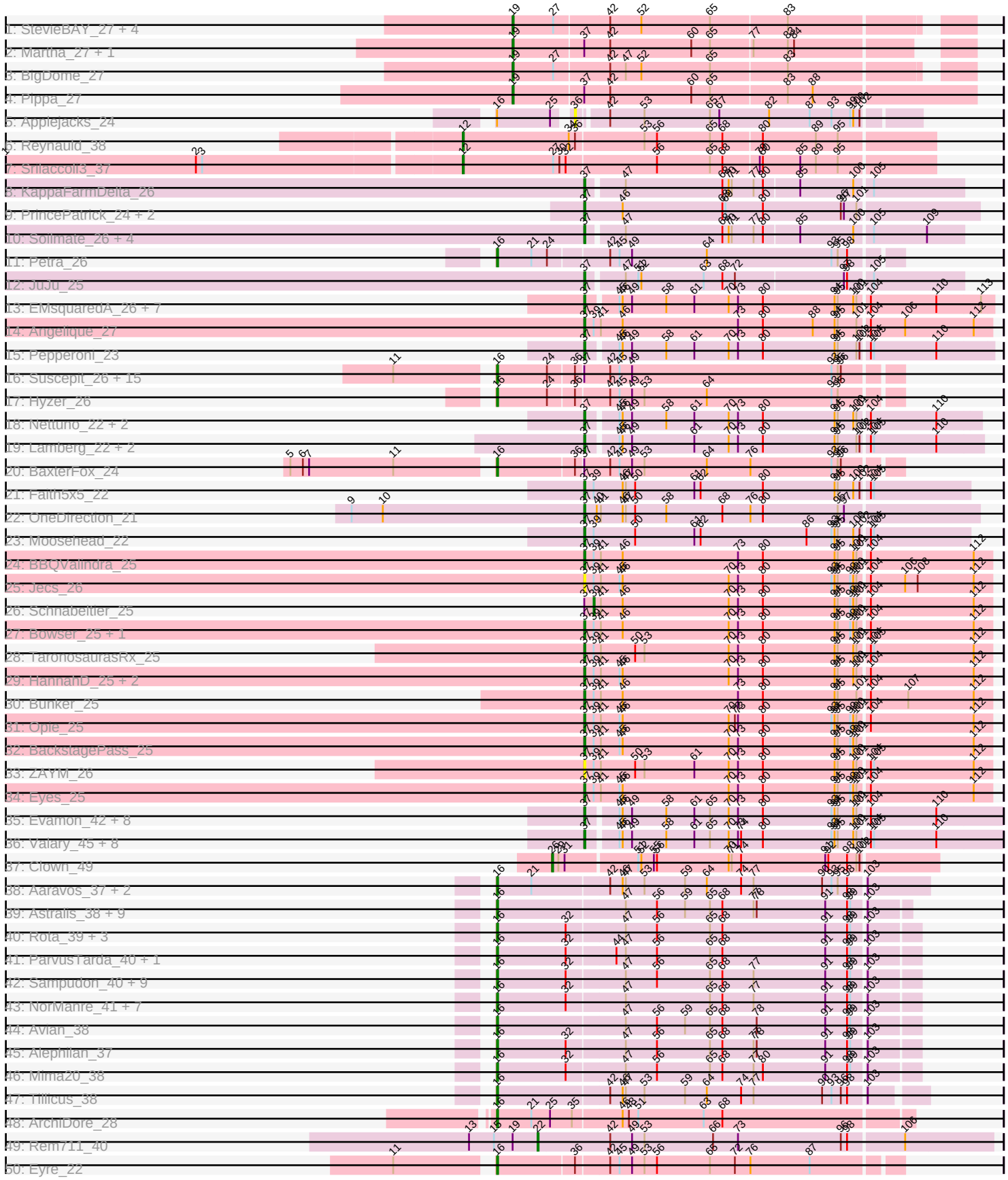
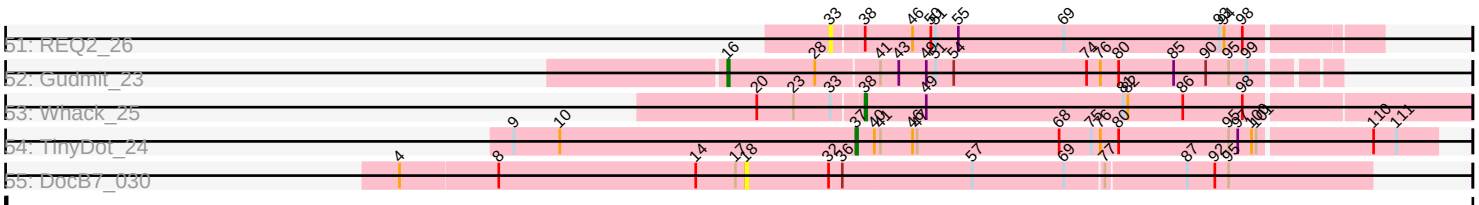
Pham 347363


1: StevieBAY_27 + 4
2: Martha_27 + 1
3: BigDome_27
4: Pippa_27
5: Applejacks_24
6: Reynauld_38
7: Smiaccoli3_37
8: KappaFarmDelta_26
9: PrincePatrick_24 + 2
10: Solimate_26 + 4
11: Petra_26
12: JuJu_25
13: EMsquaredA_26 + 7
14: Angelique_27
15: Pepperoni_23
16: Suscepit_26 + 15
17: Hyzer_26
18: Nettuno_22 + 2
19: Lamberg_22 + 2
20: BaxterFox_24
21: Faith5x5_22
22: OneDirection_21
23: Moosehead_22
24: BBQValindra_25
25: Jecs_26
26: Schnabeltier_25
27: Bowser_25 + 1
28: TaronosaurasRx_25
29: HannahD_25 + 2
30: Bunker_25
31: Opie_25
32: BackstagePass_25
33: ZAYM_26
34: Eyes_25
35: Evamon_42 + 8
36: Valary_45 + 8
37: Clown_49
38: Aaravos_37 + 2
39: Astralis_38 + 9
40: Rota_39 + 3
41: ParvusTarda_40 + 1
42: Sampudon_40 + 9
43: NorManre_41 + 7
44: Avian_38
45: Alephilan_37
46: Mima20_38
47: Tilicus_38
48: ArchiDore_28
49: Rem711_40
50: Eyre_22

Pham 347363



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 347363 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347363 has 142 members, 12 are drafts.

Phages represented in each track:
• Track 1 : StevieBAY_27, BarretLemon_27, GravityBall_27, Timinator_27, LeeroyJ_27
• Track 2 : Martha_27, BossLady_27
• Track 3 : BigDome_27
• Track 4 : Pippa_27
• Track 5 : Applejacks_24
• Track 6 : Reynauld_38
• Track 7 : Srilaccoli3_37
• Track 8 : KappaFarmDelta_26
• Track 9 : PrincePatrick_24, William_25, Fairfaxidum_24
• Track 10 : Soilmate_26, CarolAnn_25, Obliviate_24, ZiggyZoo_24, Blino_25
• Track 11 : Petra_26
• Track 12 : JuJu_25
• Track 13 : EMsquaredA_26, Pollux_26, Marteena_26, BritBrat_26, Lilas_26, Floral_26, Bradissa_26, EnalisNailo_26
• Track 14 : Angelique_27
• Track 15 : Pepperoni_23
• Track 16 : Suscepit_26, Zameen_26, BoyNamedSue_25, Dillpickles_27, AlumE_25, Neobush_26, Antonio_26, Agueybana_25, PantheRoc_25, Maridalia_25, Manasvini_26, Eudoria_26, Trumpet_26, Tayonia_26, Yeezy_26, Kita_26
• Track 17 : Hyzer_26
• Track 18 : Nettuno_22, Matteo_22, Pickett_22
• Track 19 : Lamberg_22, EdnaMode_22, Lton_22
• Track 20 : BaxterFox_24
• Track 21 : Faith5x5_22
• Track 22 : OneDirection_21
• Track 23 : Moosehead_22
• Track 24 : BBQValindra_25
• Track 25 : Jecs_26
• Track 26 : Schnabeltier_25
• Track 27 : Bowser_25, MagicMan_25
• Track 28 : TaronosaurasRx_25
• Track 29 : HannahD_25, NaLuna_25, GEazy_25
• Track 30 : Bunker_25
• Track 31 : Opie_25
• Track 32 : BackstagePass_25
• Track 33 : ZAYM_26

• Track 34 : Eyes_25
• Track 35 : Evamon_42, Portcullis_44, Jambalaya_43, Halo3_43, Twister6_45, JohnPork_44, Salvador_42, Danyall_45, Savbucketdawg_43
• Track 36 : Valary_45, KimmyK_44, Wizard_42, Arri_46, RogerDodger_46, CoveyB_46, Gezellig_42, CherryCola_45, VanDeWege_46
• Track 37 : Clown_49
• Track 38 : Aaravos_37, Apeppi_37, LuckyLeo_39
• Track 39 : Astralis_38, NovaSharks_40, Riduram_38, Charminar_38, Alyssamiracle_41, Jamemuya19_38, RazorC_39, Rumi_40, Genamy16_41, Stormer_39
• Track 40 : Rota_39, Lila22_39, Erutan_40, Wojtek_39
• Track 41 : ParvusTarda_40, BirthdayBoy_41
• Track 42 : Sampudon_40, MoiGyank_42, Yikes_41, OtterstedtS21_40, Ranch_40, GretelLyn_40, Jalebi_39, Sadboi_41, Lambo_40, Pywacket_39
• Track 43 : NorManre_41, GOATification_41, Fulcrum_41, Gibbin_41, DoobyDoo_39, DaviePasture_40, Patos_41, Zany_39
• Track 44 : Avian_38
• Track 45 : Alephilan_37
• Track 46 : Mima20_38
• Track 47 : Tillicus_38
• Track 48 : ArchiDore_28
• Track 49 : Rem711_40
• Track 50 : Eyre_22
• Track 51 : REQ2_26
• Track 52 : Gudmit_23
• Track 53 : Whack_25
• Track 54 : TinyDot_24
• Track 55 : DocB7_030

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

The start number called the most often in the published annotations is 16, it was called in 59 of the 130 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aaravos_37, Agueybana_25, Alephilan_37, AlumE_25, Alyssamiracle_41, Antonio_26, Apeppi_37, ArchiDore_28, Astralis_38, Avian_38, BaxterFox_24, BirthdayBoy_41, BoyNamedSue_25, Charminar_38, DaviePasture_40, Dillpickles_27, DoobyDoo_39, Erutan_40, Eudoria_26, Eyre_22, Fulcrum_41, GOATification_41, Genamy16_41, Gibbin_41, GretelLyn_40, Gudmit_23, Hyzer_26, Jalebi_39, Jamemuya19_38, Kita_26, Lambo_40, Lila22_39, LuckyLeo_39, Manasvini_26, Maridalia_25, Mima20_38, MoiGyank_42, Neobush_26, NorManre_41, NovaSharks_40, OtterstedtS21_40, PantheRoc_25, ParvusTarda_40, Patos_41, Petra_26, Pywacket_39, Ranch_40, RazorC_39, Riduram_38, Rota_39, Rumi_40, Sadboi_41, Sampudon_40, Stormer_39, Suscepit_26, Tayonia_26, Tillicus_38, Trumpet_26, Wojtek_39, Yeezy_26, Yikes_41, Zameen_26, Zany_39,

Genes that have the "Most Annotated" start but do not call it:
• Applejacks_24,

Genes that do not have the "Most Annotated" start:
• Angelique_27, Arri_46, BBQValindra_25, BackstagePass_25, BarretLemon_27, BigDome_27, Blino_25, BossLady_27, Bowser_25, Bradissa_26, BritBrat_26, Bunker_25, CarolAnn_25, CherryCola_45, Clown_49, CoveyB_46, Danyall_45, DocB7_030, EMsquaredA_26, EdnaMode_22, EnalisNailo_26, Evamon_42, Eyes_25, Fairfaxidum_24, Faith5x5_22, Floral_26, GEazy_25, Gezellig_42, GravityBall_27, Halo3_43, HannahD_25, Jambalaya_43, Jecs_26, JohnPork_44, JuJu_25, KappaFarmDelta_26, KimmyK_44, Lamberg_22, LeeroyJ_27, Lilas_26, Lton_22, MagicMan_25, Marteena_26, Martha_27, Matteo_22, Moosehead_22, NaLuna_25, Nettuno_22, Obliviate_24, OneDirection_21, Opie_25, Pepperoni_23, Pickett_22, Pippa_27, Pollux_26, Portcullis_44, PrincePatrick_24, REQ2_26, Rem711_40, Reynauld_38, RogerDodger_46, Salvador_42, Savbucketdawg_43, Schnabeltier_25, Soilmate_26, Srilaccoli3_37, StevieBAY_27, TaronosaurasRx_25, Timinator_27, TinyDot_24, Twister6_45, Valary_45, VanDeWege_46, Whack_25, William_25, Wizard_42, ZAYM_26, ZiggyZoo_24,

Summary by start number:

Start 12:
• Found in 2 of 142 (1.4%) of genes in pham
• Manual Annotations of this start: 2 of 130
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Reynauld_38 (CH), Srilaccoli3_37 (CH),

Start 16:
• Found in 64 of 142 (45.1%) of genes in pham
• Manual Annotations of this start: 59 of 130
• Called 98.4% of time when present
• Phage (with cluster) where this start called: Aaravos_37 (DV), Agueybana_25 (CZ1), Alephilan_37 (DV), AlumE_25 (CZ1), Alyssamiracle_41 (DV), Antonio_26 (CZ1), Apeppi_37 (DV), ArchiDore_28 (DW), Astralis_38 (DV), Avian_38 (DV), BaxterFox_24 (CZ3), BirthdayBoy_41 (DV), BoyNamedSue_25 (CZ1), Charminar_38 (DV), DaviePasture_40 (DV), Dillpickles_27 (CZ1), DoobyDoo_39 (DV), Erutan_40 (DV), Eudoria_26 (CZ1), Eyre_22 (singleton), Fulcrum_41 (DV), GOATification_41 (DV), Genamy16_41 (DV), Gibbin_41 (DV), GretelLyn_40 (DV), Gudmit_23 (singleton), Hyzer_26 (CZ1), Jalebi_39 (DV), Jamemuya19_38 (DV), Kita_26 (CZ1), Lambo_40 (DV), Lila22_39 (DV), LuckyLeo_39 (DV), Manasvini_26 (CZ1), Maridalia_25 (CZ1), Mima20_38 (DV), MoiGyank_42 (DV), Neobush_26 (CZ1), NorManre_41 (DV), NovaSharks_40 (DV), OtterstedtS21_40 (DV), PantheRoc_25 (CZ3), ParvusTarda_40 (DV), Patos_41 (DV), Petra_26 (CV), Pywacket_39 (DV), Ranch_40 (DV), RazorC_39 (DV), Riduram_38 (DV), Rota_39 (DV), Rumi_40 (DV), Sadboi_41 (DV), Sampudon_40 (DV), Stormer_39 (DV), Suscepit_26 (CZ1), Tayonia_26 (CZ1), Tillicus_38 (DV), Trumpet_26 (CZ1), Wojtek_39 (DV), Yeezy_26 (CZ3), Yikes_41 (DV), Zameen_26 (CZ1), Zany_39 (DV),

Start 18:
• Found in 1 of 142 (0.7%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DocB7_030 (singleton),

Start 19:
• Found in 10 of 142 (7.0%) of genes in pham

• Manual Annotations of this start: 9 of 130
• Called 90.0% of time when present
• Phage (with cluster) where this start called: BarretLemon_27 (AO2), BigDome_27 (AO2), BossLady_27 (AO2), GravityBall_27 (AO2), LeeroyJ_27 (AO2), Martha_27 (AO2), Pippa_27 (AO2), StevieBAY_27 (AO2), Timinator_27 (AO2),

Start 22:
• Found in 1 of 142 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 130
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Rem711_40 (Z),

Start 26:
• Found in 1 of 142 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 130
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Clown_49 (DC2),

Start 33:
• Found in 2 of 142 (1.4%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: REQ2_26 (singleton),

Start 36:
• Found in 22 of 142 (15.5%) of genes in pham
• No Manual Annotations of this start.
• Called 4.5% of time when present
• Phage (with cluster) where this start called: Applejacks_24 (CD),

Start 37:
• Found in 82 of 142 (57.7%) of genes in pham
• Manual Annotations of this start: 56 of 130
• Called 74.4% of time when present
• Phage (with cluster) where this start called: Angelique_27 (CY1), Arri_46 (DC1), BBQValindra_25 (DB), BackstagePass_25 (DB), Blino_25 (CV), Bowser_25 (DB), Bradissa_26 (CY1), BritBrat_26 (CY2), Bunker_25 (DB), CarolAnn_25 (CV), CherryCola_45 (DC1), CoveyB_46 (DC1), Danyall_45 (DC1), EMsquaredA_26 (CY1), EdnaMode_22 (CZ2), EnalisNailo_26 (CY1), Evamon_42 (DC1), Eyes_25 (DB), Fairfaxidum_24 (CV), Faith5x5_22 (CZ6), Floral_26 (CY1), GEazy_25 (DB), Gezellig_42 (DC1), Halo3_43 (DC1), HannahD_25 (DB), Jambalaya_43 (DC1), Jecs_26 (DB), JohnPork_44 (DC1), JuJu_25 (CV), KappaFarmDelta_26 (CV), KimmyK_44 (DC1), Lamberg_22 (CZ2), Lilas_26 (CY1), Lton_22 (CZ), MagicMan_25 (DB), Marteena_26 (CY1), Matteo_22 (CZ2), Moosehead_22 (CZ6), NaLuna_25 (DB), Nettuno_22 (CZ2), Obliviate_24 (CV), OneDirection_21 (CZ6), Opie_25 (DB), Pepperoni_23 (CZ), Pickett_22 (CZ2), Pollux_26 (CY1), Portcullis_44 (DC1), PrincePatrick_24 (CV), RogerDodger_46 (DC1), Salvador_42 (DC1), Savbucketdawg_43 (DC1), Soilmate_26 (CV), TaronosaurasRx_25 (DB), TinyDot_24 (singleton), Twister6_45 (DC1), Valary_45 (DC1), VanDeWege_46 (DC1), William_25 (CV), Wizard_42 (DC1), ZAYM_26 (DB), ZiggyZoo_24 (CV),

Start 38:
• Found in 2 of 142 (1.4%) of genes in pham

• Manual Annotations of this start: 1 of 130
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Whack_25 (singleton),

Start 39:
• Found in 17 of 142 (12.0%) of genes in pham
• Manual Annotations of this start: 1 of 130
• Called 5.9% of time when present
• Phage (with cluster) where this start called: Schnabeltier_25 (DB),

Summary by clusters:

There are 18 clusters represented in this pham: CY2, CY1, CH, CZ2, CZ6, CZ1, DB, singleton, CD, CZ, AO2, CZ3, DV, DW, Z, DC2, CV, DC1,

Info for manual annotations of cluster AO2:
•Start number 19 was manually annotated 9 times for cluster AO2.

Info for manual annotations of cluster CH:
•Start number 12 was manually annotated 2 times for cluster CH.

Info for manual annotations of cluster CV:
•Start number 16 was manually annotated 1 time for cluster CV.
•Start number 37 was manually annotated 9 times for cluster CV.

Info for manual annotations of cluster CY1:
•Start number 37 was manually annotated 8 times for cluster CY1.

Info for manual annotations of cluster CY2:
•Start number 37 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CZ:
•Start number 37 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ1:
•Start number 16 was manually annotated 14 times for cluster CZ1.

Info for manual annotations of cluster CZ2:
•Start number 37 was manually annotated 5 times for cluster CZ2.

Info for manual annotations of cluster CZ3:
•Start number 16 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ6:
•Start number 37 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster DB:
•Start number 37 was manually annotated 10 times for cluster DB.
•Start number 39 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DC1:
•Start number 37 was manually annotated 17 times for cluster DC1.

Info for manual annotations of cluster DC2:
•Start number 26 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DV:
•Start number 16 was manually annotated 38 times for cluster DV.

Info for manual annotations of cluster DW:
•Start number 16 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster Z:
•Start number 22 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: Aaravos_37 Start: 32386, Stop: 32793, Start Num: 16
Candidate Starts for Aaravos_37:
(Start: 16 @32386 has 59 MA's), (21, 32419), (42, 32491), (46, 32503), (47, 32506), (53, 32524), (59, 32563), (64, 32584), (74, 32617), (77, 32629), (90, 32695), (93, 32704), (95, 32710), (98, 32719), (103, 32734),

Gene: Agueybana_25 Start: 21812, Stop: 22186, Start Num: 16
Candidate Starts for Agueybana_25:
(11, 21728), (Start: 16 @21812 has 59 MA's), (24, 21860), (36, 21884), (Start: 37 @21890 has 56 MA's), (42, 21914), (45, 21923), (49, 21935), (93, 22127), (95, 22133), (96, 22136),

Gene: Alephilan_37 Start: 32269, Stop: 32664, Start Num: 16
Candidate Starts for Alephilan_37:
(Start: 16 @32269 has 59 MA's), (32, 32335), (47, 32389), (56, 32419), (65, 32470), (68, 32482), (77, 32512), (78, 32515), (91, 32581), (98, 32602), (99, 32605), (103, 32617),

Gene: AlumE_25 Start: 21811, Stop: 22185, Start Num: 16
Candidate Starts for AlumE_25:
(11, 21727), (Start: 16 @21811 has 59 MA's), (24, 21859), (36, 21883), (Start: 37 @21889 has 56 MA's), (42, 21913), (45, 21922), (49, 21934), (93, 22126), (95, 22132), (96, 22135),

Gene: Alyssamiracle_41 Start: 31366, Stop: 31752, Start Num: 16
Candidate Starts for Alyssamiracle_41:
(Start: 16 @31366 has 59 MA's), (47, 31486), (56, 31516), (59, 31543), (65, 31567), (68, 31579), (77, 31609), (78, 31612), (91, 31678), (98, 31699), (99, 31702), (103, 31714),

Gene: Angelique_27 Start: 22414, Stop: 22800, Start Num: 37
Candidate Starts for Angelique_27:
(Start: 37 @22414 has 56 MA's), (Start: 39 @22423 has 1 MA's), (41, 22429), (46, 22450), (73, 22561), (80, 22585), (88, 22633), (94, 22654), (95, 22657), (101, 22675), (104, 22684), (106, 22717), (112, 22783),

Gene: Antonio_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Antonio_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Apeppi_37 Start: 32448, Stop: 32855, Start Num: 16
Candidate Starts for Apeppi_37:
(Start: 16 @32448 has 59 MA's), (21, 32481), (42, 32553), (46, 32565), (47, 32568), (53, 32586), (59, 32625), (64, 32646), (74, 32679), (77, 32691), (90, 32757), (93, 32766), (95, 32772), (98, 32781), (103, 32796),

Gene: Applejacks_24 Start: 19251, Stop: 19565, Start Num: 36
Candidate Starts for Applejacks_24:
(Start: 16 @19188 has 59 MA's), (25, 19239), (36, 19251), (42, 19275), (53, 19308), (65, 19371), (67, 19380), (82, 19428), (87, 19467), (93, 19488), (99, 19506), (100, 19509), (102, 19515),

Gene: ArchiDore_28 Start: 24132, Stop: 24521, Start Num: 16
Candidate Starts for ArchiDore_28:
(Start: 16 @24132 has 59 MA's), (21, 24165), (25, 24183), (35, 24204), (46, 24249), (48, 24255), (51, 24264), (63, 24327), (68, 24345),

Gene: Arri_46 Start: 35970, Stop: 36359, Start Num: 37
Candidate Starts for Arri_46:
(Start: 37 @35970 has 56 MA's), (45, 35997), (46, 36000), (49, 36009), (58, 36042), (61, 36069), (65, 36084), (70, 36102), (73, 36111), (74, 36114), (80, 36135), (93, 36201), (94, 36204), (95, 36207), (100, 36222), (101, 36225), (104, 36234), (105, 36237), (110, 36297),

Gene: Astralis_38 Start: 30956, Stop: 31342, Start Num: 16
Candidate Starts for Astralis_38:
(Start: 16 @30956 has 59 MA's), (47, 31076), (56, 31106), (59, 31133), (65, 31157), (68, 31169), (77, 31199), (78, 31202), (91, 31268), (98, 31289), (99, 31292), (103, 31304),

Gene: Avian_38 Start: 31348, Stop: 31743, Start Num: 16
Candidate Starts for Avian_38:
(Start: 16 @31348 has 59 MA's), (47, 31468), (56, 31498), (59, 31525), (65, 31549), (68, 31561), (78, 31594), (91, 31660), (98, 31681), (99, 31684), (103, 31696),

Gene: BBQValindra_25 Start: 21046, Stop: 21432, Start Num: 37
Candidate Starts for BBQValindra_25:
(Start: 37 @21046 has 56 MA's), (Start: 39 @21055 has 1 MA's), (41, 21061), (46, 21082), (73, 21193), (80, 21217), (94, 21286), (95, 21289), (100, 21304), (101, 21307), (104, 21316), (112, 21415),

Gene: BackstagePass_25 Start: 21178, Stop: 21564, Start Num: 37
Candidate Starts for BackstagePass_25:
(Start: 37 @21178 has 56 MA's), (Start: 39 @21187 has 1 MA's), (41, 21193), (45, 21211), (46, 21214), (70, 21316), (73, 21325), (80, 21349), (94, 21418), (95, 21421), (99, 21433), (100, 21436), (101, 21439), (112, 21547),

Gene: BarretLemon_27 Start: 23327, Stop: 23740, Start Num: 19
Candidate Starts for BarretLemon_27:
(Start: 19 @23327 has 9 MA's), (27, 23366), (42, 23417), (52, 23447), (65, 23513), (83, 23585),

Gene: BaxterFox_24 Start: 21132, Stop: 21506, Start Num: 16
Candidate Starts for BaxterFox_24:
(5, 20949), (6, 20961), (7, 20967), (11, 21048), (Start: 16 @21132 has 59 MA's), (36, 21204), (Start: 37 @21210 has 56 MA's), (42, 21234), (45, 21243), (49, 21255), (53, 21267), (64, 21327), (76, 21369), (93, 21447), (95, 21453), (96, 21456),

Gene: BigDome_27 Start: 23316, Stop: 23729, Start Num: 19
Candidate Starts for BigDome_27:
(Start: 19 @23316 has 9 MA's), (27, 23355), (42, 23406), (47, 23421), (52, 23436), (65, 23502), (83, 23574),

Gene: BirthdayBoy_41 Start: 33095, Stop: 33490, Start Num: 16
Candidate Starts for BirthdayBoy_41:
(Start: 16 @33095 has 59 MA's), (32, 33161), (44, 33206), (47, 33215), (56, 33245), (65, 33296), (68, 33308), (91, 33407), (98, 33428), (99, 33431), (103, 33443),

Gene: Blino_25 Start: 20905, Stop: 21255, Start Num: 37
Candidate Starts for Blino_25:
(Start: 37 @20905 has 56 MA's), (47, 20938), (68, 21031), (70, 21037), (71, 21040), (77, 21061), (80, 21070), (85, 21103), (100, 21154), (105, 21169), (109, 21220),

Gene: BossLady_27 Start: 23304, Stop: 23711, Start Num: 19
Candidate Starts for BossLady_27:
(Start: 19 @23304 has 9 MA's), (Start: 37 @23370 has 56 MA's), (42, 23394), (60, 23472), (65, 23490), (77, 23529), (83, 23562), (84, 23568),

Gene: Bowser_25 Start: 20957, Stop: 21343, Start Num: 37
Candidate Starts for Bowser_25:
(Start: 37 @20957 has 56 MA's), (Start: 39 @20966 has 1 MA's), (41, 20972), (46, 20993), (70, 21095), (73, 21104), (80, 21128), (94, 21197), (95, 21200), (99, 21212), (100, 21215), (101, 21218), (104, 21227), (112, 21326),

Gene: BoyNamedSue_25 Start: 21811, Stop: 22185, Start Num: 16
Candidate Starts for BoyNamedSue_25:
(11, 21727), (Start: 16 @21811 has 59 MA's), (24, 21859), (36, 21883), (Start: 37 @21889 has 56 MA's), (42, 21913), (45, 21922), (49, 21934), (93, 22126), (95, 22132), (96, 22135),

Gene: Bradissa_26 Start: 21680, Stop: 22060, Start Num: 37
Candidate Starts for Bradissa_26:
(Start: 37 @21680 has 56 MA's), (45, 21707), (46, 21710), (49, 21719), (58, 21752), (61, 21779), (70, 21812), (73, 21821), (80, 21845), (94, 21914), (95, 21917), (100, 21932), (101, 21935), (104, 21944), (110, 22007), (113, 22049),

Gene: BritBrat_26 Start: 21533, Stop: 21913, Start Num: 37
Candidate Starts for BritBrat_26:
(Start: 37 @21533 has 56 MA's), (45, 21560), (46, 21563), (49, 21572), (58, 21605), (61, 21632), (70, 21665), (73, 21674), (80, 21698), (94, 21767), (95, 21770), (100, 21785), (101, 21788), (104, 21797), (110, 21860), (113, 21902),

Gene: Bunker_25 Start: 21159, Stop: 21545, Start Num: 37
Candidate Starts for Bunker_25:
(Start: 37 @21159 has 56 MA's), (Start: 39 @21168 has 1 MA's), (41, 21174), (46, 21195), (73, 21306), (80, 21330), (94, 21399), (95, 21402), (101, 21420), (104, 21429), (107, 21465), (112, 21528),

Gene: CarolAnn_25 Start: 20904, Stop: 21254, Start Num: 37
Candidate Starts for CarolAnn_25:
(Start: 37 @20904 has 56 MA's), (47, 20937), (68, 21030), (70, 21036), (71, 21039), (77, 21060), (80, 21069), (85, 21102), (100, 21153), (105, 21168), (109, 21219),

Gene: Charminar_38 Start: 30959, Stop: 31345, Start Num: 16
Candidate Starts for Charminar_38:
(Start: 16 @30959 has 59 MA's), (47, 31079), (56, 31109), (59, 31136), (65, 31160), (68, 31172), (77, 31202), (78, 31205), (91, 31271), (98, 31292), (99, 31295), (103, 31307),

Gene: CherryCola_45 Start: 36743, Stop: 37132, Start Num: 37
Candidate Starts for CherryCola_45:
(Start: 37 @36743 has 56 MA's), (45, 36770), (46, 36773), (49, 36782), (58, 36815), (61, 36842), (65, 36857), (70, 36875), (73, 36884), (74, 36887), (80, 36908), (93, 36974), (94, 36977), (95, 36980), (100, 36995), (101, 36998), (104, 37007), (105, 37010), (110, 37070),

Gene: Clown_49 Start: 38210, Stop: 38572, Start Num: 26
Candidate Starts for Clown_49:
(Start: 26 @38210 has 1 MA's), (29, 38216), (31, 38222), (51, 38288), (52, 38291), (55, 38303), (56, 38306), (70, 38375), (71, 38378), (74, 38387), (91, 38468), (92, 38471), (98, 38489), (101, 38498), (102, 38501),

Gene: CoveyB_46 Start: 35788, Stop: 36177, Start Num: 37
Candidate Starts for CoveyB_46:
(Start: 37 @35788 has 56 MA's), (45, 35815), (46, 35818), (49, 35827), (58, 35860), (61, 35887), (65, 35902), (70, 35920), (73, 35929), (74, 35932), (80, 35953), (93, 36019), (94, 36022), (95, 36025), (100, 36040), (101, 36043), (104, 36052), (105, 36055), (110, 36115),

Gene: Danyall_45 Start: 35790, Stop: 36179, Start Num: 37
Candidate Starts for Danyall_45:
(Start: 37 @35790 has 56 MA's), (45, 35817), (46, 35820), (49, 35829), (58, 35862), (61, 35889), (65, 35904), (70, 35922), (73, 35931), (80, 35955), (93, 36021), (94, 36024), (95, 36027), (100, 36042), (101, 36045), (104, 36054), (110, 36117),

Gene: DaviePasture_40 Start: 32896, Stop: 33291, Start Num: 16
Candidate Starts for DaviePasture_40:
(Start: 16 @32896 has 59 MA's), (32, 32962), (47, 33016), (65, 33097), (68, 33109), (77, 33139), (91, 33208), (98, 33229), (99, 33232), (103, 33244),

Gene: Dillpickles_27 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Dillpickles_27:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: DocB7_030 Start: 34120, Stop: 34521, Start Num: 18
Candidate Starts for DocB7_030:
(4, 33898), (8, 33961), (14, 34090), (17, 34114), (18, 34120), (32, 34174), (36, 34183), (57, 34267), (69, 34327), (77, 34351), (87, 34402), (92, 34420), (95, 34429),

Gene: DoobyDoo_39 Start: 32046, Stop: 32441, Start Num: 16
Candidate Starts for DoobyDoo_39:
(Start: 16 @32046 has 59 MA's), (32, 32112), (47, 32166), (65, 32247), (68, 32259), (77, 32289), (91, 32358), (98, 32379), (99, 32382), (103, 32394),

Gene: EMsquaredA_26 Start: 21533, Stop: 21913, Start Num: 37
Candidate Starts for EMsquaredA_26:

(Start: 37 @21533 has 56 MA's), (45, 21560), (46, 21563), (49, 21572), (58, 21605), (61, 21632), (70, 21665), (73, 21674), (80, 21698), (94, 21767), (95, 21770), (100, 21785), (101, 21788), (104, 21797), (110, 21860), (113, 21902),

Gene: EdnaMode_22 Start: 18339, Stop: 18710, Start Num: 37
Candidate Starts for EdnaMode_22:
(Start: 37 @18339 has 56 MA's), (45, 18366), (46, 18369), (49, 18378), (61, 18438), (70, 18471), (73, 18480), (80, 18504), (94, 18573), (95, 18576), (101, 18594), (102, 18597), (104, 18603), (105, 18606), (110, 18666),

Gene: EnalisNailo_26 Start: 21682, Stop: 22062, Start Num: 37
Candidate Starts for EnalisNailo_26:
(Start: 37 @21682 has 56 MA's), (45, 21709), (46, 21712), (49, 21721), (58, 21754), (61, 21781), (70, 21814), (73, 21823), (80, 21847), (94, 21916), (95, 21919), (100, 21934), (101, 21937), (104, 21946), (110, 22009), (113, 22051),

Gene: Erutan_40 Start: 32554, Stop: 32949, Start Num: 16
Candidate Starts for Erutan_40:
(Start: 16 @32554 has 59 MA's), (32, 32620), (47, 32674), (56, 32704), (65, 32755), (68, 32767), (91, 32866), (98, 32887), (99, 32890), (103, 32902),

Gene: Eudoria_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Eudoria_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Evamon_42 Start: 35809, Stop: 36198, Start Num: 37
Candidate Starts for Evamon_42:
(Start: 37 @35809 has 56 MA's), (45, 35836), (46, 35839), (49, 35848), (58, 35881), (61, 35908), (65, 35923), (70, 35941), (73, 35950), (80, 35974), (93, 36040), (94, 36043), (95, 36046), (100, 36061), (101, 36064), (104, 36073), (110, 36136),

Gene: Eyes_25 Start: 21050, Stop: 21436, Start Num: 37
Candidate Starts for Eyes_25:
(Start: 37 @21050 has 56 MA's), (Start: 39 @21059 has 1 MA's), (41, 21065), (45, 21083), (46, 21086), (70, 21188), (73, 21197), (80, 21221), (94, 21290), (95, 21293), (99, 21305), (100, 21308), (101, 21311), (104, 21320), (112, 21419),

Gene: Eyre_22 Start: 19166, Stop: 19540, Start Num: 16
Candidate Starts for Eyre_22:
(11, 19082), (Start: 16 @19166 has 59 MA's), (36, 19238), (42, 19268), (45, 19277), (49, 19289), (53, 19301), (56, 19313), (65, 19364), (72, 19388), (76, 19403), (87, 19460),

Gene: Fairfaxidum_24 Start: 21186, Stop: 21560, Start Num: 37
Candidate Starts for Fairfaxidum_24:
(Start: 37 @21186 has 56 MA's), (46, 21222), (68, 21318), (69, 21321), (80, 21357), (96, 21432), (97, 21435), (101, 21447),

Gene: Faith5x5_22 Start: 18281, Stop: 18646, Start Num: 37
Candidate Starts for Faith5x5_22:
(Start: 37 @18281 has 56 MA's), (Start: 39 @18290 has 1 MA's), (46, 18317), (47, 18320), (50, 18329), (61, 18386), (62, 18392), (80, 18452), (94, 18521), (95, 18524), (100, 18539), (102, 18545), (104, 18551), (105, 18554),

Gene: Floral_26 Start: 21533, Stop: 21913, Start Num: 37
Candidate Starts for Floral_26:
(Start: 37 @21533 has 56 MA's), (45, 21560), (46, 21563), (49, 21572), (58, 21605), (61, 21632), (70, 21665), (73, 21674), (80, 21698), (94, 21767), (95, 21770), (100, 21785), (101, 21788), (104, 21797), (110, 21860), (113, 21902),

Gene: Fulcrum_41 Start: 33075, Stop: 33470, Start Num: 16
Candidate Starts for Fulcrum_41:
(Start: 16 @33075 has 59 MA's), (32, 33141), (47, 33195), (65, 33276), (68, 33288), (77, 33318), (91, 33387), (98, 33408), (99, 33411), (103, 33423),

Gene: GEazy_25 Start: 21065, Stop: 21451, Start Num: 37
Candidate Starts for GEazy_25:
(Start: 37 @21065 has 56 MA's), (Start: 39 @21074 has 1 MA's), (41, 21080), (45, 21098), (46, 21101), (70, 21203), (73, 21212), (80, 21236), (94, 21305), (95, 21308), (100, 21323), (101, 21326), (104, 21335), (112, 21434),

Gene: GOATification_41 Start: 33075, Stop: 33470, Start Num: 16
Candidate Starts for GOATification_41:
(Start: 16 @33075 has 59 MA's), (32, 33141), (47, 33195), (65, 33276), (68, 33288), (77, 33318), (91, 33387), (98, 33408), (99, 33411), (103, 33423),

Gene: Genamy16_41 Start: 31366, Stop: 31752, Start Num: 16
Candidate Starts for Genamy16_41:
(Start: 16 @31366 has 59 MA's), (47, 31486), (56, 31516), (59, 31543), (65, 31567), (68, 31579), (77, 31609), (78, 31612), (91, 31678), (98, 31699), (99, 31702), (103, 31714),

Gene: Gezellig_42 Start: 35941, Stop: 36330, Start Num: 37
Candidate Starts for Gezellig_42:
(Start: 37 @35941 has 56 MA's), (45, 35968), (46, 35971), (49, 35980), (58, 36013), (61, 36040), (65, 36055), (70, 36073), (73, 36082), (74, 36085), (80, 36106), (93, 36172), (94, 36175), (95, 36178), (100, 36193), (101, 36196), (104, 36205), (105, 36208), (110, 36268),

Gene: Gibbin_41 Start: 33173, Stop: 33559, Start Num: 16
Candidate Starts for Gibbin_41:
(Start: 16 @33173 has 59 MA's), (32, 33239), (47, 33293), (65, 33374), (68, 33386), (77, 33416), (91, 33485), (98, 33506), (99, 33509), (103, 33521),

Gene: GravityBall_27 Start: 23326, Stop: 23739, Start Num: 19
Candidate Starts for GravityBall_27:
(Start: 19 @23326 has 9 MA's), (27, 23365), (42, 23416), (52, 23446), (65, 23512), (83, 23584),

Gene: GretelLyn_40 Start: 33439, Stop: 33834, Start Num: 16
Candidate Starts for GretelLyn_40:
(Start: 16 @33439 has 59 MA's), (32, 33505), (47, 33559), (56, 33589), (65, 33640), (68, 33652), (77, 33682), (91, 33751), (98, 33772), (99, 33775), (103, 33787),

Gene: Gudmit_23 Start: 19228, Stop: 19611, Start Num: 16
Candidate Starts for Gudmit_23:
(Start: 16 @19228 has 59 MA's), (28, 19285), (41, 19324), (43, 19336), (49, 19354), (51, 19360), (54, 19372), (74, 19459), (76, 19468), (80, 19480), (85, 19516), (90, 19537), (95, 19552), (99, 19564),

Gene: Halo3_43 Start: 36234, Stop: 36623, Start Num: 37
Candidate Starts for Halo3_43:
(Start: 37 @36234 has 56 MA's), (45, 36261), (46, 36264), (49, 36273), (58, 36306), (61, 36333), (65, 36348), (70, 36366), (73, 36375), (80, 36399), (93, 36465), (94, 36468), (95, 36471), (100, 36486), (101, 36489), (104, 36498), (110, 36561),

Gene: HannahD_25 Start: 21065, Stop: 21451, Start Num: 37
Candidate Starts for HannahD_25:
(Start: 37 @21065 has 56 MA's), (Start: 39 @21074 has 1 MA's), (41, 21080), (45, 21098), (46, 21101), (70, 21203), (73, 21212), (80, 21236), (94, 21305), (95, 21308), (100, 21323), (101, 21326), (104, 21335), (112, 21434),

Gene: Hyzer_26 Start: 22472, Stop: 22846, Start Num: 16
Candidate Starts for Hyzer_26:
(Start: 16 @22472 has 59 MA's), (24, 22520), (36, 22544), (42, 22574), (45, 22583), (49, 22595), (53, 22607), (64, 22667), (93, 22787), (95, 22793),

Gene: Jalebi_39 Start: 33608, Stop: 34003, Start Num: 16
Candidate Starts for Jalebi_39:
(Start: 16 @33608 has 59 MA's), (32, 33674), (47, 33728), (56, 33758), (65, 33809), (68, 33821), (77, 33851), (91, 33920), (98, 33941), (99, 33944), (103, 33956),

Gene: Jambalaya_43 Start: 35588, Stop: 35977, Start Num: 37
Candidate Starts for Jambalaya_43:
(Start: 37 @35588 has 56 MA's), (45, 35615), (46, 35618), (49, 35627), (58, 35660), (61, 35687), (65, 35702), (70, 35720), (73, 35729), (80, 35753), (93, 35819), (94, 35822), (95, 35825), (100, 35840), (101, 35843), (104, 35852), (110, 35915),

Gene: Jamemuya19_38 Start: 30956, Stop: 31342, Start Num: 16
Candidate Starts for Jamemuya19_38:
(Start: 16 @30956 has 59 MA's), (47, 31076), (56, 31106), (59, 31133), (65, 31157), (68, 31169), (77, 31199), (78, 31202), (91, 31268), (98, 31289), (99, 31292), (103, 31304),

Gene: Jecs_26 Start: 21363, Stop: 21749, Start Num: 37
Candidate Starts for Jecs_26:
(Start: 37 @21363 has 56 MA's), (Start: 39 @21372 has 1 MA's), (41, 21378), (45, 21396), (46, 21399), (70, 21501), (73, 21510), (80, 21534), (93, 21600), (94, 21603), (95, 21606), (99, 21618), (100, 21621), (101, 21624), (104, 21633), (106, 21666), (108, 21678), (112, 21732),

Gene: JohnPork_44 Start: 35309, Stop: 35698, Start Num: 37
Candidate Starts for JohnPork_44:
(Start: 37 @35309 has 56 MA's), (45, 35336), (46, 35339), (49, 35348), (58, 35381), (61, 35408), (65, 35423), (70, 35441), (73, 35450), (80, 35474), (93, 35540), (94, 35543), (95, 35546), (100, 35561), (101, 35564), (104, 35573), (110, 35636),

Gene: JuJu_25 Start: 20877, Stop: 21227, Start Num: 37
Candidate Starts for JuJu_25:
(Start: 37 @20877 has 56 MA's), (47, 20910), (51, 20922), (52, 20925), (63, 20985), (68, 21003), (72, 21015), (97, 21117), (98, 21120), (105, 21141),

Gene: KappaFarmDelta_26 Start: 21305, Stop: 21655, Start Num: 37
Candidate Starts for KappaFarmDelta_26:

(Start: 37 @21305 has 56 MA's), (47, 21338), (68, 21431), (70, 21437), (71, 21440), (77, 21461), (80, 21470), (85, 21503), (100, 21554), (105, 21569),

Gene: KimmyK_44 Start: 36523, Stop: 36912, Start Num: 37
Candidate Starts for KimmyK_44:
(Start: 37 @36523 has 56 MA's), (45, 36550), (46, 36553), (49, 36562), (58, 36595), (61, 36622), (65, 36637), (70, 36655), (73, 36664), (74, 36667), (80, 36688), (93, 36754), (94, 36757), (95, 36760), (100, 36775), (101, 36778), (104, 36787), (105, 36790), (110, 36850),

Gene: Kita_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Kita_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Lamberg_22 Start: 18339, Stop: 18710, Start Num: 37
Candidate Starts for Lamberg_22:
(Start: 37 @18339 has 56 MA's), (45, 18366), (46, 18369), (49, 18378), (61, 18438), (70, 18471), (73, 18480), (80, 18504), (94, 18573), (95, 18576), (101, 18594), (102, 18597), (104, 18603), (105, 18606), (110, 18666),

Gene: Lambo_40 Start: 33093, Stop: 33488, Start Num: 16
Candidate Starts for Lambo_40:
(Start: 16 @33093 has 59 MA's), (32, 33159), (47, 33213), (56, 33243), (65, 33294), (68, 33306), (77, 33336), (91, 33405), (98, 33426), (99, 33429), (103, 33441),

Gene: LeeroyJ_27 Start: 23326, Stop: 23739, Start Num: 19
Candidate Starts for LeeroyJ_27:
(Start: 19 @23326 has 9 MA's), (27, 23365), (42, 23416), (52, 23446), (65, 23512), (83, 23584),

Gene: Lila22_39 Start: 33048, Stop: 33443, Start Num: 16
Candidate Starts for Lila22_39:
(Start: 16 @33048 has 59 MA's), (32, 33114), (47, 33168), (56, 33198), (65, 33249), (68, 33261), (91, 33360), (98, 33381), (99, 33384), (103, 33396),

Gene: Lilas_26 Start: 21682, Stop: 22062, Start Num: 37
Candidate Starts for Lilas_26:
(Start: 37 @21682 has 56 MA's), (45, 21709), (46, 21712), (49, 21721), (58, 21754), (61, 21781), (70, 21814), (73, 21823), (80, 21847), (94, 21916), (95, 21919), (100, 21934), (101, 21937), (104, 21946), (110, 22009), (113, 22051),

Gene: Lton_22 Start: 18368, Stop: 18739, Start Num: 37
Candidate Starts for Lton_22:
(Start: 37 @18368 has 56 MA's), (45, 18395), (46, 18398), (49, 18407), (61, 18467), (70, 18500), (73, 18509), (80, 18533), (94, 18602), (95, 18605), (101, 18623), (102, 18626), (104, 18632), (105, 18635), (110, 18695),

Gene: LuckyLeo_39 Start: 32448, Stop: 32855, Start Num: 16
Candidate Starts for LuckyLeo_39:
(Start: 16 @32448 has 59 MA's), (21, 32481), (42, 32553), (46, 32565), (47, 32568), (53, 32586), (59, 32625), (64, 32646), (74, 32679), (77, 32691), (90, 32757), (93, 32766), (95, 32772), (98, 32781), (103, 32796),

Gene: MagicMan_25 Start: 21371, Stop: 21757, Start Num: 37

Candidate Starts for MagicMan_25:
(Start: 37 @21371 has 56 MA's), (Start: 39 @21380 has 1 MA's), (41, 21386), (46, 21407), (70, 21509), (73, 21518), (80, 21542), (94, 21611), (95, 21614), (99, 21626), (100, 21629), (101, 21632), (104, 21641), (112, 21740),

Gene: Manasvini_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Manasvini_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Maridalia_25 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Maridalia_25:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Marteena_26 Start: 21533, Stop: 21913, Start Num: 37
Candidate Starts for Marteena_26:
(Start: 37 @21533 has 56 MA's), (45, 21560), (46, 21563), (49, 21572), (58, 21605), (61, 21632), (70, 21665), (73, 21674), (80, 21698), (94, 21767), (95, 21770), (100, 21785), (101, 21788), (104, 21797), (110, 21860), (113, 21902),

Gene: Martha_27 Start: 23251, Stop: 23658, Start Num: 19
Candidate Starts for Martha_27:
(Start: 19 @23251 has 9 MA's), (Start: 37 @23317 has 56 MA's), (42, 23341), (60, 23419), (65, 23437), (77, 23476), (83, 23509), (84, 23515),

Gene: Matteo_22 Start: 18276, Stop: 18656, Start Num: 37
Candidate Starts for Matteo_22:
(Start: 37 @18276 has 56 MA's), (45, 18303), (46, 18306), (49, 18315), (58, 18348), (61, 18375), (70, 18408), (73, 18417), (80, 18441), (94, 18510), (95, 18513), (100, 18528), (101, 18531), (104, 18540), (110, 18603),

Gene: Mima20_38 Start: 32797, Stop: 33192, Start Num: 16
Candidate Starts for Mima20_38:
(Start: 16 @32797 has 59 MA's), (32, 32863), (47, 32917), (56, 32947), (65, 32998), (68, 33010), (77, 33040), (80, 33049), (91, 33109), (98, 33130), (99, 33133), (103, 33145),

Gene: MoiGyank_42 Start: 33478, Stop: 33873, Start Num: 16
Candidate Starts for MoiGyank_42:
(Start: 16 @33478 has 59 MA's), (32, 33544), (47, 33598), (56, 33628), (65, 33679), (68, 33691), (77, 33721), (91, 33790), (98, 33811), (99, 33814), (103, 33826),

Gene: Moosehead_22 Start: 18289, Stop: 18654, Start Num: 37
Candidate Starts for Moosehead_22:
(Start: 37 @18289 has 56 MA's), (Start: 39 @18298 has 1 MA's), (50, 18337), (61, 18394), (62, 18400), (86, 18502), (93, 18526), (94, 18529), (95, 18532), (100, 18547), (102, 18553), (104, 18559), (105, 18562),

Gene: NaLuna_25 Start: 21065, Stop: 21451, Start Num: 37
Candidate Starts for NaLuna_25:
(Start: 37 @21065 has 56 MA's), (Start: 39 @21074 has 1 MA's), (41, 21080), (45, 21098), (46, 21101), (70, 21203), (73, 21212), (80, 21236), (94, 21305), (95, 21308), (100, 21323), (101, 21326), (104, 21335), (112, 21434),

Gene: Neobush_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Neobush_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Nettuno_22 Start: 18342, Stop: 18710, Start Num: 37
Candidate Starts for Nettuno_22:
(Start: 37 @18342 has 56 MA's), (45, 18369), (46, 18372), (49, 18381), (58, 18414), (61, 18441), (70, 18474), (73, 18483), (80, 18507), (94, 18576), (95, 18579), (100, 18594), (101, 18597), (104, 18606), (110, 18669),

Gene: NorManre_41 Start: 32684, Stop: 33079, Start Num: 16
Candidate Starts for NorManre_41:
(Start: 16 @32684 has 59 MA's), (32, 32750), (47, 32804), (65, 32885), (68, 32897), (77, 32927), (91, 32996), (98, 33017), (99, 33020), (103, 33032),

Gene: NovaSharks_40 Start: 30956, Stop: 31342, Start Num: 16
Candidate Starts for NovaSharks_40:
(Start: 16 @30956 has 59 MA's), (47, 31076), (56, 31106), (59, 31133), (65, 31157), (68, 31169), (77, 31199), (78, 31202), (91, 31268), (98, 31289), (99, 31292), (103, 31304),

Gene: Obliviate_24 Start: 20727, Stop: 21077, Start Num: 37
Candidate Starts for Obliviate_24:
(Start: 37 @20727 has 56 MA's), (47, 20760), (68, 20853), (70, 20859), (71, 20862), (77, 20883), (80, 20892), (85, 20925), (100, 20976), (105, 20991), (109, 21042),

Gene: OneDirection_21 Start: 18308, Stop: 18682, Start Num: 37
Candidate Starts for OneDirection_21:
(9, 18086), (10, 18116), (Start: 37 @18308 has 56 MA's), (40, 18320), (41, 18323), (46, 18344), (47, 18347), (50, 18356), (58, 18386), (68, 18440), (76, 18467), (80, 18479), (95, 18551), (97, 18557),

Gene: Opie_25 Start: 21395, Stop: 21781, Start Num: 37
Candidate Starts for Opie_25:
(Start: 37 @21395 has 56 MA's), (Start: 39 @21404 has 1 MA's), (41, 21410), (45, 21428), (46, 21431), (70, 21533), (72, 21539), (73, 21542), (80, 21566), (93, 21632), (94, 21635), (95, 21638), (99, 21650), (100, 21653), (101, 21656), (104, 21665), (112, 21764),

Gene: OtterstedtS21_40 Start: 32755, Stop: 33150, Start Num: 16
Candidate Starts for OtterstedtS21_40:
(Start: 16 @32755 has 59 MA's), (32, 32821), (47, 32875), (56, 32905), (65, 32956), (68, 32968), (77, 32998), (91, 33067), (98, 33088), (99, 33091), (103, 33103),

Gene: PantheRoc_25 Start: 21130, Stop: 21504, Start Num: 16
Candidate Starts for PantheRoc_25:
(11, 21046), (Start: 16 @21130 has 59 MA's), (24, 21178), (36, 21202), (Start: 37 @21208 has 56 MA's), (42, 21232), (45, 21241), (49, 21253), (93, 21445), (95, 21451), (96, 21454),

Gene: ParvusTarda_40 Start: 32223, Stop: 32618, Start Num: 16
Candidate Starts for ParvusTarda_40:
(Start: 16 @32223 has 59 MA's), (32, 32289), (44, 32334), (47, 32343), (56, 32373), (65, 32424), (68, 32436), (91, 32535), (98, 32556), (99, 32559), (103, 32571),

Gene: Patos_41 Start: 32684, Stop: 33079, Start Num: 16
Candidate Starts for Patos_41:
(Start: 16 @32684 has 59 MA's), (32, 32750), (47, 32804), (65, 32885), (68, 32897), (77, 32927), (91, 32996), (98, 33017), (99, 33020), (103, 33032),

Gene: Pepperoni_23 Start: 19151, Stop: 19531, Start Num: 37
Candidate Starts for Pepperoni_23:
(Start: 37 @19151 has 56 MA's), (45, 19178), (46, 19181), (49, 19190), (58, 19223), (61, 19250), (70, 19283), (73, 19292), (80, 19316), (94, 19385), (95, 19388), (101, 19406), (102, 19409), (104, 19415), (105, 19418), (110, 19478),

Gene: Petra_26 Start: 20781, Stop: 21155, Start Num: 16
Candidate Starts for Petra_26:
(Start: 16 @20781 has 59 MA's), (21, 20814), (24, 20829), (42, 20883), (45, 20892), (49, 20904), (64, 20976), (93, 21096), (95, 21102), (98, 21111),

Gene: Pickett_22 Start: 18266, Stop: 18634, Start Num: 37
Candidate Starts for Pickett_22:
(Start: 37 @18266 has 56 MA's), (45, 18293), (46, 18296), (49, 18305), (58, 18338), (61, 18365), (70, 18398), (73, 18407), (80, 18431), (94, 18500), (95, 18503), (100, 18518), (101, 18521), (104, 18530), (110, 18593),

Gene: Pippa_27 Start: 23349, Stop: 23783, Start Num: 19
Candidate Starts for Pippa_27:
(Start: 19 @23349 has 9 MA's), (Start: 37 @23415 has 56 MA's), (42, 23439), (60, 23517), (65, 23535), (83, 23607), (88, 23631),

Gene: Pollux_26 Start: 21533, Stop: 21913, Start Num: 37
Candidate Starts for Pollux_26:
(Start: 37 @21533 has 56 MA's), (45, 21560), (46, 21563), (49, 21572), (58, 21605), (61, 21632), (70, 21665), (73, 21674), (80, 21698), (94, 21767), (95, 21770), (100, 21785), (101, 21788), (104, 21797), (110, 21860), (113, 21902),

Gene: Portcullis_44 Start: 35309, Stop: 35698, Start Num: 37
Candidate Starts for Portcullis_44:
(Start: 37 @35309 has 56 MA's), (45, 35336), (46, 35339), (49, 35348), (58, 35381), (61, 35408), (65, 35423), (70, 35441), (73, 35450), (80, 35474), (93, 35540), (94, 35543), (95, 35546), (100, 35561), (101, 35564), (104, 35573), (110, 35636),

Gene: PrincePatrick_24 Start: 21182, Stop: 21556, Start Num: 37
Candidate Starts for PrincePatrick_24:
(Start: 37 @21182 has 56 MA's), (46, 21218), (68, 21314), (69, 21317), (80, 21353), (96, 21428), (97, 21431), (101, 21443),

Gene: Pywacket_39 Start: 33569, Stop: 33964, Start Num: 16
Candidate Starts for Pywacket_39:
(Start: 16 @33569 has 59 MA's), (32, 33635), (47, 33689), (56, 33719), (65, 33770), (68, 33782), (77, 33812), (91, 33881), (98, 33902), (99, 33905), (103, 33917),

Gene: REQ2_26 Start: 22510, Stop: 22854, Start Num: 33
Candidate Starts for REQ2_26:
(33, 22510), (Start: 38 @22528 has 1 MA's), (46, 22558), (50, 22570), (51, 22573), (55, 22588), (69, 22657), (93, 22759), (94, 22762), (98, 22774),

Gene: Ranch_40 Start: 31581, Stop: 31976, Start Num: 16
Candidate Starts for Ranch_40:
(Start: 16 @31581 has 59 MA's), (32, 31647), (47, 31701), (56, 31731), (65, 31782), (68, 31794), (77, 31824), (91, 31893), (98, 31914), (99, 31917), (103, 31929),

Gene: RazorC_39 Start: 31348, Stop: 31734, Start Num: 16
Candidate Starts for RazorC_39:
(Start: 16 @31348 has 59 MA's), (47, 31468), (56, 31498), (59, 31525), (65, 31549), (68, 31561), (77, 31591), (78, 31594), (91, 31660), (98, 31681), (99, 31684), (103, 31696),

Gene: Rem711_40 Start: 30711, Stop: 31142, Start Num: 22
Candidate Starts for Rem711_40:
(13, 30645), (15, 30669), (Start: 19 @30687 has 9 MA's), (Start: 22 @30711 has 1 MA's), (42, 30780), (49, 30801), (53, 30813), (66, 30879), (73, 30903), (96, 31002), (98, 31008), (106, 31059),

Gene: Reynauld_38 Start: 37966, Stop: 38409, Start Num: 12
Candidate Starts for Reynauld_38:
(Start: 12 @37966 has 2 MA's), (34, 38068), (36, 38074), (53, 38137), (56, 38149), (65, 38200), (68, 38212), (80, 38248), (89, 38299), (95, 38320),

Gene: Riduram_38 Start: 30926, Stop: 31312, Start Num: 16
Candidate Starts for Riduram_38:
(Start: 16 @30926 has 59 MA's), (47, 31046), (56, 31076), (59, 31103), (65, 31127), (68, 31139), (77, 31169), (78, 31172), (91, 31238), (98, 31259), (99, 31262), (103, 31274),

Gene: RogerDodger_46 Start: 36138, Stop: 36527, Start Num: 37
Candidate Starts for RogerDodger_46:
(Start: 37 @36138 has 56 MA's), (45, 36165), (46, 36168), (49, 36177), (58, 36210), (61, 36237), (65, 36252), (70, 36270), (73, 36279), (74, 36282), (80, 36303), (93, 36369), (94, 36372), (95, 36375), (100, 36390), (101, 36393), (104, 36402), (105, 36405), (110, 36465),

Gene: Rota_39 Start: 32964, Stop: 33359, Start Num: 16
Candidate Starts for Rota_39:
(Start: 16 @32964 has 59 MA's), (32, 33030), (47, 33084), (56, 33114), (65, 33165), (68, 33177), (91, 33276), (98, 33297), (99, 33300), (103, 33312),

Gene: Rumi_40 Start: 30959, Stop: 31345, Start Num: 16
Candidate Starts for Rumi_40:
(Start: 16 @30959 has 59 MA's), (47, 31079), (56, 31109), (59, 31136), (65, 31160), (68, 31172), (77, 31202), (78, 31205), (91, 31271), (98, 31292), (99, 31295), (103, 31307),

Gene: Sadboi_41 Start: 33440, Stop: 33835, Start Num: 16
Candidate Starts for Sadboi_41:
(Start: 16 @33440 has 59 MA's), (32, 33506), (47, 33560), (56, 33590), (65, 33641), (68, 33653), (77, 33683), (91, 33752), (98, 33773), (99, 33776), (103, 33788),

Gene: Salvador_42 Start: 35807, Stop: 36196, Start Num: 37
Candidate Starts for Salvador_42:
(Start: 37 @35807 has 56 MA's), (45, 35834), (46, 35837), (49, 35846), (58, 35879), (61, 35906), (65, 35921), (70, 35939), (73, 35948), (80, 35972), (93, 36038), (94, 36041), (95, 36044), (100, 36059), (101, 36062), (104, 36071), (110, 36134),

Gene: Sampudon_40 Start: 33608, Stop: 34003, Start Num: 16
Candidate Starts for Sampudon_40:
(Start: 16 @33608 has 59 MA's), (32, 33674), (47, 33728), (56, 33758), (65, 33809), (68, 33821), (77, 33851), (91, 33920), (98, 33941), (99, 33944), (103, 33956),

Gene: Savbucketdawg_43 Start: 35588, Stop: 35977, Start Num: 37
Candidate Starts for Savbucketdawg_43:
(Start: 37 @35588 has 56 MA's), (45, 35615), (46, 35618), (49, 35627), (58, 35660), (61, 35687), (65, 35702), (70, 35720), (73, 35729), (80, 35753), (93, 35819), (94, 35822), (95, 35825), (100, 35840), (101, 35843), (104, 35852), (110, 35915),

Gene: Schnabeltier_25 Start: 21381, Stop: 21758, Start Num: 39
Candidate Starts for Schnabeltier_25:
(Start: 37 @21372 has 56 MA's), (Start: 39 @21381 has 1 MA's), (41, 21387), (46, 21408), (70, 21510), (73, 21519), (80, 21543), (94, 21612), (95, 21615), (99, 21627), (100, 21630), (101, 21633), (104, 21642), (112, 21741),

Gene: Soilmate_26 Start: 20904, Stop: 21254, Start Num: 37
Candidate Starts for Soilmate_26:
(Start: 37 @20904 has 56 MA's), (47, 20937), (68, 21030), (70, 21036), (71, 21039), (77, 21060), (80, 21069), (85, 21102), (100, 21153), (105, 21168), (109, 21219),

Gene: Srilaccoli3_37 Start: 36886, Stop: 37329, Start Num: 12
Candidate Starts for Srilaccoli3_37:
(1, 36457), (2, 36640), (3, 36646), (Start: 12 @36886 has 2 MA's), (27, 36973), (30, 36979), (32, 36985), (56, 37069), (65, 37120), (68, 37132), (79, 37165), (80, 37168), (85, 37204), (89, 37219), (95, 37240),

Gene: StevieBAY_27 Start: 23326, Stop: 23739, Start Num: 19
Candidate Starts for StevieBAY_27:
(Start: 19 @23326 has 9 MA's), (27, 23365), (42, 23416), (52, 23446), (65, 23512), (83, 23584),

Gene: Stormer_39 Start: 30962, Stop: 31348, Start Num: 16
Candidate Starts for Stormer_39:
(Start: 16 @30962 has 59 MA's), (47, 31082), (56, 31112), (59, 31139), (65, 31163), (68, 31175), (77, 31205), (78, 31208), (91, 31274), (98, 31295), (99, 31298), (103, 31310),

Gene: Suscepit_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Suscepit_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: TaronosaurasRx_25 Start: 21403, Stop: 21789, Start Num: 37
Candidate Starts for TaronosaurasRx_25:
(Start: 37 @21403 has 56 MA's), (Start: 39 @21412 has 1 MA's), (41, 21418), (50, 21451), (53, 21460), (70, 21541), (73, 21550), (80, 21574), (94, 21643), (95, 21646), (100, 21661), (101, 21664), (104, 21673), (105, 21676), (112, 21772),

Gene: Tayonia_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Tayonia_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Tillicus_38 Start: 32042, Stop: 32440, Start Num: 16
Candidate Starts for Tillicus_38:
(Start: 16 @32042 has 59 MA's), (42, 32147), (46, 32159), (47, 32162), (53, 32180), (59, 32219), (64, 32240), (74, 32273), (77, 32285), (90, 32351), (93, 32360), (96, 32369), (98, 32375), (103, 32390),

Gene: Timinator_27 Start: 23326, Stop: 23739, Start Num: 19
Candidate Starts for Timinator_27:
(Start: 19 @23326 has 9 MA's), (27, 23365), (42, 23416), (52, 23446), (65, 23512), (83, 23584),

Gene: TinyDot_24 Start: 18787, Stop: 19161, Start Num: 37
Candidate Starts for TinyDot_24:
(9, 18565), (10, 18595), (Start: 37 @18787 has 56 MA's), (40, 18799), (41, 18802), (46, 18823), (47, 18826), (68, 18919), (75, 18940), (76, 18946), (80, 18958), (95, 19030), (97, 19036), (100, 19045), (101, 19048), (110, 19120), (111, 19135),

Gene: Trumpet_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Trumpet_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Twister6_45 Start: 35701, Stop: 36090, Start Num: 37
Candidate Starts for Twister6_45:
(Start: 37 @35701 has 56 MA's), (45, 35728), (46, 35731), (49, 35740), (58, 35773), (61, 35800), (65, 35815), (70, 35833), (73, 35842), (80, 35866), (93, 35932), (94, 35935), (95, 35938), (100, 35953), (101, 35956), (104, 35965), (110, 36028),

Gene: Valary_45 Start: 36743, Stop: 37132, Start Num: 37
Candidate Starts for Valary_45:
(Start: 37 @36743 has 56 MA's), (45, 36770), (46, 36773), (49, 36782), (58, 36815), (61, 36842), (65, 36857), (70, 36875), (73, 36884), (74, 36887), (80, 36908), (93, 36974), (94, 36977), (95, 36980), (100, 36995), (101, 36998), (104, 37007), (105, 37010), (110, 37070),

Gene: VanDeWege_46 Start: 36035, Stop: 36424, Start Num: 37
Candidate Starts for VanDeWege_46:
(Start: 37 @36035 has 56 MA's), (45, 36062), (46, 36065), (49, 36074), (58, 36107), (61, 36134), (65, 36149), (70, 36167), (73, 36176), (74, 36179), (80, 36200), (93, 36266), (94, 36269), (95, 36272), (100, 36287), (101, 36290), (104, 36299), (105, 36302), (110, 36362),

Gene: Whack_25 Start: 21433, Stop: 21819, Start Num: 38
Candidate Starts for Whack_25:
(20, 21367), (23, 21391), (33, 21415), (Start: 38 @21433 has 1 MA's), (49, 21472), (81, 21601), (82, 21604), (86, 21640), (98, 21679),

Gene: William_25 Start: 20929, Stop: 21303, Start Num: 37
Candidate Starts for William_25:
(Start: 37 @20929 has 56 MA's), (46, 20965), (68, 21061), (69, 21064), (80, 21100), (96, 21175), (97, 21178), (101, 21190),

Gene: Wizard_42 Start: 35941, Stop: 36330, Start Num: 37
Candidate Starts for Wizard_42:
(Start: 37 @35941 has 56 MA's), (45, 35968), (46, 35971), (49, 35980), (58, 36013), (61, 36040), (65, 36055), (70, 36073), (73, 36082), (74, 36085), (80, 36106), (93, 36172), (94, 36175), (95, 36178), (100, 36193), (101, 36196), (104, 36205), (105, 36208), (110, 36268),

Gene: Wojtek_39 Start: 32308, Stop: 32703, Start Num: 16
Candidate Starts for Wojtek_39:
(Start: 16 @32308 has 59 MA's), (32, 32374), (47, 32428), (56, 32458), (65, 32509), (68, 32521), (91, 32620), (98, 32641), (99, 32644), (103, 32656),

Gene: Yeezy_26 Start: 21154, Stop: 21528, Start Num: 16
Candidate Starts for Yeezy_26:
(11, 21070), (Start: 16 @21154 has 59 MA's), (24, 21202), (36, 21226), (Start: 37 @21232 has 56 MA's), (42, 21256), (45, 21265), (49, 21277), (93, 21469), (95, 21475), (96, 21478),

Gene: Yikes_41 Start: 33687, Stop: 34082, Start Num: 16
Candidate Starts for Yikes_41:
(Start: 16 @33687 has 59 MA's), (32, 33753), (47, 33807), (56, 33837), (65, 33888), (68, 33900), (77, 33930), (91, 33999), (98, 34020), (99, 34023), (103, 34035),

Gene: ZAYM_26 Start: 21872, Stop: 22258, Start Num: 37
Candidate Starts for ZAYM_26:
(Start: 37 @21872 has 56 MA's), (Start: 39 @21881 has 1 MA's), (41, 21887), (50, 21920), (53, 21929), (61, 21977), (70, 22010), (73, 22019), (80, 22043), (94, 22112), (95, 22115), (100, 22130), (101, 22133), (104, 22142), (105, 22145), (112, 22241),

Gene: Zameen_26 Start: 21932, Stop: 22306, Start Num: 16
Candidate Starts for Zameen_26:
(11, 21848), (Start: 16 @21932 has 59 MA's), (24, 21980), (36, 22004), (Start: 37 @22010 has 56 MA's), (42, 22034), (45, 22043), (49, 22055), (93, 22247), (95, 22253), (96, 22256),

Gene: Zany_39 Start: 33212, Stop: 33607, Start Num: 16
Candidate Starts for Zany_39:
(Start: 16 @33212 has 59 MA's), (32, 33278), (47, 33332), (65, 33413), (68, 33425), (77, 33455), (91, 33524), (98, 33545), (99, 33548), (103, 33560),

Gene: ZiggyZoo_24 Start: 20727, Stop: 21077, Start Num: 37
Candidate Starts for ZiggyZoo_24:
(Start: 37 @20727 has 56 MA's), (47, 20760), (68, 20853), (70, 20859), (71, 20862), (77, 20883), (80, 20892), (85, 20925), (100, 20976), (105, 20991), (109, 21042),