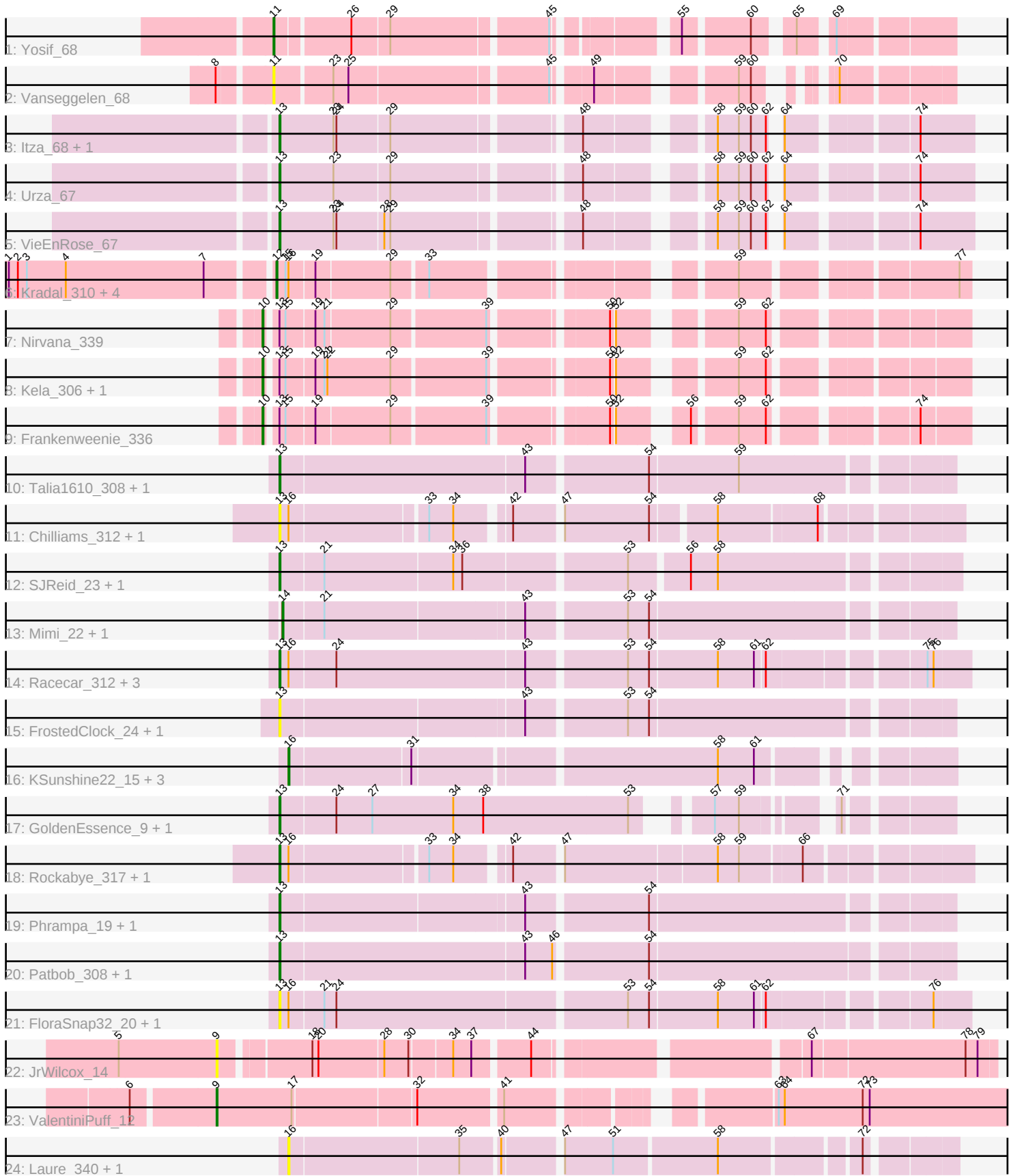


# Pham 328958



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 328958 Report

This analysis was run 09/05/26 on database version 662.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 328958 has 47 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Yosif\_68
- Track 2 : Vansëggelen\_68
- Track 3 : Itza\_68, Celia\_65
- Track 4 : Urza\_67
- Track 5 : VieEnRose\_67
- Track 6 : Kradal\_310, EhyElimayoE\_313, Quantum\_308, Satis\_310, Sarkar\_308
- Track 7 : Nirvana\_339
- Track 8 : Kela\_306, JustBecause\_308
- Track 9 : Frankenweenie\_336
- Track 10 : Talia1610\_308, Talia1610\_22
- Track 11 : Chilliams\_312, Chilliams\_21
- Track 12 : SJReid\_23, SJReid\_332
- Track 13 : Mimi\_22, Mimi\_307
- Track 14 : Racecar\_312, Bloom\_24, Bloom\_311, Racecar\_23
- Track 15 : FrostedClock\_24, FrostedClock\_309
- Track 16 : KSunshine22\_15, Ellewin\_14, KSunshine22\_307, Ellewin\_307
- Track 17 : GoldenEssence\_9, GoldenEssence\_290
- Track 18 : Rockabye\_317, Rockabye\_20
- Track 19 : Phrampa\_19, Phrampa\_303
- Track 20 : Patbob\_308, Patbob\_22
- Track 21 : FloraSnap32\_20, FloraSnap32\_305
- Track 22 : JrWilcox\_14
- Track 23 : ValentiniPuff\_12
- Track 24 : Laure\_340, Laure\_22

### ***Summary of Final Annotations (See graph section above for start numbers):***

The start number called the most often in the published annotations is 13, it was called in 18 of the 33 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bloom\_24, Bloom\_311, Celia\_65, Chilliams\_21, Chilliams\_312, FloraSnap32\_20, FloraSnap32\_305, FrostedClock\_24, FrostedClock\_309, GoldenEssence\_290, GoldenEssence\_9, Itza\_68, Patbob\_22, Patbob\_308, Phrampa\_19, Phrampa\_303, Racecar\_23, Racecar\_312, Rockabye\_20, Rockabye\_317, SJReid\_23, SJReid\_332, Talia1610\_22, Talia1610\_308, Urza\_67, VieEnRose\_67,

Genes that have the "Most Annotated" start but do not call it:

- Frankenweenie\_336, JustBecause\_308, Kela\_306, Nirvana\_339,

Genes that do not have the "Most Annotated" start:

- EhyElimayoE\_313, Ellewin\_14, Ellewin\_307, JrWilcox\_14, KSunshine22\_15, KSunshine22\_307, Kradal\_310, Laure\_22, Laure\_340, Mimi\_22, Mimi\_307, Quantum\_308, Sarkar\_308, Satis\_310, ValentiniPuff\_12, Vanseggelen\_68, Yosif\_68,

### Summary by start number:

Start 9:

- Found in 2 of 47 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 1 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JrWilcox\_14 (GL), ValentiniPuff\_12 (GL),

Start 10:

- Found in 4 of 47 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 4 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Frankenweenie\_336 (BM), JustBecause\_308 (BM), Kela\_306 (BM), Nirvana\_339 (BM),

Start 11:

- Found in 2 of 47 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 1 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Vanseggelen\_68 (BD3), Yosif\_68 (BD3),

Start 12:

- Found in 5 of 47 ( 10.6% ) of genes in pham
- Manual Annotations of this start: 5 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EhyElimayoE\_313 (BM), Kradal\_310 (BM), Quantum\_308 (BM), Sarkar\_308 (BM), Satis\_310 (BM),

Start 13:

- Found in 30 of 47 ( 63.8% ) of genes in pham
- Manual Annotations of this start: 18 of 33
- Called 86.7% of time when present
- Phage (with cluster) where this start called: Bloom\_24 (FC), Bloom\_311 (FC), Celia\_65 (BD6), Chilliams\_21 (FC), Chilliams\_312 (FC), FloraSnap32\_20 (FC), FloraSnap32\_305 (FC), FrostedClock\_24 (FC), FrostedClock\_309 (FC), GoldenEssence\_290 (FC), GoldenEssence\_9 (FC), Itza\_68 (BD6), Patbob\_22 (FC), Patbob\_308 (FC), Phrampa\_19 (FC), Phrampa\_303 (FC), Racecar\_23 (FC), Racecar\_312 (FC), Rockabye\_20 (FC), Rockabye\_317 (FC), SJReid\_23 (FC),

SJReid\_332 (FC), Talia1610\_22 (FC), Talia1610\_308 (FC), Urza\_67 (BD6), VieEnRose\_67 (BD6),

Start 14:

- Found in 2 of 47 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 2 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mimi\_22 (FC), Mimi\_307 (FC),

Start 16:

- Found in 21 of 47 ( 44.7% ) of genes in pham
- Manual Annotations of this start: 2 of 33
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Ellewin\_14 (FC), Ellewin\_307 (FC), KSunshine22\_15 (FC), KSunshine22\_307 (FC), Laure\_22 (UNK), Laure\_340 (UNK),

### **Summary by clusters:**

There are 6 clusters represented in this pham: UNK, BM, FC, BD6, BD3, GL,

Info for manual annotations of cluster BD3:

- Start number 11 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BD6:

- Start number 13 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster BM:

- Start number 10 was manually annotated 4 times for cluster BM.
- Start number 12 was manually annotated 5 times for cluster BM.

Info for manual annotations of cluster FC:

- Start number 13 was manually annotated 14 times for cluster FC.
- Start number 14 was manually annotated 2 times for cluster FC.
- Start number 16 was manually annotated 2 times for cluster FC.

Info for manual annotations of cluster GL:

- Start number 9 was manually annotated 1 time for cluster GL.

### **Gene Information:**

Gene: Bloom\_24 Start: 10896, Stop: 11540, Start Num: 13

Candidate Starts for Bloom\_24:

(Start: 13 @10896 has 18 MA's), (Start: 16 @10905 has 2 MA's), (24, 10950), (43, 11136), (53, 11229), (54, 11250), (58, 11316), (61, 11352), (62, 11361), (75, 11499), (76, 11505),

Gene: Bloom\_311 Start: 184371, Stop: 185015, Start Num: 13

Candidate Starts for Bloom\_311:

(Start: 13 @184371 has 18 MA's), (Start: 16 @184380 has 2 MA's), (24, 184425), (43, 184611), (53, 184704), (54, 184725), (58, 184791), (61, 184827), (62, 184836), (75, 184974), (76, 184980),

Gene: Celia\_65 Start: 44395, Stop: 43802, Start Num: 13

Candidate Starts for Celia\_65:

(Start: 13 @44395 has 18 MA's), (23, 44341), (24, 44338), (29, 44287), (48, 44119), (58, 44017), (59, 43996), (60, 43984), (62, 43969), (64, 43966), (74, 43855),

Gene: Chilliams\_312 Start: 183128, Stop: 183736, Start Num: 13

Candidate Starts for Chilliams\_312:

(Start: 13 @183128 has 18 MA's), (Start: 16 @183137 has 2 MA's), (33, 183266), (34, 183290), (42, 183335), (47, 183377), (54, 183461), (58, 183518), (68, 183611),

Gene: Chilliams\_21 Start: 10394, Stop: 11002, Start Num: 13

Candidate Starts for Chilliams\_21:

(Start: 13 @10394 has 18 MA's), (Start: 16 @10403 has 2 MA's), (33, 10532), (34, 10556), (42, 10601), (47, 10643), (54, 10727), (58, 10784), (68, 10877),

Gene: EhyElimayoE\_313 Start: 170133, Stop: 169549, Start Num: 12

Candidate Starts for EhyElimayoE\_313:

(1, 170385), (2, 170376), (3, 170367), (4, 170328), (7, 170190), (Start: 12 @170133 has 5 MA's), (15, 170124), (Start: 16 @170121 has 2 MA's), (19, 170097), (29, 170025), (33, 169992), (59, 169746), (77, 169560),

Gene: Ellewin\_14 Start: 6471, Stop: 7067, Start Num: 16

Candidate Starts for Ellewin\_14:

(Start: 16 @6471 has 2 MA's), (31, 6588), (58, 6873), (61, 6909),

Gene: Ellewin\_307 Start: 185585, Stop: 186181, Start Num: 16

Candidate Starts for Ellewin\_307:

(Start: 16 @185585 has 2 MA's), (31, 185702), (58, 185987), (61, 186023),

Gene: FloraSnap32\_20 Start: 9658, Stop: 10302, Start Num: 13

Candidate Starts for FloraSnap32\_20:

(Start: 13 @9658 has 18 MA's), (Start: 16 @9667 has 2 MA's), (21, 9700), (24, 9712), (53, 9991), (54, 10012), (58, 10078), (61, 10114), (62, 10123), (76, 10267),

Gene: FloraSnap32\_305 Start: 183796, Stop: 184440, Start Num: 13

Candidate Starts for FloraSnap32\_305:

(Start: 13 @183796 has 18 MA's), (Start: 16 @183805 has 2 MA's), (21, 183838), (24, 183850), (53, 184129), (54, 184150), (58, 184216), (61, 184252), (62, 184261), (76, 184405),

Gene: Frankenweenie\_336 Start: 182525, Stop: 181935, Start Num: 10

Candidate Starts for Frankenweenie\_336:

(Start: 10 @182525 has 4 MA's), (Start: 13 @182516 has 18 MA's), (15, 182510), (19, 182483), (29, 182411), (39, 182321), (50, 182222), (52, 182219), (56, 182168), (59, 182129), (62, 182102), (74, 181982),

Gene: FrostedClock\_24 Start: 10424, Stop: 11053, Start Num: 13

Candidate Starts for FrostedClock\_24:

(Start: 13 @10424 has 18 MA's), (43, 10658), (53, 10751), (54, 10772),

Gene: FrostedClock\_309 Start: 184224, Stop: 184853, Start Num: 13

Candidate Starts for FrostedClock\_309:

(Start: 13 @184224 has 18 MA's), (43, 184458), (53, 184551), (54, 184572),

Gene: GoldenEssence\_9 Start: 5099, Stop: 5680, Start Num: 13

Candidate Starts for GoldenEssence\_9:

(Start: 13 @5099 has 18 MA's), (24, 5153), (27, 5189), (34, 5270), (38, 5300), (53, 5444), (57, 5489), (59, 5513), (71, 5585),

Gene: GoldenEssence\_290 Start: 175652, Stop: 176233, Start Num: 13

Candidate Starts for GoldenEssence\_290:

(Start: 13 @175652 has 18 MA's), (24, 175706), (27, 175742), (34, 175823), (38, 175853), (53, 175997), (57, 176042), (59, 176066), (71, 176138),

Gene: Itza\_68 Start: 44328, Stop: 43735, Start Num: 13

Candidate Starts for Itza\_68:

(Start: 13 @44328 has 18 MA's), (23, 44274), (24, 44271), (29, 44220), (48, 44052), (58, 43950), (59, 43929), (60, 43917), (62, 43902), (64, 43899), (74, 43788),

Gene: JrWilcox\_14 Start: 10405, Stop: 11100, Start Num: 9

Candidate Starts for JrWilcox\_14:

(5, 10309), (Start: 9 @10405 has 1 MA's), (18, 10486), (20, 10492), (28, 10555), (30, 10579), (34, 10618), (37, 10636), (44, 10687), (67, 10924), (78, 11071), (79, 11083),

Gene: JustBecause\_308 Start: 166368, Stop: 165775, Start Num: 10

Candidate Starts for JustBecause\_308:

(Start: 10 @166368 has 4 MA's), (Start: 13 @166359 has 18 MA's), (15, 166353), (19, 166326), (21, 166317), (22, 166314), (29, 166251), (39, 166161), (50, 166062), (52, 166059), (59, 165969), (62, 165942),

Gene: KSunshine22\_15 Start: 6996, Stop: 7592, Start Num: 16

Candidate Starts for KSunshine22\_15:

(Start: 16 @6996 has 2 MA's), (31, 7113), (58, 7398), (61, 7434),

Gene: KSunshine22\_307 Start: 183897, Stop: 184493, Start Num: 16

Candidate Starts for KSunshine22\_307:

(Start: 16 @183897 has 2 MA's), (31, 184014), (58, 184299), (61, 184335),

Gene: Kela\_306 Start: 167263, Stop: 166670, Start Num: 10

Candidate Starts for Kela\_306:

(Start: 10 @167263 has 4 MA's), (Start: 13 @167254 has 18 MA's), (15, 167248), (19, 167221), (21, 167212), (22, 167209), (29, 167146), (39, 167056), (50, 166957), (52, 166954), (59, 166864), (62, 166837),

Gene: Kradal\_310 Start: 170130, Stop: 169546, Start Num: 12

Candidate Starts for Kradal\_310:

(1, 170382), (2, 170373), (3, 170364), (4, 170325), (7, 170187), (Start: 12 @170130 has 5 MA's), (15, 170121), (Start: 16 @170118 has 2 MA's), (19, 170094), (29, 170022), (33, 169989), (59, 169743), (77, 169557),

Gene: Laure\_340 Start: 178108, Stop: 178713, Start Num: 16

Candidate Starts for Laure\_340:

(Start: 16 @178108 has 2 MA's), (35, 178273), (40, 178309), (47, 178360), (51, 178408), (58, 178507), (72, 178633),

Gene: Laure\_22 Start: 9760, Stop: 10365, Start Num: 16

Candidate Starts for Laure\_22:

(Start: 16 @9760 has 2 MA's), (35, 9925), (40, 9961), (47, 10012), (51, 10060), (58, 10159), (72, 10285),

Gene: Mimi\_22 Start: 10326, Stop: 10952, Start Num: 14

Candidate Starts for Mimi\_22:

(Start: 14 @10326 has 2 MA's), (21, 10365), (43, 10557), (53, 10650), (54, 10671),

Gene: Mimi\_307 Start: 182986, Stop: 183612, Start Num: 14

Candidate Starts for Mimi\_307:

(Start: 14 @182986 has 2 MA's), (21, 183025), (43, 183217), (53, 183310), (54, 183331),

Gene: Nirvana\_339 Start: 185496, Stop: 184906, Start Num: 10

Candidate Starts for Nirvana\_339:

(Start: 10 @185496 has 4 MA's), (Start: 13 @185487 has 18 MA's), (15, 185481), (19, 185454), (21, 185445), (29, 185382), (39, 185292), (50, 185193), (52, 185190), (59, 185100), (62, 185073),

Gene: Patbob\_308 Start: 186305, Stop: 186943, Start Num: 13

Candidate Starts for Patbob\_308:

(Start: 13 @186305 has 18 MA's), (43, 186545), (46, 186572), (54, 186659),

Gene: Patbob\_22 Start: 10846, Stop: 11484, Start Num: 13

Candidate Starts for Patbob\_22:

(Start: 13 @10846 has 18 MA's), (43, 11086), (46, 11113), (54, 11200),

Gene: Phrampa\_19 Start: 8984, Stop: 9613, Start Num: 13

Candidate Starts for Phrampa\_19:

(Start: 13 @8984 has 18 MA's), (43, 9218), (54, 9332),

Gene: Phrampa\_303 Start: 185355, Stop: 185984, Start Num: 13

Candidate Starts for Phrampa\_303:

(Start: 13 @185355 has 18 MA's), (43, 185589), (54, 185703),

Gene: Quantum\_308 Start: 170124, Stop: 169540, Start Num: 12

Candidate Starts for Quantum\_308:

(1, 170376), (2, 170367), (3, 170358), (4, 170319), (7, 170181), (Start: 12 @170124 has 5 MA's), (15, 170115), (Start: 16 @170112 has 2 MA's), (19, 170088), (29, 170016), (33, 169983), (59, 169737), (77, 169551),

Gene: Racecar\_312 Start: 184605, Stop: 185249, Start Num: 13

Candidate Starts for Racecar\_312:

(Start: 13 @184605 has 18 MA's), (Start: 16 @184614 has 2 MA's), (24, 184659), (43, 184845), (53, 184938), (54, 184959), (58, 185025), (61, 185061), (62, 185070), (75, 185208), (76, 185214),

Gene: Racecar\_23 Start: 10896, Stop: 11540, Start Num: 13

Candidate Starts for Racecar\_23:

(Start: 13 @10896 has 18 MA's), (Start: 16 @10905 has 2 MA's), (24, 10950), (43, 11136), (53, 11229), (54, 11250), (58, 11316), (61, 11352), (62, 11361), (75, 11499), (76, 11505),

Gene: Rockabye\_317 Start: 182778, Stop: 183401, Start Num: 13

Candidate Starts for Rockabye\_317:

(Start: 13 @182778 has 18 MA's), (Start: 16 @182787 has 2 MA's), (33, 182916), (34, 182940), (42, 182985), (47, 183027), (58, 183174), (59, 183195), (66, 183252),

Gene: Rockabye\_20 Start: 10165, Stop: 10788, Start Num: 13

Candidate Starts for Rockabye\_20:

(Start: 13 @10165 has 18 MA's), (Start: 16 @10174 has 2 MA's), (33, 10303), (34, 10327), (42, 10372), (47, 10414), (58, 10561), (59, 10582), (66, 10639),

Gene: SJReid\_23 Start: 10577, Stop: 11209, Start Num: 13

Candidate Starts for SJReid\_23:

(Start: 13 @10577 has 18 MA's), (21, 10619), (34, 10745), (36, 10754), (53, 10907), (56, 10961), (58, 10988),

Gene: SJReid\_332 Start: 183416, Stop: 184048, Start Num: 13

Candidate Starts for SJReid\_332:

(Start: 13 @183416 has 18 MA's), (21, 183458), (34, 183584), (36, 183593), (53, 183746), (56, 183800), (58, 183827),

Gene: Sarkar\_308 Start: 170174, Stop: 169590, Start Num: 12

Candidate Starts for Sarkar\_308:

(1, 170426), (2, 170417), (3, 170408), (4, 170369), (7, 170231), (Start: 12 @170174 has 5 MA's), (15, 170165), (Start: 16 @170162 has 2 MA's), (19, 170138), (29, 170066), (33, 170033), (59, 169787), (77, 169601),

Gene: Satis\_310 Start: 170467, Stop: 169883, Start Num: 12

Candidate Starts for Satis\_310:

(1, 170719), (2, 170710), (3, 170701), (4, 170662), (7, 170524), (Start: 12 @170467 has 5 MA's), (15, 170458), (Start: 16 @170455 has 2 MA's), (19, 170431), (29, 170359), (33, 170326), (59, 170080), (77, 169894),

Gene: Talia1610\_308 Start: 184802, Stop: 185437, Start Num: 13

Candidate Starts for Talia1610\_308:

(Start: 13 @184802 has 18 MA's), (43, 185042), (54, 185156), (59, 185243),

Gene: Talia1610\_22 Start: 10330, Stop: 10965, Start Num: 13

Candidate Starts for Talia1610\_22:

(Start: 13 @10330 has 18 MA's), (43, 10570), (54, 10684), (59, 10771),

Gene: Urza\_67 Start: 44349, Stop: 43756, Start Num: 13

Candidate Starts for Urza\_67:

(Start: 13 @44349 has 18 MA's), (23, 44295), (29, 44241), (48, 44073), (58, 43971), (59, 43950), (60, 43938), (62, 43923), (64, 43920), (74, 43809),

Gene: ValentiniPuff\_12 Start: 9427, Stop: 10167, Start Num: 9

Candidate Starts for ValentiniPuff\_12:

(6, 9349), (Start: 9 @9427 has 1 MA's), (17, 9502), (32, 9619), (41, 9697), (63, 9913), (64, 9919), (72, 9997), (73, 10003),

Gene: Vanseggelen\_68 Start: 43163, Stop: 42615, Start Num: 11

Candidate Starts for Vanseggelen\_68:

(8, 43202), (Start: 11 @43163 has 1 MA's), (23, 43109), (25, 43094), (45, 42908), (49, 42878), (59, 42767), (60, 42755), (70, 42716),

Gene: VieEnRose\_67 Start: 44202, Stop: 43609, Start Num: 13

Candidate Starts for VieEnRose\_67:

(Start: 13 @44202 has 18 MA's), (23, 44148), (24, 44145), (28, 44100), (29, 44094), (48, 43926), (58, 43824), (59, 43803), (60, 43791), (62, 43776), (64, 43773), (74, 43662),

Gene: Yosif\_68 Start: 44529, Stop: 43960, Start Num: 11

Candidate Starts for Yosif\_68:

(Start: 11 @44529 has 1 MA's), (26, 44460), (29, 44424), (45, 44277), (55, 44184), (60, 44124), (65, 44094), (69, 44067),