TACTAAC	119	44	Contig19-10212	complement(join(161723..162615,162735..162831))		identified by computational approach (r.1)
orf19.4660	<i>RPS6B</i>	1	GTATGT	TACTAAC	425	26	Contig19-10212	complement(join(193731..194435,194861..194866))		previously published annotation
orf19.4723	<i>FAD1</i>	1	GTATGT	TACTAAC	85	12	Contig19-10215	complement(join(4866..5484,5570..5802))		previously published annotation
orf19.4730	<i>YNL050C</i>	1	GTATGT	AACCTAAC	62	11	Contig19-10215	15857..15870,15933..16641		identified by S. cerevisiae candidate approach
orf19.4741	<i>MYO2</i>	1	GTACGT	TACTAAC	71	22	Contig19-10215	complement(join(36369..36495,36562..36620,36692..36952))		identified by computational approach (r.1)
orf19.4741	<i>MYO2</i>	2	GTAAAGT	TATTAAC	66	14	Contig19-10215	complement(join(36369..36495,36562..36620,36692..36952))		identified by computational approach (r.1)
orf19.4759	<i>COX5A</i>	1	GTATGT	TACTAAC	264	17	Contig19-10215	complement(80671..81168)	complement(81199..81462)	identified by computational approach (r.1) ¹
orf19.479.2	<i>SEC22</i>	1	GTATGT	TACTAAC	77	13	Contig19-10053	complement(join(36741..37357,37435..37468))		previously published annotation
orf19.4826	<i>IDH1</i>	1	GTATGT	TACTAAC	219	19	Contig19-10215	join(234719..234745,234965..236032)		correction to previously published annotation
orf19.4828	<i>DOA1</i>	1	GTATGT	TATTAAC	66	10	Contig19-10215	join(238649..238691,238758..240244)		identified by computational approach (r.1)
orf19.485	<i>CDC31</i>	1	GTATGT	TACTAAC	91	18	Contig19-10053	complement(join(43461..43495,43587..44154))		previously published annotation
orf19.4862.2	<i>PET100</i>	1	GTATGT	TACTAAC	101	18	Contig19-10215	join(289349..289408,289510..289773)		identified by computational approach (r.1)
orf19.4879.2	<i>NTF2</i>	1	GTATGT	TACTAAC	109	19	Contig19-10215	complement(join(326665..327032,327142..327148))		previously published annotation
orf19.4909.1	<i>RPL42B</i>	1	GTATGT	TACTAAC	358	19	Contig19-10215	complement(join(414309..414625,414984..414987))		previously published annotation
orf19.4922	<i>YIP5</i>	1	GTATGT	TACTAAC	90	16	Contig19-10216	complement(join(19850..20601,20697..20733,20824..20859))		identified by computational approach (r.1)
orf19.4922	<i>YIP5</i>	2	GTATGT	TACTAAC	95	24	Contig19-10216	complement(join(19850..20601,20697..20733,20824..20859))		identified by computational approach (r.1)
orf19.4931.1	<i>RPL14A</i>	1	GTATGT	TACTAAC	354	16	Contig19-10216	join(47235..47345,47700..47984)		previously published annotation
orf19.4952.1	<i>FPR2</i>	1	GTATGT	TACTAAC	107	29	Contig19-10216	join(100740..100833,100941..101302)		previously published annotation
orf19.4955	<i>SPS22</i>	1	GTACGT	TACTAAC	60	11	Contig19-10216	join(104100..104172,104233..105686)		identified by computational approach (r.1)
orf19.4967	<i>COX19</i>	1	GTATGT	TACTAAT	70	21	Contig19-10216	join(132842..132860,132931..133310)		identified by computational approach (r.1)
orf19.4969	<i>KEM1</i>	1	GTATGT	TACTAAC	72	16	Contig19-10216	complement(join(133497..138003,138076..138079))		identified by computational approach (r.1)
orf19.4998	<i>TEA1</i>	1	GTATGT	TACTAAC	66	15	Contig19-10216	join(200642..200688,200755..203683)		identified by computational approach (r.2)
orf19.5006.1	<i>SNC2</i>	1	GTATGT	TACTAAC	72	13	Contig19-10216	complement(join(216897..217145,217218..217304))		correction to previously published annotation
orf19.5007	<i>ACT1</i>	1	GTATGT	TACTAAC	661	16	Contig19-10216	join(218758..218767,219429..220546)		previously published annotation
orf19.5024	<i>GND2</i>	1	GTATGT	TACTAAC	700	15	Contig19-10216	complement(253289..254759,255460..255476)		identified by debranchase approach
orf19.5104	<i>LTP1</i>	1	GTATGT	TACTAAC	162	27	Contig19-10218	complement(join(110882..111323,111486..111550))		correction to previously published annotation
orf19.5137.1	<i>HHO1</i>	1	GTATGT	TACTAAC	164	26	Contig19-10219	join(27482..27568,27733..27943)		correction to previously published annotation ²
orf19.514	<i>LSM2</i>	1	GTATGT	TACTAAC	79	18	Contig19-10053	join(91490..91754,91834..91856)		previously published annotation
orf19.5147	<i>YLL007C</i>	1	GTATGT	AACCTAAC	75	22	Contig19-10219	complement(join(48065..49854,49930..49984))		identified by computational approach (r.1)
orf19.5212	<i>CST9</i>	1	GTATGT	TACTAAC	62	11	Contig19-10221	join(17706..17847,17910..18868)		previously published annotation
orf19.5225.2	<i>RPL27B</i>	1	GTATGT	TACTAAC	416	13	Contig19-10223	19782..19812,20229..20608		identified by S. cerevisiae candidate approach
orf19.5236	<i>SRT1</i>	1	GTATGT	TACTAAT	65	18	Contig19-10223	complement(join(39578..40282,40348..40587))		identified by computational approach (r.1)
orf19.5249	<i>MCD1</i>	1	GTACGT	GACTAAC	69	18	Contig19-10223	join(64010..64067,64137..64687)		identified by computational approach (r.1)
orf19.5282	<i>YHR131C</i>	1	GTATGT	TACTAAC	951	20	Contig19-10223	complement(124178..125620)	complement(125623..126573)	identified by debranchase approach
orf19.5342.1	<i>MTR2</i>	1	GTAAAGT	TATTAAC	57	14	Contig19-10225	complement(106384..106913,106971..106986)		identified by S. cerevisiae candidate approach
orf19.5348	<i>TSL1</i>	1	GTATGT	TACTAAC	62	12	Contig19-10225	join(112727..112749,112812..115812)		correction to previously published annotation ²
orf19.5364	<i>ECM2</i>	1	GTATGT	TACTAAC	186	12	Contig19-10225	130347..131258	130056..130241	identified by computational approach (r.1) ¹
orf19.5389	<i>FKH1</i>	1	GTATGT	TACTAAC	76	19	Contig19-10227	join(38239..39802,39879..40378)		identified by computational approach (r.1)
orf19.5394.1	<i>PET191</i>	1	GTATGT	TACTAAC	62	11	Contig19-10227	join(54651..54661,54724..55066)		previously published annotation
orf19.544.1	<i>PRE6</i>	1	GTATGT	TACTAAC	95	16	Contig19-10053	join(137523..137557,137653..137672,137762..138459)		previously published annotation
orf19.544.1	<i>PRE6</i>	2	GTATGT	TACTAAC	89	20	Contig19-10053	join(137523..137557,137653..137672,137762..138459)		previously published annotation
orf19.5486.1	<i>SMD2</i>	1	GTATGT	TACTAAC	77	25	Contig19-10228	join(14504..14508,14586..14919)		previously published annotation
orf19.5491.1	<i>ATP14</i>	1	GTATGT	TACTAAC	375	22	Contig19-10228	complement(join(21052..21360,21736..21753))		previously published annotation
orf19.5569	<i>SRC1</i>	1	GTACGA	TACTAAC	72	16	Contig19-10230	join(99929..102028,102101..102610)		correction to previously published annotation

orf19 name	S. cerevisiae ortholog	intron #	5' splice site	branch site	intron length	bp-3'ss length	orf19 contig	orf19 ORF coordinates	coordinates of 5' UTR intron	source of annotation
orf19.5628	<i>DIC1</i>	1	GTATGT	TACTAAC	120	16	Contig19-10230	join(210742..210773,210894..211791)		correction to previously published annotation
orf19.5647	<i>SUB2</i>	1	GTATGT	TACTAAC	79	16	Contig19-10231	complement(join(20148..21226,21306..21528))		previously published annotation
orf19.5653	<i>ATP2</i>	1	GTATGT	TACTAAC	410	24	Contig19-10231	26230..26348,26759..28154		identified by debranchase approach
orf19.5654	<i>STE24</i>	1	GTATGT	TACTAAC	53	10	Contig19-10231	join(28416..28433,28487..29806)		identified by computational approach (r.1)
orf19.5655	<i>TCB3</i>	1	GTATGT	TACTAAC	86	13	Contig19-10231	complement(join(29949..30612,30754..30757,30844..31480))		correction to previously published annotation
orf19.5655	<i>TCB3</i>	2	GTATGT	TACTAAC	141	17	Contig19-10231	complement(join(29949..30612,30754..30757,30844..31480))		correction to previously published annotation
orf19.5660	<i>PEX10</i>	1	GTATGT	TACTAAC	70	16	Contig19-10231	complement(join(36299..37167,37238..37277))		identified by computational approach (r.2)
orf19.567	<i>TFB3</i>	1	GTATGT	GACTAAC	60	11	Contig19-10057	complement(join(56..1119,1180..1198))		identified by computational approach (r.1)
orf19.57	<i>PSF2</i>	1	GTATGT	AACTAAC	84	24	Contig19-10020	complement(join(23451..23942,24027..24146))		identified by computational approach (r.1)
orf19.5732	<i>NOG2</i>	1	GTATGT	TACTAAC	601	15	Contig19-10233	join(53741..54550,55152..55943)		previously published annotation
orf19.5788	<i>EFT2</i>	1	GTATGT	TACTAAC	200	17	Contig19-10234	complement(join(20927..23451,23652..23655))		previously published annotation
orf19.5817	<i>BET3</i>	1	GTATGT	CACTAAC	79	11	Contig19-10234	complement(join(72163..72684,72764..72817))		identified by computational approach (r.1)
orf19.5844	<i>MEI5</i>	1	GTATGT	GACTGAC	73	16	Contig19-10235	join(5471..5513,5587..6098)		identified by D. hansenii candidate approach
orf19.5869	<i>BSD2</i>	1	GTATGT	TACTAAC	289	21	Contig19-10236	join(29651..29668,29958..31214)		previously published annotation
orf19.5870	<i>CTP1</i>	1	GTATGT	AACTAAC	71	20	Contig19-10236	complement(join(31435..32304,32376..32390))		previously published annotation
orf19.5876	<i>GAS2</i>	1	GTATGT	TACTAAC	63	14	Contig19-10236	complement(join(44975..45354,45418..45430))		identified by computational approach (r.1)
orf19.5886	<i>CUP5</i>	1	GTATGT	TACTAAC	298	30	Contig19-10236	join(56479..56492,56791..57259)		previously published annotation
orf19.5893	<i>RIP1</i>	1	GTATGT	TACTAAC	169	23	Contig19-10236	join(67066..67114,67284..67876)		previously published annotation
orf19.5894	<i>YEL023C</i>	1	GTATGT	TACTTAC	76	11	Contig19-10236	complement(join(68174..69386,69463..69878))		previously published annotation
orf19.5904	<i>RPL19B</i>	1	GTATGT	TACTAAC	436	20	Contig19-10236	complement(join(85733..86303,86740..86741))		previously published annotation
orf19.5917.3	<i>YRA1</i>	1	GTATGT	AACTAAC	903	23	Contig19-10236	join(118231..118503,119407..119817)		previously published annotation
orf19.5927	<i>RPS15</i>	1	GTATGT	TACTAAC	375	16	Contig19-10236	complement(join(136208..136623,136999..137011))		previously published annotation
orf19.5943.1	<i>STM1</i>	1	GTATGT	TACTAAC	474	16	Contig19-10236	complement(join(167591..168376,168851..168868))		previously published annotation
orf19.5954	<i>AMA1</i>	1	GTATGT	TACTAAC	88	31	Contig19-10236	join(188034..188964,189053..189654)		previously published annotation
orf19.596.2	<i>DAD4</i>	1	GTATGT	TACTAAC	85	11	Contig19-10057	complement(join(53679..53852,53938..53997))		identified by computational approach (r.2); new gene
orf19.5964.2	<i>RPL35B</i>	1	GTATGT	TACTAAC	440	23	Contig19-10236	join(212295..212297,212738..213097)		previously published annotation
orf19.5982	<i>RPL18B</i>	1	GTATGT	TACTAAC	459	18	Contig19-10236	complement(join(241012..241460,241920..242031))		previously published annotation
orf19.5985	<i>PAC10</i>	1	GTATGT	TACTAAC	54	10	Contig19-10236	complement(join(243461..244001,244056..244072))		previously published annotation
orf19.5996.1	<i>RPS19A</i>	1	GTATGT	TACTAAC	367	21	Contig19-10236	join(274709..274728,275096..275513)		previously published annotation
orf19.6008.3	<i>NST1</i>	1	GTATGT	TACTAAC	67	12	Contig19-10237	complement(join(859..1253,1321..1384))		previously published annotation
orf19.6010.1	<i>RPB11</i>	1	GTAAGT	TATTAAC	84	13	Contig19-10237	complement(join(8449..8770,8855..8907))		previously published annotation
orf19.6011	<i>SIN3</i>	1	GTATGT	TACTAAC	75	21	Contig19-10237	join(9459..9517,9593..9639,9704..9825,9911..10254,10434..14097)		correction to previously published annotation
orf19.6011	<i>SIN3</i>	2	GTATGT	TACTAAC	64	14	Contig19-10237	join(9459..9517,9593..9639,9704..9825,9911..10254,10434..14097)		correction to previously published annotation
orf19.6011	<i>SIN3</i>	3	GTATGT	TACTAAC	85	14	Contig19-10237	join(9459..9517,9593..9639,9704..9825,9911..10254,10434..14097)		previously published annotation
orf19.6011	<i>SIN3</i>	4	GTATGT	TACTAAC	179	23	Contig19-10237	join(9459..9517,9593..9639,9704..9825,9911..10254,10434..14097)		previously published annotation
orf19.6013	<i>YMR233W</i>	1	GTATGT	TACTAAC	86	19	Contig19-10237	complement(join(18778..18959,19046..19379))		previously published annotation
orf19.6034	<i>TUB2</i>	1	GTATGT	TACTAAC	215	22	Contig19-10237	join(74010..74021,74237..74272,74437..75738)		previously published annotation
orf19.6034	<i>TUB2</i>	2	GTATGT	TACTAAC	164	20	Contig19-10237	join(74010..74021,74237..74272,74437..75738)		previously published annotation
orf19.6062.3	<i>YFR011C</i>	1	GTATGT	TACTAAC	90	15	Contig19-10237	join(126323..126424,126515..126865)		previously published annotation
orf19.6063	<i>UBP6</i>	1	GTATGT	TACTAAC	77	15	Contig19-10237	complement(join(127025..128448,128526..128538))		identified by computational approach (r.1)
orf19.6105	<i>MVD1</i>	1	GTAAGT	TACTAAC	51	9	Contig19-10237	complement(join(184690..185739,185791..185829))		previously published annotation
orf19.6187	<i>SGM1</i>	1	GTATGT	TACTAAT	52	10	Contig19-2405	join(14422..15327,15386..16447)		identified by computational approach (r.1)
orf19.6198.1	<i>YIL156W-B</i>	1	GTATGT	AACTAAC	207	39	Contig19-10241	join(11723..11728,11936..12241)		identified by D. hansenii candidate approach
orf19.6199	<i>HCS1</i>	1	GTATGT	TACTAAC	525	16	Contig19-10241	13030..15189	12479..13003	identified by debranchase approach
orf19.6220.3	<i>MMF1</i>	1	GTATGT	TACTAAC	78	13	Contig19-10241	join(49716..49796,49875..49935,50025..50353)		correction to previously published annotation
orf19.6220.3	<i>MMF1</i>	2	GTACGT	TACTAAC	89	18	Contig19-10241	join(49716..49796,49875..49935,50025..50353)		correction to previously published annotation
orf19.6220.4	<i>RPL34B</i>	1	GTATGT	TACTAAC	442	18	Contig19-10241	join(50715..50751,51194..51525)		correction to previously published annotation
orf19.6222	<i>SPO22</i>	1	GTATGT	TACTAAC	60	12	Contig19-10241	join(51763..51811,51872..54480,54564..54651,54731..54814)		correction to previously published annotation
orf19.6222	<i>SPO22</i>	2	GTATGT	TATTAAC	83	36	Contig19-10241	join(51763..51811,51872..54480,54564..54651,54731..54814)		correction to previously published annotation ²
orf19.6222	<i>SPO22</i>	3	GTGAGT	TACTAAC	79	12	Contig19-10241	join(51763..51811,51872..54480,54564..54651,54731..54814)		correction to previously published annotation ²
orf19.6264.3	<i>YIP3</i>	1	GTATGT	TACTAAC	81	18	Contig19-10241	join(140769..140792,140874..141377)		previously published annotation
orf19.6264.4	<i>RPL39</i>	1	GTATGT	TACTAAC	231	19	Contig19-10241	complement(join(141794..141943,142175..142180))		previously published annotation
orf19.6265.1	<i>RPS14A</i>	1	GTATGT	TACTAAC	430	25	Contig19-10241	143321..143330,143761..144149		identified by S. cerevisiae candidate approach
orf19.6285	<i>GLC7</i>	1	GTATGT	TACTAAC	160	10	Contig19-10242	complement(4113..5105)	complement(5120..5279)	identified by debranchase approach
orf19.6286.2	<i>RPS27B</i>	1	GTATGT	TACTAAC	430	23	Contig19-10242	join(8088..8090,8521..8766)		previously published annotation
orf19.6313.2	<i>RDH54</i>	1	GTATGT	TACTAAC	76	19	Contig19-10244	complement(join(23273..23745,23822..23840))		previously published annotation
orf19.6340	<i>RPB5</i>	1	GTATGT	TACTAAC	304	26	Contig19-10246	join(344..418,723..1292)		previously published annotation
orf19.6358	<i>MMS2</i>	1	GTGAGT	TACTAAC	83	30	Contig19-10246	33368..33378,33462..33864		identified by S. cerevisiae candidate approach
orf19.6403.1	<i>RPP2B</i>	1	GTATGT	TACTAAC	345	11	Contig19-10247	complement(join(50708..51033,51379..51379))		previously published annotation
orf19.6405	<i>YOL048C</i>	1	GTATGT	AACTAAC	56	12	Contig19-10247	complement(53766..54605,54662..54718)		identified by S. cerevisiae candidate approach
orf19.6414.3	<i>TPM1</i>	1	GTATGT	TACTAAC	387	15	Contig19-10247	join(68876..68893,69281..69748)		previously published annotation
orf19.6415.1	<i>RPS29A</i>	1	GTATGT	TACTAAC	527	18	Contig19-10247	complement(73081..73251)	complement(73273..73799)	identified by S. cerevisiae candidate approach
orf19.6419.1	--	1	GTATGT	TACTAAC	88	30	Contig19-10247	complement(join(82792..83032,83121..83212))		identified by D. hansenii candidate approach; new gene
orf19.644	<i>HXT5</i>	1	GTATGT	TACTAAC	77	16	Contig19-10063	join(27278..28275,28353..28353,28463..28772,28838..29250)		previously published annotation

orf19 name	S. cerevisiae ortholog	intron #	5' splice site	branch site	intron length	bp-3'ss length	orf19 contig	orf19 ORF coordinates	coordinates of 5' UTR intron	source of annotation
orf19.644	<i>HXT5</i>	2	GTATGT	TACTAAC	109	28	Contig19-10063	join(27278..28275,28353..28353,28463..28772,28838..29250)		previously published annotation
orf19.644	<i>HXT5</i>	3	GTATGT	TACTAAC	65	16	Contig19-10063	join(27278..28275,28353..28353,28463..28772,28838..29250)		previously published annotation
orf19.645.1	<i>VMA13</i>	1	GTATGT	TACTAAC	67	22	Contig19-10063	complement(join(29564..30958,31026..31040))		previously published annotation
orf19.6458.1	<i>LSM4</i>	1	GTATGT	TATTAAAC	82	28	Contig19-10248	complement(join(15744..16133,16216..16218))		identified by computational approach (r.1)
orf19.6462	<i>YKL207W</i>	1	GTATGT	TACTAAC	92	18	Contig19-10248	join(23538..23695,23788..24415)		correction to previously published annotation
orf19.6507	<i>MAP2</i>	1	GTACGT	TACTAAC	61	14	Contig19-10248	complement(join(91811..92955,93017..93035))		identified by computational approach (r.1)
orf19.6534.2	<i>CRN1</i>	1	GTATGT	TACTAAC	154	20	Contig19-10248	join(154849..154853,155008..156905)		identified by direct inspection
orf19.6551.1	<i>STE18</i>	1	GTATGT	TACTAAC	68	19	Contig19-10248	join(182254..182375,182444..182594)		correction to previously published annotation
orf19.6559	<i>YNL108C</i>	1	GTACGT	TACTAAC	140	15	Contig19-10248	complement(join(200453..201004,201145..202050))		correction to previously published annotation
orf19.6563.1	<i>YJL062W-A</i>	1	GTAAGT	TACTAAC	71	17	Contig19-10248	complement(join(209010..209253,209325..209347))		correction to previously published annotation
orf19.6582	<i>PRE10</i>	1	GTATGT	TACTAAC	61	11	Contig19-10248	246427..246429,246491..246539,246615..247363		previously published annotation
orf19.6582	<i>PRE10</i>	2	GTATGT	TACTAAC	75	10	Contig19-10248	246427..246429,246491..246539,246615..247363		previously published annotation
orf19.6663	<i>RPS25A</i>	1	GTATGT	TACTAAC	353	18	Contig19-2472	complement(14151..14468)	complement(14470..14822)	identified by S. cerevisiae candidate approach
orf19.667.1	<i>RPL37B</i>	1	GTATGT	TACTAAC	352	23	Contig19-10064	complement(join(30351..30616,30969..30975))		previously published annotation
orf19.6696	<i>TIM9</i>	1	GTATGT	TACTAAC	100	23	Contig19-10253	complement(join(30757..30787,30888..31120))		identified by computational approach (r.1)
orf19.670.2	--	1	GTATGT	TACTAAC	82	21	Contig19-10064	join(37526..37556,37639..37838)		previously published annotation
orf19.6718	<i>PRP19</i>	1	GTATGT	GTCTAAC	55	13	Contig19-10254	join(12876..12925,12981..13683)		identified by computational approach (r.1)
orf19.6738	<i>VAN1</i>	1	GTATGT	TACTAAC	94	31	Contig19-10254	complement(join(52979..54374,54469..54533))		identified by computational approach (r.1)
orf19.6747	<i>YDR051C</i>	1	GTATGT	TACTAAC	67	17	Contig19-10254	complement(join(66129..67043,67111..67125))		identified by computational approach (r.1)
orf19.6753	<i>YBR062C</i>	1	GTATGT	TACTAAC	79	32	Contig19-10254	complement(72355..72917,72997..73012)		identified by S. cerevisiae candidate approach
orf19.6781	--	1	GTATGT	TACTAAC	162	60	Contig19-10254	join(116365..116433,116596..117945)		identified by computational approach (r.1) ²
orf19.6786	<i>SMC2</i>	1	GTATGT	TACTAAC	68	19	Contig19-10254	join(131495..131541,131610..133296)		identified by computational approach (r.2)
orf19.6787	<i>ERV14</i>	1	GTATGT	TACTAAC	260	19	Contig19-10254	complement(133623..134019,134280..134296)		identified by debranchase approach
orf19.68.2	<i>POP8</i>	1	GTACGT	AACCTAAC	86	19	Contig19-10025	complement(join(2664..2997,3084..3166))		identified by computational approach (r.1)
orf19.6822	<i>DCN1</i>	1	GTATGT	TACTAAC	186	11	Contig19-10254	join(215847..215849,216036..216923)		identified by debranchase approach
orf19.6833.2	<i>YIR035C</i>	1	GTATGT	TACTAAC	65	11	Contig19-10256	complement(join(85..809,875..911))		correction to previously published annotation
orf19.6837	<i>YIR035C</i>	1	GTACGT	TACTAAC	71	11	Contig19-10256	complement(join(1139..1863,1935..1971))		identified by computational approach (r.1)
orf19.6846	<i>PHO85</i>	1	GTATGT	TACTAAC	79	20	Contig19-10256	complement(join(16407..17385,17465..17484))		correction to previously published annotation
orf19.6854	<i>ATP1</i>	1	GTATGT	TACTAAC	288	17	Contig19-10256	join(32981..33055,33344..33486,33701..35123)		previously published annotation
orf19.6854	<i>ATP1</i>	2	GTATGT	TACTAAC	214	19	Contig19-10256	join(32981..33055,33344..33486,33701..35123)		correction to previously published annotation
orf19.6866	<i>SNP1</i>	1	GTAAGT	TACTAAC	76	17	Contig19-10257	complement(join(415..1455,1532..1534))		previously published annotation
orf19.687.1	<i>RPL25</i>	1	GTATGT	TACTAAC	445	20	Contig19-10064	complement(join(72589..73010,73456..73462))		previously published annotation
orf19.6873	<i>RPS8A</i>	1	GTATGT	TACTAAC	365	14	Contig19-10257	complement(14515..15135)	complement(15142..15506)	identified by S. cerevisiae candidate approach
orf19.6882.1	<i>RPL33A</i>	1	GTATGT	TACTAAC	456	13	Contig19-10257	complement(join(40038..40342,40799..40817))		correction to previously published annotation
orf19.6888	<i>AEP3</i>	1	GTATGC	TACTAAC	110	25	Contig19-10257	join(51070..51135,51246..52508)		identified by computational approach (r.1)
orf19.6891	<i>RFC1</i>	1	GTATGT	TACTAAC	65	15	Contig19-10257	complement(join(55314..57932,57998..58045))		previously published annotation
orf19.6906	<i>ASC1</i>	1	GTATGT	TACTAAC	259	19	Contig19-2485	join(27615..28142,28402..28827)		previously published annotation
orf19.6947	<i>GTT1</i>	1	GTATGT	TACTAAC	77	16	Contig19-10259	complement(join(40878..41598,41676..41704))		correction to previously published annotation
orf19.6975	<i>RPS0A</i>	1	GTATGT	TACTAAC	391	22	Contig19-2500	complement(join(26099..26794,27186..27275))		previously published annotation
orf19.6979	<i>MAM3</i>	1	GTATGT	TACTAAC	355	29	Contig19-2500	34815..37157	34382..34736	identified by computational approach (r.1) ¹
orf19.7006	<i>MUC1</i>	1	GTATGT	TACTAAC	73	21	Contig19-10262	join(17258..17281,17355..20615)		previously published annotation
orf19.7018	<i>RPS18A</i>	1	GTATGT	TACTAAC	428	21	Contig19-10262	complement(join(40829..41219,41648..41694))		previously published annotation
orf19.7025	<i>MCM1</i>	1	GTATGT	TACTAAC	282	10	Contig19-10262	55100..55888	54792..55073	identified by computational approach (r.1) ¹
orf19.703	<i>CPD1</i>	1	GTATGT	TGCTAAC	71	16	Contig19-10065	complement(join(35626..36362,36434..36437))		identified by computational approach (r.1)
orf19.7038	<i>MVP1</i>	1	GTATGT	TACTAAC	73	14	Contig19-10262	complement(join(90671..91710,91797..91867,91941..93064))		correction to previously published annotation
orf19.7038	<i>MVP1</i>	2	GTACGT	TACTAAC	86	19	Contig19-10262	complement(join(90671..91710,91797..91867,91941..93064))		correction to previously published annotation
orf19.7043.1	<i>ACB1</i>	1	GTATGT	GACTAAC	123	30	Contig19-10262	complement(join(100002..100235,100359..100385))		previously published annotation
orf19.7048.1	<i>RPS28B</i>	1	GTATGT	TATTAAAC	72	22	Contig19-10262	complement(join(112214..112414,112487..112489))		previously published annotation
orf19.7056	<i>DIP5</i>	1	GTATGT	TACTAAC	190	21	Contig19-10262	join(138258..138472,138663..140097)		previously published annotation
orf19.7076	<i>GBP2</i>	1	GTATGT	TGCTAAC	364	15	Contig19-10262	169742..169774,170139..171416		identified by direct inspection
orf19.7093	<i>STL1</i>	1	GTATGT	TACTAAC	65	10	Contig19-10262	join(198972..200357,200423..200695)		previously published annotation
orf19.7111.1	<i>SOD2</i>	1	GTATGT	TACTAAC	60	15	Contig19-10262	complement(join(227412..227927,227988..228092))		previously published annotation
orf19.7144	<i>HBS1</i>	1	GTATGT	TACTAAC	420	11	Contig19-2506	complement(join(16902..18379,18800..19034))		correction to previously published annotation
orf19.7157	<i>ECM17</i>	1	GTATGT	AACCTAAC	52	10	Contig19-2506	complement(join(49857..50608,50661..50676))		identified by computational approach (r.1)
orf19.7195	<i>RAD6</i>	1	GTATGT	TACTAAT	109	24	Contig19-2506	complement(join(93700..94132,94239..94303,94413..94454))		previously published annotation
orf19.7195	<i>RAD6</i>	2	GTACGT	GACTAAC	106	30	Contig19-2506	complement(join(93700..94132,94239..94303,94413..94454))		previously published annotation
orf19.7208	<i>SMK1</i>	1	GTATGT	TACTAAC	68	13	Contig19-2507	join(6595..6876,6945..7787)		previously published annotation
orf19.7215.3	<i>HSP10</i>	1	GTATGT	TACTAAC	61	12	Contig19-2507	join(23939..23941,24003..24320)		correction to previously published annotation
orf19.7239	<i>MDG1</i>	1	GTATGT	TACTAAC	248	17	Contig19-2507	complement(join(66941..68897,69146..69171))		correction to previously published annotation
orf19.7292	<i>ARP2</i>	1	GTATGT	TACTAAC	66	16	Contig19-2511	17856..17871,17938..19097		identified by S. cerevisiae candidate approach
orf19.7308	<i>TUB1</i>	1	GTATGT	TACTAAC	214	13	Contig19-2511	complement(join(47694..49015,49230..49254))		correction to previously published annotation
orf19.7335	<i>PRE8</i>	1	GTATGT	TACTAAC	147	16	Contig19-2511	join(91414..91457,91605..92316)		identified by computational approach (r.1)
orf19.7339	--	1	GTAAGT	TACTAAC	156	14	Contig19-2511	complement(join(105236..107751,107908..108166))		identified by computational approach (r.1)
orf19.7341	<i>TIR4</i>	1	GTATGT	TACTAAC	67	21	Contig19-2511	complement(join(109164..110125,110193..110211))		identified by computational approach (r.1)

orf19 name	S. cerevisiae ortholog	intron #	5' splice site	branch site	intron length	bp-3'ss length	orf19 contig	orf19 ORF coordinates	coordinates of 5' UTR intron	source of annotation
orf19.7360	<i>SGF11</i>	1	GTATGA	TACTAAC	114	29	Contig19-2513	complement(join(29678..30007,30122..30154))		identified by computational approach (r.1)
orf19.7380	<i>ARK1</i>	1	GTATGT	TACTAAC	711	26	Contig19-2513	complement(join(80967..81159,81871..83969))		previously published annotation
orf19.7382	<i>TEF4</i>	1	GTATGT	TACTAAC	229	24	Contig19-2513	join(98239..98437,98667..99706)		correction to previously published annotation
orf19.740	<i>HAP4</i>	1	GTATGT	TACTAAC	815	11	Contig19-10072	complement(7047..8170,8986..8992)		identified by debranchase approach
orf19.7428	<i>APN1</i>	1	GTATGT	TATTAAC	90	19	Contig19-2514	join(57371..57384,57475..58555)		identified by computational approach (r.1)
orf19.7436.1	<i>ECM15</i>	1	GTATGT	TACTAAT	134	23	Contig19-2514	complement(join(74292..74585,74720..74764))		previously published annotation
orf19.7466	<i>ACC1</i>	1	GTATGT	TACTAAC	384	15	Contig19-2516	complement(5410..12090)	complement(12176..12559)	identified by debranchase approach
orf19.7509.1	<i>ATP17</i>	1	GTATGT	TACTAAC	62	14	Contig19-2516	complement(join(104265..104510,104573..104635))		previously published annotation
orf19.7509.2	<i>LSM6</i>	1	GTATGT	TACTAAC	59	14	Contig19-2516	complement(join(104857..104879,104939..105158))		identified by computational approach (r.1)
orf19.7571	<i>UBC4</i>	1	GTATGT	TACTAAC	444	24	Contig19-2518	join(63330..63373,63818..64217)		correction to previously published annotation
orf19.7576	<i>YPT31</i>	1	GTATGT	AACTAAC	66	18	Contig19-2518	complement(join(73971..74275,74342..74429))		identified by computational approach (r.1)
orf19.7600	<i>SFA1</i>	1	GTAAGT	TACTAAC	204	23	Contig19-2518	complement(join(116135..117256,117461..117484))		previously published annotation
orf19.7626	<i>CDC33</i>	1	GTAAGT	TGCTAAC	60	14	Contig19-2518	159989..160618	159927..159986	identified by computational approach (r.1) ¹
orf19.791	<i>MRK1</i>	1	GTATGT	TACTAAC	777	23	Contig19-10076	complement(7645..8201,8979..9843)		identified by debranchase approach
orf19.798	<i>TAF14</i>	1	GTATGT	TACTAAC	118	18	Contig19-10076	20650..20658,20777..21559		identified by S. cerevisiae candidate approach
orf19.810	<i>HFM1</i>	1	GTATAT	TACTAAT	61	10	Contig19-10076	complement(39625..43310,43372..43429)		identified by S. cerevisiae candidate approach
orf19.827	<i>RPB4</i>	1	GTATGT	TACTAAC	81	27	Contig19-10076	complement(join(74174..74232,74314..74911))		identified by computational approach (r.2)
orf19.827.1	<i>RPL36A</i>	1	GTATGT	TACTAAC	425	22	Contig19-10076	complement(join(75331..75617,76043..76055))		previously published annotation
orf19.836.1	<i>SMX2</i>	1	GTATGT	TACTAAC	72	24	Contig19-10076	join(95593..95619,95692..95838,95923..95955,96028..96045)		identified by computational approach (r.1)
orf19.836.1	<i>SMX2</i>	2	GTATGT	TACTAAC	84	21	Contig19-10076	join(95593..95619,95692..95838,95923..95955,96028..96045)		identified by computational approach (r.1)
orf19.836.1	<i>SMX2</i>	3	GTATGT	TACTAAC	72	21	Contig19-10076	join(95593..95619,95692..95838,95923..95955,96028..96045)		identified by computational approach (r.1)
orf19.837.1	<i>INO4</i>	1	GTATGT	TACTGAC	84	16	Contig19-10076	join(98101..98232,98317..98577)		identified by computational approach (r.2); new gene
orf19.838.1	<i>RPS9B</i>	1	GTATGT	TTCTAAC	488	15	Contig19-10076	join(100883..100889,101378..101940)		previously published annotation
orf19.840	<i>RPL21A</i>	1	GTATGT	TACTAAC	330	17	Contig19-10076	join(102426..102436,102767..103238)		previously published annotation
orf19.873.1	<i>COX6</i>	1	GTATGT	TACTAAC	76	15	Contig19-10076	join(183400..183566,183643..183928)		previously published annotation
orf19.909.1	<i>ATP19</i>	1	GTATGT	TACTAAC	121	31	Contig19-10076	complement(join(250042..250069,250164..250312,250434..250481))		identified by computational approach (r.2); new gene
orf19.909.1	<i>ATP19</i>	2	GTATGT	TACTAAC	94	19	Contig19-10076	complement(join(250042..250069,250164..250312,250434..250481))		identified by computational approach (r.2); new gene
orf19.913.2	<i>QCR6</i>	1	GTATGT	TACTAAC	119	27	Contig19-10079	complement(join(1509..1859,1979..2035))		previously published annotation
orf19.944	<i>TOM1</i>	1	GTATGT	TGCTAAC	72	21	Contig19-10080	join(76446..76468,76541..77561)		identified by computational approach (r.1)
orf19.953.1	<i>COF1</i>	1	GTATGT	AACTAAC	128	16	Contig19-10080	complement(join(89783..90194,90298..90308,90437..90439))		previously published annotation
orf19.953.1	<i>COF1</i>	2	GTATGT	TACTAAC	103	29	Contig19-10080	complement(join(89783..90194,90298..90308,90437..90439))		previously published annotation

¹Confirmed by RT-PCR ²Confirmed by sequencing