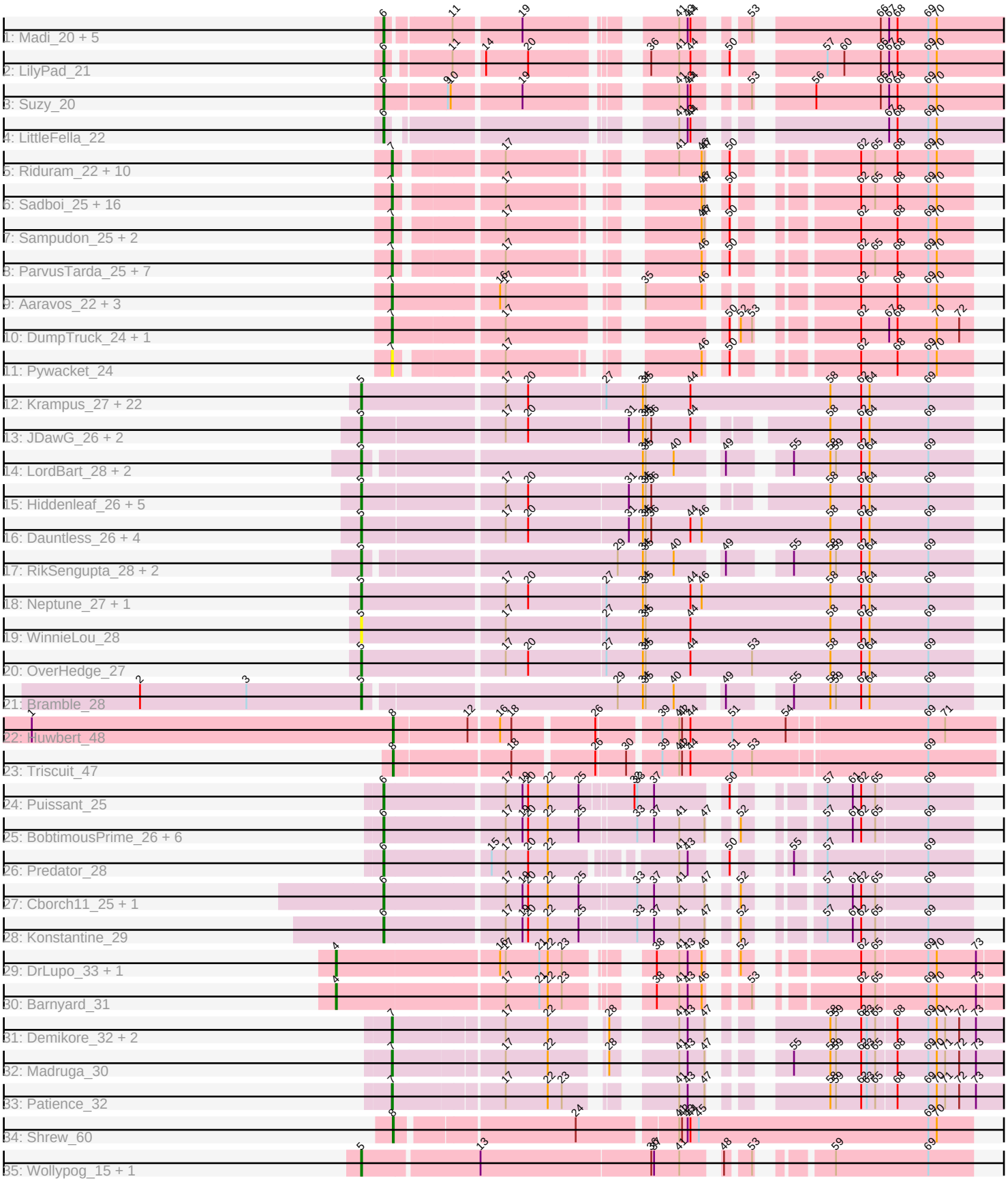
Pham 347383


1: Madi_20 + 5
2: LilyPad_21
3: Suzy_20
4: LittleFella_22
5: Riduram_22 + 10
6: Sadboi_25 + 16
7: Sampudon_25 + 2
8: ParvusTarda_25 + 7
9: Aaravos_22 + 3
10: DumpTruck_24 + 1
11: Pywacket_24
12: Krampus_27 + 22
13: JDawG_26 + 2
14: LordBart_28 + 2
15: Hiddenleaf_26 + 5
16: Dauntless_26 + 4
17: RikSengupta_28 + 2
18: Neptune_27 + 1
19: WinnieLou_28
20: OverHedge_27
21: Bramble_28
22: Huwbert_48
23: Triscuit_47
24: Puissant_25
25: BobtimousPrime_26 + 6
26: Predator_28
27: Cborch11_25 + 1
28: Konstantine_29
29: DrLupo_33 + 1
30: Barnyard_31
31: Demikore_32 + 2
32: Madruga_30
33: Patience_32
34: Shrew_60
35: Wollypog_15 + 1

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 347383 Report

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

Pham number 347383 has 128 members, 13 are drafts.

Phages represented in each track:
• Track 1 : Madi_20, BiteSize_20, Terapin_20, Sienna_20, Beyoncage_20, Djokovic_20
• Track 2 : LilyPad_21
• Track 3 : Suzy_20
• Track 4 : LittleFella_22
• Track 5 : Riduram_22, Astralis_22, Alyssamiracle_24, Avian_22, RazorC_22, Genamy16_24, Rumi_24, Charminar_22, Jamemuya19_22, NovaSharks_24, Stormer_23
• Track 6 : Sadboi_25, Nettle_24, OtterstedtS21_25, Alephilan_22, DaviePasture_25, Gibbin_26, Mima20_23, GretelLyn_25, Patos_26, Ranch_25, Erutan_25, Zany_23, Rukungu_25, Yikes_26, NorManre_26, LavAbarElk_23, DoobyDoo_24
• Track 7 : Sampudon_25, Lila22_24, Jalebi_24
• Track 8 : ParvusTarda_25, Lambo_25, Fulcrum_26, MoiGyank_27, BirthdayBoy_26, GOATification_26, Wojtek_24, Rota_24
• Track 9 : Aaravos_22, LuckyLeo_24, Apeppi_22, Tillicus_24
• Track 10 : DumpTruck_24, Xenia2_25
• Track 11 : Pywacket_24
• Track 12 : Krampus_27, SafetyGuy_27, Tiggy93_27, FountainFog_26, Gilda_27, Pharpay_27, Anakin_27, Karate_26, Rachella_27, Poultress_26, Haunter_27, Kate_27, AnnaSerena_27, CoolCookie_27, Rie18_27, OhDear_27, Potty_27, Artiphact_27, Tedro_27, PhunaPhoke_27, Hager_28, NarutoRun_27, Tongui_26
• Track 13 : JDawG_26, Aesir_26, MortySmith_25
• Track 14 : LordBart_28, Ajin_28, Sparcetus_28
• Track 15 : Hiddenleaf_26, Snakehole_28, DannyDe_26, FreddieHg_26, SilentWarrior_26, Chivey_26
• Track 16 : Dauntless_26, Crestdrop_26, JingleBells_26, Annapurna_26, Erudite_26
• Track 17 : RikSengupta_28, TinyMiny_28, Kors_28
• Track 18 : Neptune_27, Cybele_27
• Track 19 : WinnieLou_28
• Track 20 : OverHedge_27
• Track 21 : Bramble_28
• Track 22 : Huwbert_48
• Track 23 : Triscuit_47
• Track 24 : Puissant_25
• Track 25 : BobtimousPrime_26, Phreeze_24, Beckerton_24, Oaker_24, Megatron06_26, Damien_24, Thumb_24
• Track 26 : Predator_28

• Track 27 : Cborch11_25, Nish23_25
• Track 28 : Konstantine_29
• Track 29 : DrLupo_33, AmandaPanda_32
• Track 30 : Barnyard_31
• Track 31 : Demikore_32, Labelle_31, SuperSonics_31
• Track 32 : Madruga_30
• Track 33 : Patience_32
• Track 34 : Shrew_60
• Track 35 : Wollypog_15, Wollypog_16

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

The start number called the most often in the published annotations is 5, it was called in 46 of the 115 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aesir_26, Ajin_28, Anakin_27, AnnaSerena_27, Annapurna_26, Artiphact_27, Bramble_28, Chivey_26, CoolCookie_27, Crestdrop_26, Cybele_27, DannyDe_26, Dauntless_26, Erudite_26, FountainFog_26, FreddieHg_26, Gilda_27, Hager_28, Haunter_27, Hiddenleaf_26, JDawG_26, JingleBells_26, Karate_26, Kate_27, Kors_28, Krampus_27, LordBart_28, MortySmith_25, NarutoRun_27, Neptune_27, OhDear_27, OverHedge_27, Pharpay_27, PhunaPhoke_27, Potty_27, Poultress_26, Rachella_27, Rie18_27, RikSengupta_28, SafetyGuy_27, SilentWarrior_26, Snakehole_28, Sparcetus_28, Tedro_27, Tiggy93_27, TinyMiny_28, Tongui_26, WinnieLou_28, Wollypog_15, Wollypog_16,

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

Genes that do not have the "Most Annotated" start:
• Aaravos_22, Alephilan_22, Alyssamiracle_24, AmandaPanda_32, Apeppi_22, Astralis_22, Avian_22, Barnyard_31, Beckerton_24, Beyoncage_20, BirthdayBoy_26, BiteSize_20, BobtimousPrime_26, Cborch11_25, Charminar_22, Damien_24, DaviePasture_25, Demikore_32, Djokovic_20, DoobyDoo_24, DrLupo_33, DumpTruck_24, Erutan_25, Fulcrum_26, GOATification_26, Genamy16_24, Gibbin_26, GretelLyn_25, Huwbert_48, Jalebi_24, Jamemuya19_22, Konstantine_29, Labelle_31, Lambo_25, LavAbarElk_23, Lila22_24, LilyPad_21, LittleFella_22, LuckyLeo_24, Madi_20, Madruga_30, Megatron06_26, Mima20_23, MoiGyank_27, Nettle_24, Nish23_25, NorManre_26, NovaSharks_24, Oaker_24, OtterstedtS21_25, ParvusTarda_25, Patience_32, Patos_26, Phreeze_24, Predator_28, Puissant_25, Pywacket_24, Ranch_25, RazorC_22, Riduram_22, Rota_24, Rukungu_25, Rumi_24, Sadboi_25, Sampudon_25, Shrew_60, Sienna_20, Stormer_23, SuperSonics_31, Suzy_20, Terapin_20, Thumb_24, Tillicus_24, Triscuit_47, Wojtek_24, Xenia2_25, Yikes_26, Zany_23,

Summary by start number:

Start 4:
• Found in 3 of 128 (2.3%) of genes in pham
• Manual Annotations of this start: 2 of 115

• Called 100.0% of time when present
• Phage (with cluster) where this start called: AmandaPanda_32 (H2), Barnyard_31 (H2), DrLupo_33 (H2),

Start 5:
• Found in 50 of 128 (39.1%) of genes in pham
• Manual Annotations of this start: 46 of 115
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aesir_26 (EF), Ajin_28 (EF), Anakin_27 (EF), AnnaSerena_27 (EF), Annapurna_26 (EF), Artiphact_27 (EF), Bramble_28 (EF), Chivey_26 (EF), CoolCookie_27 (EF), Crestdrop_26 (EF), Cybele_27 (EF), DannyDe_26 (EF), Dauntless_26 (EF), Erudite_26 (EF), FountainFog_26 (EF), FreddieHg_26 (EF), Gilda_27 (EF), Hager_28 (EF), Haunter_27 (EF), Hiddenleaf_26 (EF), JDawG_26 (EF), JingleBells_26 (EF), Karate_26 (EF), Kate_27 (EF), Kors_28 (EF), Krampus_27 (EF), LordBart_28 (EF), MortySmith_25 (EF), NarutoRun_27 (EF), Neptune_27 (EF), OhDear_27 (EF), OverHedge_27 (EF), Pharpay_27 (EF), PhunaPhoke_27 (EF), Potty_27 (EF), Poultress_26 (EF), Rachella_27 (EF), Rie18_27 (EF), RikSengupta_28 (EF), SafetyGuy_27 (EF), SilentWarrior_26 (EF), Snakehole_28 (EF), Sparcetus_28 (EF), Tedro_27 (EF), Tiggy93_27 (EF), TinyMiny_28 (EF), Tongui_26 (EF), WinnieLou_28 (EF), Wollypog_15 (singleton), Wollypog_16 (singleton),

Start 6:
• Found in 21 of 128 (16.4%) of genes in pham
• Manual Annotations of this start: 20 of 115
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Beckerton_24 (H1), Beyoncage_20 (DG1), BiteSize_20 (DG1), BobtimousPrime_26 (H1), Cborch11_25 (H1), Damien_24 (H1), Djokovic_20 (DG1), Konstantine_29 (H1), LilyPad_21 (DG1), LittleFella_22 (DG2), Madi_20 (DG1), Megatron06_26 (H1), Nish23_25 (H1), Oaker_24 (H1), Phreeze_24 (H1), Predator_28 (H1), Puissant_25 (H1), Sienna_20 (DG1), Suzy_20 (DG1), Terapin_20 (DG1), Thumb_24 (H1),

Start 7:
• Found in 51 of 128 (39.8%) of genes in pham
• Manual Annotations of this start: 44 of 115
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aaravos_22 (DV), Alephilan_22 (DV), Alyssamiracle_24 (DV), Apeppi_22 (DV), Astralis_22 (DV), Avian_22 (DV), BirthdayBoy_26 (DV), Charminar_22 (DV), DaviePasture_25 (DV), Demikore_32 (U), DoobyDoo_24 (DV), DumpTruck_24 (DV), Erutan_25 (DV), Fulcrum_26 (DV), GOATification_26 (DV), Genamy16_24 (DV), Gibbin_26 (DV), GretelLyn_25 (DV), Jalebi_24 (DV), Jamemuya19_22 (DV), Labelle_31 (U), Lambo_25 (DV), LavAbarElk_23 (DV), Lila22_24 (DV), LuckyLeo_24 (DV), Madruga_30 (U), Mima20_23 (DV), MoiGyank_27 (DV), Nettle_24 (DV), NorManre_26 (DV), NovaSharks_24 (DV), OtterstedtS21_25 (DV), ParvusTarda_25 (DV), Patience_32 (U), Patos_26 (DV), Pywacket_24 (DV), Ranch_25 (DV), RazorC_22 (DV), Riduram_22 (DV), Rota_24 (DV), Rukungu_25 (DV), Rumi_24 (DV), Sadboi_25 (DV), Sampudon_25 (DV), Stormer_23 (DV), SuperSonics_31 (U), Tillicus_24 (DV), Wojtek_24 (DV), Xenia2_25 (DV), Yikes_26 (DV), Zany_23 (DV),

Start 8:
• Found in 3 of 128 (2.3%) of genes in pham

• Manual Annotations of this start: 3 of 115
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Huwbert_48 (GG), Shrew_60 (singleton), Triscuit_47 (GG),

Summary by clusters:

There are 9 clusters represented in this pham: DG2, singleton, EF, H2, H1, GG, DG1, U, DV,

Info for manual annotations of cluster DG1:
•Start number 6 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:
•Start number 6 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:
•Start number 7 was manually annotated 40 times for cluster DV.

Info for manual annotations of cluster EF:
•Start number 5 was manually annotated 44 times for cluster EF.

Info for manual annotations of cluster GG:
•Start number 8 was manually annotated 2 times for cluster GG.

Info for manual annotations of cluster H1:
•Start number 6 was manually annotated 11 times for cluster H1.

Info for manual annotations of cluster H2:
•Start number 4 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster U:
•Start number 7 was manually annotated 4 times for cluster U.

Gene Information:

Gene: Aaravos_22 Start: 16008, Stop: 16505, Start Num: 7
Candidate Starts for Aaravos_22:
(Start: 7 @16008 has 44 MA's), (16, 16113), (17, 16119), (35, 16221), (46, 16281), (62, 16386), (68, 16425), (69, 16458), (70, 16467),

Gene: Aesir_26 Start: 13825, Stop: 14427, Start Num: 5
Candidate Starts for Aesir_26:
(Start: 5 @13825 has 46 MA's), (17, 13969), (20, 13993), (31, 14098), (34, 14113), (35, 14116), (36, 14122), (44, 14164), (58, 14275), (62, 14308), (64, 14317), (69, 14380),

Gene: Ajin_28 Start: 13971, Stop: 14564, Start Num: 5
Candidate Starts for Ajin_28:
(Start: 5 @13971 has 46 MA's), (34, 14253), (35, 14256), (40, 14286), (49, 14325), (55, 14373), (58, 14412), (59, 14418), (62, 14445), (64, 14454), (69, 14517),

Gene: Alephilan_22 Start: 15936, Stop: 16421, Start Num: 7
Candidate Starts for Alephilan_22:
(Start: 7 @15936 has 44 MA's), (17, 16041), (46, 16197), (47, 16200), (50, 16209), (62, 16302), (65, 16317), (68, 16341), (69, 16374), (70, 16383),

Gene: Alyssamiracle_24 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for Alyssamiracle_24:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: AmandaPanda_32 Start: 17635, Stop: 18246, Start Num: 4
Candidate Starts for AmandaPanda_32:
(Start: 4 @17635 has 2 MA's), (16, 17803), (17, 17809), (21, 17845), (22, 17854), (23, 17869), (38, 17929), (41, 17953), (43, 17962), (46, 17977), (52, 17992), (62, 18082), (65, 18097), (69, 18151), (70, 18160), (73, 18202),

Gene: Anakin_27 Start: 14035, Stop: 14679, Start Num: 5
Candidate Starts for Anakin_27:
(Start: 5 @14035 has 46 MA's), (17, 14182), (20, 14206), (27, 14287), (34, 14326), (35, 14329), (44, 14377), (58, 14527), (62, 14560), (64, 14569), (69, 14632),

Gene: AnnaSerena_27 Start: 14044, Stop: 14688, Start Num: 5
Candidate Starts for AnnaSerena_27:
(Start: 5 @14044 has 46 MA's), (17, 14191), (20, 14215), (27, 14296), (34, 14335), (35, 14338), (44, 14386), (58, 14536), (62, 14569), (64, 14578), (69, 14641),

Gene: Annapurna_26 Start: 13248, Stop: 13889, Start Num: 5
Candidate Starts for Annapurna_26:
(Start: 5 @13248 has 46 MA's), (17, 13392), (20, 13416), (31, 13521), (34, 13536), (35, 13539), (36, 13545), (44, 13587), (46, 13599), (58, 13737), (62, 13770), (64, 13779), (69, 13842),

Gene: Apeppi_22 Start: 16058, Stop: 16555, Start Num: 7
Candidate Starts for Apeppi_22:
(Start: 7 @16058 has 44 MA's), (16, 16163), (17, 16169), (35, 16271), (46, 16331), (62, 16436), (68, 16475), (69, 16508), (70, 16517),

Gene: Artiphact_27 Start: 14036, Stop: 14680, Start Num: 5
Candidate Starts for Artiphact_27:
(Start: 5 @14036 has 46 MA's), (17, 14183), (20, 14207), (27, 14288), (34, 14327), (35, 14330), (44, 14378), (58, 14528), (62, 14561), (64, 14570), (69, 14633),

Gene: Astralis_22 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for Astralis_22:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: Avian_22 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for Avian_22:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: Barnyard_31 Start: 17229, Stop: 17840, Start Num: 4
Candidate Starts for Barnyard_31:

(Start: 4 @17229 has 2 MA's), (17, 17403), (21, 17439), (22, 17448), (23, 17463), (38, 17523), (41, 17547), (43, 17556), (46, 17571), (53, 17598), (62, 17676), (65, 17691), (69, 17745), (70, 17754), (73, 17796),

Gene: Beckerton_24 Start: 15907, Stop: 16452, Start Num: 6
Candidate Starts for Beckerton_24:
(Start: 6 @15907 has 20 MA's), (17, 16027), (19, 16045), (20, 16051), (22, 16072), (25, 16105), (33, 16162), (37, 16180), (41, 16207), (47, 16234), (52, 16246), (57, 16300), (61, 16327), (62, 16336), (65, 16351), (69, 16405),

Gene: Beyoncage_20 Start: 11749, Stop: 12312, Start Num: 6
Candidate Starts for Beyoncage_20:
(Start: 6 @11749 has 20 MA's), (11, 11812), (19, 11878), (41, 12004), (43, 12013), (44, 12016), (53, 12055), (66, 12169), (67, 12178), (68, 12187), (69, 12220), (70, 12229),

Gene: BirthdayBoy_26 Start: 16789, Stop: 17265, Start Num: 7
Candidate Starts for BirthdayBoy_26:
(Start: 7 @16789 has 44 MA's), (17, 16885), (46, 17041), (50, 17053), (62, 17146), (65, 17161), (68, 17185), (69, 17218), (70, 17227),

Gene: BiteSize_20 Start: 11749, Stop: 12312, Start Num: 6
Candidate Starts for BiteSize_20:
(Start: 6 @11749 has 20 MA's), (11, 11812), (19, 11878), (41, 12004), (43, 12013), (44, 12016), (53, 12055), (66, 12169), (67, 12178), (68, 12187), (69, 12220), (70, 12229),

Gene: BobtimousPrime_26 Start: 15827, Stop: 16372, Start Num: 6
Candidate Starts for BobtimousPrime_26:
(Start: 6 @15827 has 20 MA's), (17, 15947), (19, 15965), (20, 15971), (22, 15992), (25, 16025), (33, 16082), (37, 16100), (41, 16127), (47, 16154), (52, 16166), (57, 16220), (61, 16247), (62, 16256), (65, 16271), (69, 16325),

Gene: Bramble_28 Start: 13937, Stop: 14530, Start Num: 5
Candidate Starts for Bramble_28:
(2, 13700), (3, 13814), (Start: 5 @13937 has 46 MA's), (29, 14192), (34, 14219), (35, 14222), (40, 14252), (49, 14291), (55, 14339), (58, 14378), (59, 14384), (62, 14411), (64, 14420), (69, 14483),

Gene: Cborch11_25 Start: 15369, Stop: 15914, Start Num: 6
Candidate Starts for Cborch11_25:
(Start: 6 @15369 has 20 MA's), (17, 15489), (19, 15507), (20, 15513), (22, 15534), (25, 15567), (33, 15624), (37, 15642), (41, 15669), (47, 15696), (52, 15708), (57, 15762), (61, 15789), (62, 15798), (65, 15813), (69, 15867),

Gene: Charminar_22 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for Charminar_22:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: Chivey_26 Start: 13241, Stop: 13843, Start Num: 5
Candidate Starts for Chivey_26:
(Start: 5 @13241 has 46 MA's), (17, 13385), (20, 13409), (31, 13514), (34, 13529), (35, 13532), (36, 13538), (58, 13691), (62, 13724), (64, 13733), (69, 13796),

Gene: CoolCookie_27 Start: 14042, Stop: 14686, Start Num: 5

Candidate Starts for CoolCookie_27:
(Start: 5 @14042 has 46 MA's), (17, 14189), (20, 14213), (27, 14294), (34, 14333), (35, 14336), (44, 14384), (58, 14534), (62, 14567), (64, 14576), (69, 14639),

Gene: Crestdrop_26 Start: 13111, Stop: 13752, Start Num: 5
Candidate Starts for Crestdrop_26:
(Start: 5 @13111 has 46 MA's), (17, 13255), (20, 13279), (31, 13384), (34, 13399), (35, 13402), (36, 13408), (44, 13450), (46, 13462), (58, 13600), (62, 13633), (64, 13642), (69, 13705),

Gene: Cybele_27 Start: 14012, Stop: 14656, Start Num: 5
Candidate Starts for Cybele_27:
(Start: 5 @14012 has 46 MA's), (17, 14159), (20, 14183), (27, 14264), (34, 14303), (35, 14306), (44, 14354), (46, 14366), (58, 14504), (62, 14537), (64, 14546), (69, 14609),

Gene: Damien_24 Start: 15370, Stop: 15915, Start Num: 6
Candidate Starts for Damien_24:
(Start: 6 @15370 has 20 MA's), (17, 15490), (19, 15508), (20, 15514), (22, 15535), (25, 15568), (33, 15625), (37, 15643), (41, 15670), (47, 15697), (52, 15709), (57, 15763), (61, 15790), (62, 15799), (65, 15814), (69, 15868),

Gene: DannyDe_26 Start: 13233, Stop: 13835, Start Num: 5
Candidate Starts for DannyDe_26:
(Start: 5 @13233 has 46 MA's), (17, 13377), (20, 13401), (31, 13506), (34, 13521), (35, 13524), (36, 13530), (58, 13683), (62, 13716), (64, 13725), (69, 13788),

Gene: Dauntless_26 Start: 13754, Stop: 14395, Start Num: 5
Candidate Starts for Dauntless_26:
(Start: 5 @13754 has 46 MA's), (17, 13898), (20, 13922), (31, 14027), (34, 14042), (35, 14045), (36, 14051), (44, 14093), (46, 14105), (58, 14243), (62, 14276), (64, 14285), (69, 14348),

Gene: DaviePasture_25 Start: 16546, Stop: 17034, Start Num: 7
Candidate Starts for DaviePasture_25:
(Start: 7 @16546 has 44 MA's), (17, 16654), (46, 16810), (47, 16813), (50, 16822), (62, 16915), (65, 16930), (68, 16954), (69, 16987), (70, 16996),

Gene: Demikore_32 Start: 18730, Stop: 19290, Start Num: 7
Candidate Starts for Demikore_32:
(Start: 7 @18730 has 44 MA's), (17, 18838), (22, 18883), (28, 18928), (41, 18979), (43, 18988), (47, 19006), (58, 19090), (59, 19096), (62, 19123), (63, 19129), (65, 19138), (68, 19159), (69, 19192), (70, 19201), (71, 19210), (72, 19225), (73, 19243),

Gene: Djokovic_20 Start: 11749, Stop: 12312, Start Num: 6
Candidate Starts for Djokovic_20:
(Start: 6 @11749 has 20 MA's), (11, 11812), (19, 11878), (41, 12004), (43, 12013), (44, 12016), (53, 12055), (66, 12169), (67, 12178), (68, 12187), (69, 12220), (70, 12229),

Gene: DoobyDoo_24 Start: 15723, Stop: 16199, Start Num: 7
Candidate Starts for DoobyDoo_24:
(Start: 7 @15723 has 44 MA's), (17, 15819), (46, 15975), (47, 15978), (50, 15987), (62, 16080), (65, 16095), (68, 16119), (69, 16152), (70, 16161),

Gene: DrLupo_33 Start: 17635, Stop: 18246, Start Num: 4
Candidate Starts for DrLupo_33:

(Start: 4 @17635 has 2 MA's), (16, 17803), (17, 17809), (21, 17845), (22, 17854), (23, 17869), (38, 17929), (41, 17953), (43, 17962), (46, 17977), (52, 17992), (62, 18082), (65, 18097), (69, 18151), (70, 18160), (73, 18202),

Gene: DumpTruck_24 Start: 15958, Stop: 16452, Start Num: 7
Candidate Starts for DumpTruck_24:
(Start: 7 @15958 has 44 MA's), (17, 16066), (50, 16240), (52, 16243), (53, 16255), (62, 16333), (67, 16363), (68, 16372), (70, 16414), (72, 16438),

Gene: Erudite_26 Start: 13754, Stop: 14395, Start Num: 5
Candidate Starts for Erudite_26:
(Start: 5 @13754 has 46 MA's), (17, 13898), (20, 13922), (31, 14027), (34, 14042), (35, 14045), (36, 14051), (44, 14093), (46, 14105), (58, 14243), (62, 14276), (64, 14285), (69, 14348),

Gene: Erutan_25 Start: 16236, Stop: 16712, Start Num: 7
Candidate Starts for Erutan_25:
(Start: 7 @16236 has 44 MA's), (17, 16332), (46, 16488), (47, 16491), (50, 16500), (62, 16593), (65, 16608), (68, 16632), (69, 16665), (70, 16674),

Gene: FountainFog_26 Start: 13354, Stop: 13998, Start Num: 5
Candidate Starts for FountainFog_26:
(Start: 5 @13354 has 46 MA's), (17, 13501), (20, 13525), (27, 13606), (34, 13645), (35, 13648), (44, 13696), (58, 13846), (62, 13879), (64, 13888), (69, 13951),

Gene: FreddieHg_26 Start: 13257, Stop: 13859, Start Num: 5
Candidate Starts for FreddieHg_26:
(Start: 5 @13257 has 46 MA's), (17, 13401), (20, 13425), (31, 13530), (34, 13545), (35, 13548), (36, 13554), (58, 13707), (62, 13740), (64, 13749), (69, 13812),

Gene: Fulcrum_26 Start: 16769, Stop: 17245, Start Num: 7
Candidate Starts for Fulcrum_26:
(Start: 7 @16769 has 44 MA's), (17, 16865), (46, 17021), (50, 17033), (62, 17126), (65, 17141), (68, 17165), (69, 17198), (70, 17207),

Gene: GOATification_26 Start: 16769, Stop: 17245, Start Num: 7
Candidate Starts for GOATification_26:
(Start: 7 @16769 has 44 MA's), (17, 16865), (46, 17021), (50, 17033), (62, 17126), (65, 17141), (68, 17165), (69, 17198), (70, 17207),

Gene: Genamy16_24 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for Genamy16_24:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: Gibbin_26 Start: 16829, Stop: 17317, Start Num: 7
Candidate Starts for Gibbin_26:
(Start: 7 @16829 has 44 MA's), (17, 16937), (46, 17093), (47, 17096), (50, 17105), (62, 17198), (65, 17213), (68, 17237), (69, 17270), (70, 17279),

Gene: Gilda_27 Start: 14036, Stop: 14680, Start Num: 5
Candidate Starts for Gilda_27:
(Start: 5 @14036 has 46 MA's), (17, 14183), (20, 14207), (27, 14288), (34, 14327), (35, 14330), (44, 14378), (58, 14528), (62, 14561), (64, 14570), (69, 14633),

Gene: GretelLyn_25 Start: 17103, Stop: 17579, Start Num: 7
Candidate Starts for GretelLyn_25:
(Start: 7 @17103 has 44 MA's), (17, 17199), (46, 17355), (47, 17358), (50, 17367), (62, 17460), (65, 17475), (68, 17499), (69, 17532), (70, 17541),

Gene: Hager_28 Start: 13598, Stop: 14242, Start Num: 5
Candidate Starts for Hager_28:
(Start: 5 @13598 has 46 MA's), (17, 13745), (20, 13769), (27, 13850), (34, 13889), (35, 13892), (44, 13940), (58, 14090), (62, 14123), (64, 14132), (69, 14195),

Gene: Haunter_27 Start: 13449, Stop: 14093, Start Num: 5
Candidate Starts for Haunter_27:
(Start: 5 @13449 has 46 MA's), (17, 13596), (20, 13620), (27, 13701), (34, 13740), (35, 13743), (44, 13791), (58, 13941), (62, 13974), (64, 13983), (69, 14046),

Gene: Hiddenleaf_26 Start: 13241, Stop: 13843, Start Num: 5
Candidate Starts for Hiddenleaf_26:
(Start: 5 @13241 has 46 MA's), (17, 13385), (20, 13409), (31, 13514), (34, 13529), (35, 13532), (36, 13538), (58, 13691), (62, 13724), (64, 13733), (69, 13796),

Gene: Huwbert_48 Start: 24385, Stop: 24990, Start Num: 8
Candidate Starts for Huwbert_48:
(1, 23998), (Start: 8 @24385 has 3 MA's), (12, 24460), (16, 24490), (18, 24502), (26, 24583), (39, 24643), (41, 24661), (42, 24664), (44, 24673), (51, 24718), (54, 24775), (69, 24919), (71, 24937),

Gene: JDawG_26 Start: 13823, Stop: 14425, Start Num: 5
Candidate Starts for JDawG_26:
(Start: 5 @13823 has 46 MA's), (17, 13967), (20, 13991), (31, 14096), (34, 14111), (35, 14114), (36, 14120), (44, 14162), (58, 14273), (62, 14306), (64, 14315), (69, 14378),

Gene: Jalebi_24 Start: 17279, Stop: 17755, Start Num: 7
Candidate Starts for Jalebi_24:
(Start: 7 @17279 has 44 MA's), (17, 17375), (46, 17531), (47, 17534), (50, 17543), (62, 17636), (68, 17675), (69, 17708), (70, 17717),

Gene: Jamemuya19_22 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for Jamemuya19_22:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: JingleBells_26 Start: 13318, Stop: 13959, Start Num: 5
Candidate Starts for JingleBells_26:
(Start: 5 @13318 has 46 MA's), (17, 13462), (20, 13486), (31, 13591), (34, 13606), (35, 13609), (36, 13615), (44, 13657), (46, 13669), (58, 13807), (62, 13840), (64, 13849), (69, 13912),

Gene: Karate_26 Start: 13448, Stop: 14092, Start Num: 5
Candidate Starts for Karate_26:
(Start: 5 @13448 has 46 MA's), (17, 13595), (20, 13619), (27, 13700), (34, 13739), (35, 13742), (44, 13790), (58, 13940), (62, 13973), (64, 13982), (69, 14045),

Gene: Kate_27 Start: 14044, Stop: 14688, Start Num: 5
Candidate Starts for Kate_27:

(Start: 5 @14044 has 46 MA's), (17, 14191), (20, 14215), (27, 14296), (34, 14335), (35, 14338), (44, 14386), (58, 14536), (62, 14569), (64, 14578), (69, 14641),

Gene: Konstantine_29 Start: 16571, Stop: 17116, Start Num: 6
Candidate Starts for Konstantine_29:
(Start: 6 @16571 has 20 MA's), (17, 16691), (19, 16709), (20, 16715), (22, 16736), (25, 16769), (33, 16826), (37, 16844), (41, 16871), (47, 16898), (52, 16910), (57, 16964), (61, 16991), (62, 17000), (65, 17015), (69, 17069),

Gene: Kors_28 Start: 14017, Stop: 14610, Start Num: 5
Candidate Starts for Kors_28:
(Start: 5 @14017 has 46 MA's), (29, 14272), (34, 14299), (35, 14302), (40, 14332), (49, 14371), (55, 14419), (58, 14458), (59, 14464), (62, 14491), (64, 14500), (69, 14563),

Gene: Krampus_27 Start: 14042, Stop: 14686, Start Num: 5
Candidate Starts for Krampus_27:
(Start: 5 @14042 has 46 MA's), (17, 14189), (20, 14213), (27, 14294), (34, 14333), (35, 14336), (44, 14384), (58, 14534), (62, 14567), (64, 14576), (69, 14639),

Gene: Labelle_31 Start: 18732, Stop: 19292, Start Num: 7
Candidate Starts for Labelle_31:
(Start: 7 @18732 has 44 MA's), (17, 18840), (22, 18885), (28, 18930), (41, 18981), (43, 18990), (47, 19008), (58, 19092), (59, 19098), (62, 19125), (63, 19131), (65, 19140), (68, 19161), (69, 19194), (70, 19203), (71, 19212), (72, 19227), (73, 19245),

Gene: Lambo_25 Start: 16772, Stop: 17257, Start Num: 7
Candidate Starts for Lambo_25:
(Start: 7 @16772 has 44 MA's), (17, 16877), (46, 17033), (50, 17045), (62, 17138), (65, 17153), (68, 17177), (69, 17210), (70, 17219),

Gene: LavAbarElk_23 Start: 15206, Stop: 15694, Start Num: 7
Candidate Starts for LavAbarElk_23:
(Start: 7 @15206 has 44 MA's), (17, 15314), (46, 15470), (47, 15473), (50, 15482), (62, 15575), (65, 15590), (68, 15614), (69, 15647), (70, 15656),

Gene: Lila22_24 Start: 16727, Stop: 17203, Start Num: 7
Candidate Starts for Lila22_24:
(Start: 7 @16727 has 44 MA's), (17, 16823), (46, 16979), (47, 16982), (50, 16991), (62, 17084), (68, 17123), (69, 17156), (70, 17165),

Gene: LilyPad_21 Start: 12413, Stop: 12973, Start Num: 6
Candidate Starts for LilyPad_21:
(Start: 6 @12413 has 20 MA's), (11, 12473), (14, 12500), (20, 12545), (36, 12635), (41, 12665), (44, 12677), (50, 12701), (57, 12773), (60, 12791), (66, 12830), (67, 12839), (68, 12848), (69, 12881), (70, 12890),

Gene: LittleFella_22 Start: 14288, Stop: 14845, Start Num: 6
Candidate Starts for LittleFella_22:
(Start: 6 @14288 has 20 MA's), (41, 14537), (43, 14546), (44, 14549), (67, 14711), (68, 14720), (69, 14753), (70, 14762),

Gene: LordBart_28 Start: 13933, Stop: 14526, Start Num: 5
Candidate Starts for LordBart_28:

(Start: 5 @13933 has 46 MA's), (34, 14215), (35, 14218), (40, 14248), (49, 14287), (55, 14335), (58, 14374), (59, 14380), (62, 14407), (64, 14416), (69, 14479),

Gene: LuckyLeo_24 Start: 16058, Stop: 16555, Start Num: 7
Candidate Starts for LuckyLeo_24:
(Start: 7 @16058 has 44 MA's), (16, 16163), (17, 16169), (35, 16271), (46, 16331), (62, 16436), (68, 16475), (69, 16508), (70, 16517),

Gene: Madi_20 Start: 11749, Stop: 12312, Start Num: 6
Candidate Starts for Madi_20:
(Start: 6 @11749 has 20 MA's), (11, 11812), (19, 11878), (41, 12004), (43, 12013), (44, 12016), (53, 12055), (66, 12169), (67, 12178), (68, 12187), (69, 12220), (70, 12229),

Gene: Madruga_30 Start: 18401, Stop: 18961, Start Num: 7
Candidate Starts for Madruga_30:
(Start: 7 @18401 has 44 MA's), (17, 18509), (22, 18554), (28, 18599), (41, 18650), (43, 18659), (47, 18677), (55, 18722), (58, 18761), (59, 18767), (62, 18794), (63, 18800), (65, 18809), (68, 18830), (69, 18863), (70, 18872), (71, 18881), (72, 18896), (73, 18914),

Gene: Megatron06_26 Start: 15903, Stop: 16448, Start Num: 6
Candidate Starts for Megatron06_26:
(Start: 6 @15903 has 20 MA's), (17, 16023), (19, 16041), (20, 16047), (22, 16068), (25, 16101), (33, 16158), (37, 16176), (41, 16203), (47, 16230), (52, 16242), (57, 16296), (61, 16323), (62, 16332), (65, 16347), (69, 16401),

Gene: Mima20_23 Start: 16456, Stop: 16944, Start Num: 7
Candidate Starts for Mima20_23:
(Start: 7 @16456 has 44 MA's), (17, 16564), (46, 16720), (47, 16723), (50, 16732), (62, 16825), (65, 16840), (68, 16864), (69, 16897), (70, 16906),

Gene: MoiGyank_27 Start: 17140, Stop: 17616, Start Num: 7
Candidate Starts for MoiGyank_27:
(Start: 7 @17140 has 44 MA's), (17, 17236), (46, 17392), (50, 17404), (62, 17497), (65, 17512), (68, 17536), (69, 17569), (70, 17578),

Gene: MortySmith_25 Start: 13216, Stop: 13818, Start Num: 5
Candidate Starts for MortySmith_25:
(Start: 5 @13216 has 46 MA's), (17, 13360), (20, 13384), (31, 13489), (34, 13504), (35, 13507), (36, 13513), (44, 13555), (58, 13666), (62, 13699), (64, 13708), (69, 13771),

Gene: NarutoRun_27 Start: 14035, Stop: 14679, Start Num: 5
Candidate Starts for NarutoRun_27:
(Start: 5 @14035 has 46 MA's), (17, 14182), (20, 14206), (27, 14287), (34, 14326), (35, 14329), (44, 14377), (58, 14527), (62, 14560), (64, 14569), (69, 14632),

Gene: Neptune_27 Start: 14012, Stop: 14656, Start Num: 5
Candidate Starts for Neptune_27:
(Start: 5 @14012 has 46 MA's), (17, 14159), (20, 14183), (27, 14264), (34, 14303), (35, 14306), (44, 14354), (46, 14366), (58, 14504), (62, 14537), (64, 14546), (69, 14609),

Gene: Nettle_24 Start: 17003, Stop: 17479, Start Num: 7
Candidate Starts for Nettle_24:

(Start: 7 @17003 has 44 MA's), (17, 17099), (46, 17255), (47, 17258), (50, 17267), (62, 17360), (65, 17375), (68, 17399), (69, 17432), (70, 17441),

Gene: Nish23_25 Start: 15369, Stop: 15914, Start Num: 6
Candidate Starts for Nish23_25:
(Start: 6 @15369 has 20 MA's), (17, 15489), (19, 15507), (20, 15513), (22, 15534), (25, 15567), (33, 15624), (37, 15642), (41, 15669), (47, 15696), (52, 15708), (57, 15762), (61, 15789), (62, 15798), (65, 15813), (69, 15867),

Gene: NorManre_26 Start: 16335, Stop: 16823, Start Num: 7
Candidate Starts for NorManre_26:
(Start: 7 @16335 has 44 MA's), (17, 16443), (46, 16599), (47, 16602), (50, 16611), (62, 16704), (65, 16719), (68, 16743), (69, 16776), (70, 16785),

Gene: NovaSharks_24 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for NovaSharks_24:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: Oaker_24 Start: 15627, Stop: 16172, Start Num: 6
Candidate Starts for Oaker_24:
(Start: 6 @15627 has 20 MA's), (17, 15747), (19, 15765), (20, 15771), (22, 15792), (25, 15825), (33, 15882), (37, 15900), (41, 15927), (47, 15954), (52, 15966), (57, 16020), (61, 16047), (62, 16056), (65, 16071), (69, 16125),

Gene: OhDear_27 Start: 14041, Stop: 14685, Start Num: 5
Candidate Starts for OhDear_27:
(Start: 5 @14041 has 46 MA's), (17, 14188), (20, 14212), (27, 14293), (34, 14332), (35, 14335), (44, 14383), (58, 14533), (62, 14566), (64, 14575), (69, 14638),

Gene: OtterstedtS21_25 Start: 16425, Stop: 16901, Start Num: 7
Candidate Starts for OtterstedtS21_25:
(Start: 7 @16425 has 44 MA's), (17, 16521), (46, 16677), (47, 16680), (50, 16689), (62, 16782), (65, 16797), (68, 16821), (69, 16854), (70, 16863),

Gene: OverHedge_27 Start: 14002, Stop: 14646, Start Num: 5
Candidate Starts for OverHedge_27:
(Start: 5 @14002 has 46 MA's), (17, 14149), (20, 14173), (27, 14254), (34, 14293), (35, 14296), (44, 14344), (53, 14410), (58, 14494), (62, 14527), (64, 14536), (69, 14599),

Gene: ParvusTarda_25 Start: 15907, Stop: 16383, Start Num: 7
Candidate Starts for ParvusTarda_25:
(Start: 7 @15907 has 44 MA's), (17, 16003), (46, 16159), (50, 16171), (62, 16264), (65, 16279), (68, 16303), (69, 16336), (70, 16345),

Gene: Patience_32 Start: 19282, Stop: 19842, Start Num: 7
Candidate Starts for Patience_32:
(Start: 7 @19282 has 44 MA's), (17, 19390), (22, 19435), (23, 19450), (41, 19531), (43, 19540), (47, 19558), (58, 19642), (59, 19648), (62, 19675), (63, 19681), (65, 19690), (68, 19711), (69, 19744), (70, 19753), (71, 19762), (72, 19777), (73, 19795),

Gene: Patos_26 Start: 16335, Stop: 16823, Start Num: 7
Candidate Starts for Patos_26:

(Start: 7 @16335 has 44 MA's), (17, 16443), (46, 16599), (47, 16602), (50, 16611), (62, 16704), (65, 16719), (68, 16743), (69, 16776), (70, 16785),

Gene: Pharpay_27 Start: 14057, Stop: 14701, Start Num: 5
Candidate Starts for Pharpay_27:
(Start: 5 @14057 has 46 MA's), (17, 14204), (20, 14228), (27, 14309), (34, 14348), (35, 14351), (44, 14399), (58, 14549), (62, 14582), (64, 14591), (69, 14654),

Gene: Phreeze_24 Start: 15370, Stop: 15915, Start Num: 6
Candidate Starts for Phreeze_24:
(Start: 6 @15370 has 20 MA's), (17, 15490), (19, 15508), (20, 15514), (22, 15535), (25, 15568), (33, 15625), (37, 15643), (41, 15670), (47, 15697), (52, 15709), (57, 15763), (61, 15790), (62, 15799), (65, 15814), (69, 15868),

Gene: PhunaPhoke_27 Start: 14030, Stop: 14674, Start Num: 5
Candidate Starts for PhunaPhoke_27:
(Start: 5 @14030 has 46 MA's), (17, 14177), (20, 14201), (27, 14282), (34, 14321), (35, 14324), (44, 14372), (58, 14522), (62, 14555), (64, 14564), (69, 14627),

Gene: Potty_27 Start: 14035, Stop: 14679, Start Num: 5
Candidate Starts for Potty_27:
(Start: 5 @14035 has 46 MA's), (17, 14182), (20, 14206), (27, 14287), (34, 14326), (35, 14329), (44, 14377), (58, 14527), (62, 14560), (64, 14569), (69, 14632),

Gene: Poultress_26 Start: 13799, Stop: 14443, Start Num: 5
Candidate Starts for Poultress_26:
(Start: 5 @13799 has 46 MA's), (17, 13946), (20, 13970), (27, 14051), (34, 14090), (35, 14093), (44, 14141), (58, 14291), (62, 14324), (64, 14333), (69, 14396),

Gene: Predator_28 Start: 16911, Stop: 17432, Start Num: 6
Candidate Starts for Predator_28:
(Start: 6 @16911 has 20 MA's), (15, 17016), (17, 17031), (20, 17055), (22, 17076), (41, 17187), (43, 17196), (50, 17223), (55, 17253), (57, 17280), (69, 17385),

Gene: Puissant_25 Start: 15838, Stop: 16380, Start Num: 6
Candidate Starts for Puissant_25:
(Start: 6 @15838 has 20 MA's), (17, 15958), (19, 15976), (20, 15982), (22, 16003), (25, 16036), (32, 16087), (33, 16090), (37, 16108), (50, 16171), (57, 16228), (61, 16255), (62, 16264), (65, 16279), (69, 16333),

Gene: Pywacket_24 Start: 17264, Stop: 17740, Start Num: 7
Candidate Starts for Pywacket_24:
(Start: 7 @17264 has 44 MA's), (17, 17360), (46, 17516), (50, 17528), (62, 17621), (68, 17660), (69, 17693), (70, 17702),

Gene: Rachella_27 Start: 14038, Stop: 14682, Start Num: 5
Candidate Starts for Rachella_27:
(Start: 5 @14038 has 46 MA's), (17, 14185), (20, 14209), (27, 14290), (34, 14329), (35, 14332), (44, 14380), (58, 14530), (62, 14563), (64, 14572), (69, 14635),

Gene: Ranch_25 Start: 15273, Stop: 15749, Start Num: 7
Candidate Starts for Ranch_25:

(Start: 7 @15273 has 44 MA's), (17, 15369), (46, 15525), (47, 15528), (50, 15537), (62, 15630), (65, 15645), (68, 15669), (69, 15702), (70, 15711),

Gene: RazorC_22 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for RazorC_22:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: Riduram_22 Start: 14312, Stop: 14788, Start Num: 7
Candidate Starts for Riduram_22:
(Start: 7 @14312 has 44 MA's), (17, 14408), (41, 14540), (46, 14564), (47, 14567), (50, 14576), (62, 14669), (65, 14684), (68, 14708), (69, 14741), (70, 14750),

Gene: Rie18_27 Start: 13380, Stop: 14024, Start Num: 5
Candidate Starts for Rie18_27:
(Start: 5 @13380 has 46 MA's), (17, 13527), (20, 13551), (27, 13632), (34, 13671), (35, 13674), (44, 13722), (58, 13872), (62, 13905), (64, 13914), (69, 13977),

Gene: RikSengupta_28 Start: 14054, Stop: 14647, Start Num: 5
Candidate Starts for RikSengupta_28:
(Start: 5 @14054 has 46 MA's), (29, 14309), (34, 14336), (35, 14339), (40, 14369), (49, 14408), (55, 14456), (58, 14495), (59, 14501), (62, 14528), (64, 14537), (69, 14600),

Gene: Rota_24 Start: 16231, Stop: 16707, Start Num: 7
Candidate Starts for Rota_24:
(Start: 7 @16231 has 44 MA's), (17, 16327), (46, 16483), (50, 16495), (62, 16588), (65, 16603), (68, 16627), (69, 16660), (70, 16669),

Gene: Rukungu_25 Start: 16972, Stop: 17448, Start Num: 7
Candidate Starts for Rukungu_25:
(Start: 7 @16972 has 44 MA's), (17, 17068), (46, 17224), (47, 17227), (50, 17236), (62, 17329), (65, 17344), (68, 17368), (69, 17401), (70, 17410),

Gene: Rumi_24 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for Rumi_24:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: Sadboi_25 Start: 17103, Stop: 17579, Start Num: 7
Candidate Starts for Sadboi_25:
(Start: 7 @17103 has 44 MA's), (17, 17199), (46, 17355), (47, 17358), (50, 17367), (62, 17460), (65, 17475), (68, 17499), (69, 17532), (70, 17541),

Gene: SafetyGuy_27 Start: 14041, Stop: 14685, Start Num: 5
Candidate Starts for SafetyGuy_27:
(Start: 5 @14041 has 46 MA's), (17, 14188), (20, 14212), (27, 14293), (34, 14332), (35, 14335), (44, 14383), (58, 14533), (62, 14566), (64, 14575), (69, 14638),

Gene: Sampudon_25 Start: 17279, Stop: 17755, Start Num: 7
Candidate Starts for Sampudon_25:
(Start: 7 @17279 has 44 MA's), (17, 17375), (46, 17531), (47, 17534), (50, 17543), (62, 17636), (68, 17675), (69, 17708), (70, 17717),

Gene: Shrew_60 Start: 29033, Stop: 29623, Start Num: 8
Candidate Starts for Shrew_60:
(Start: 8 @29033 has 3 MA's), (24, 29210), (41, 29309), (42, 29312), (43, 29318), (44, 29321), (45, 29330), (69, 29576), (70, 29585),

Gene: Sienna_20 Start: 11749, Stop: 12312, Start Num: 6
Candidate Starts for Sienna_20:
(Start: 6 @11749 has 20 MA's), (11, 11812), (19, 11878), (41, 12004), (43, 12013), (44, 12016), (53, 12055), (66, 12169), (67, 12178), (68, 12187), (69, 12220), (70, 12229),

Gene: SilentWarrior_26 Start: 13249, Stop: 13851, Start Num: 5
Candidate Starts for SilentWarrior_26:
(Start: 5 @13249 has 46 MA's), (17, 13393), (20, 13417), (31, 13522), (34, 13537), (35, 13540), (36, 13546), (58, 13699), (62, 13732), (64, 13741), (69, 13804),

Gene: Snakehole_28 Start: 13338, Stop: 13940, Start Num: 5
Candidate Starts for Snakehole_28:
(Start: 5 @13338 has 46 MA's), (17, 13482), (20, 13506), (31, 13611), (34, 13626), (35, 13629), (36, 13635), (58, 13788), (62, 13821), (64, 13830), (69, 13893),

Gene: Sparcetus_28 Start: 13933, Stop: 14526, Start Num: 5
Candidate Starts for Sparcetus_28:
(Start: 5 @13933 has 46 MA's), (34, 14215), (35, 14218), (40, 14248), (49, 14287), (55, 14335), (58, 14374), (59, 14380), (62, 14407), (64, 14416), (69, 14479),

Gene: Stormer_23 Start: 14342, Stop: 14818, Start Num: 7
Candidate Starts for Stormer_23:
(Start: 7 @14342 has 44 MA's), (17, 14438), (41, 14570), (46, 14594), (47, 14597), (50, 14606), (62, 14699), (65, 14714), (68, 14738), (69, 14771), (70, 14780),

Gene: SuperSonics_31 Start: 18458, Stop: 19018, Start Num: 7
Candidate Starts for SuperSonics_31:
(Start: 7 @18458 has 44 MA's), (17, 18566), (22, 18611), (28, 18656), (41, 18707), (43, 18716), (47, 18734), (58, 18818), (59, 18824), (62, 18851), (63, 18857), (65, 18866), (68, 18887), (69, 18920), (70, 18929), (71, 18938), (72, 18953), (73, 18971),

Gene: Suzy_20 Start: 12976, Stop: 13545, Start Num: 6
Candidate Starts for Suzy_20:
(Start: 6 @12976 has 20 MA's), (9, 13039), (10, 13042), (19, 13111), (41, 13237), (43, 13246), (44, 13249), (53, 13288), (56, 13333), (66, 13402), (67, 13411), (68, 13420), (69, 13453), (70, 13462),

Gene: Tedro_27 Start: 13508, Stop: 14152, Start Num: 5
Candidate Starts for Tedro_27:
(Start: 5 @13508 has 46 MA's), (17, 13655), (20, 13679), (27, 13760), (34, 13799), (35, 13802), (44, 13850), (58, 14000), (62, 14033), (64, 14042), (69, 14105),

Gene: Terapin_20 Start: 11749, Stop: 12312, Start Num: 6
Candidate Starts for Terapin_20:
(Start: 6 @11749 has 20 MA's), (11, 11812), (19, 11878), (41, 12004), (43, 12013), (44, 12016), (53, 12055), (66, 12169), (67, 12178), (68, 12187), (69, 12220), (70, 12229),

Gene: Thumb_24 Start: 15370, Stop: 15915, Start Num: 6
Candidate Starts for Thumb_24:

(Start: 6 @15370 has 20 MA's), (17, 15490), (19, 15508), (20, 15514), (22, 15535), (25, 15568), (33, 15625), (37, 15643), (41, 15670), (47, 15697), (52, 15709), (57, 15763), (61, 15790), (62, 15799), (65, 15814), (69, 15868),

Gene: Tiggy93_27 Start: 14041, Stop: 14685, Start Num: 5
Candidate Starts for Tiggy93_27:
(Start: 5 @14041 has 46 MA's), (17, 14188), (20, 14212), (27, 14293), (34, 14332), (35, 14335), (44, 14383), (58, 14533), (62, 14566), (64, 14575), (69, 14638),

Gene: Tillicus_24 Start: 15652, Stop: 16149, Start Num: 7
Candidate Starts for Tillicus_24:
(Start: 7 @15652 has 44 MA's), (16, 15757), (17, 15763), (35, 15865), (46, 15925), (62, 16030), (68, 16069), (69, 16102), (70, 16111),

Gene: TinyMiny_28 Start: 13952, Stop: 14545, Start Num: 5
Candidate Starts for TinyMiny_28:
(Start: 5 @13952 has 46 MA's), (29, 14207), (34, 14234), (35, 14237), (40, 14267), (49, 14306), (55, 14354), (58, 14393), (59, 14399), (62, 14426), (64, 14435), (69, 14498),

Gene: Tongui_26 Start: 13372, Stop: 14016, Start Num: 5
Candidate Starts for Tongui_26:
(Start: 5 @13372 has 46 MA's), (17, 13519), (20, 13543), (27, 13624), (34, 13663), (35, 13666), (44, 13714), (58, 13864), (62, 13897), (64, 13906), (69, 13969),

Gene: Triscuit_47 Start: 24305, Stop: 24910, Start Num: 8
Candidate Starts for Triscuit_47:
(Start: 8 @24305 has 3 MA's), (18, 24422), (26, 24503), (30, 24533), (39, 24563), (41, 24581), (42, 24584), (44, 24593), (51, 24638), (53, 24659), (69, 24839),

Gene: WinnieLou_28 Start: 13667, Stop: 14311, Start Num: 5
Candidate Starts for WinnieLou_28:
(Start: 5 @13667 has 46 MA's), (17, 13814), (27, 13919), (34, 13958), (35, 13961), (44, 14009), (58, 14159), (62, 14192), (64, 14201), (69, 14264),

Gene: Wojtek_24 Start: 15980, Stop: 16456, Start Num: 7
Candidate Starts for Wojtek_24:
(Start: 7 @15980 has 44 MA's), (17, 16076), (46, 16232), (50, 16244), (62, 16337), (65, 16352), (68, 16376), (69, 16409), (70, 16418),

Gene: Wollypog_15 Start: 10559, Stop: 11137, Start Num: 5
Candidate Starts for Wollypog_15:
(Start: 5 @10559 has 46 MA's), (13, 10679), (36, 10859), (37, 10862), (41, 10889), (48, 10919), (53, 10940), (59, 10991), (69, 11090),

Gene: Wollypog_16 Start: 10559, Stop: 11351, Start Num: 5
Candidate Starts for Wollypog_16:
(Start: 5 @10559 has 46 MA's), (13, 10679), (36, 10859), (37, 10862), (41, 10889), (48, 10919), (53, 10940), (59, 10991), (69, 11090),

Gene: Xenia2_25 Start: 16000, Stop: 16494, Start Num: 7
Candidate Starts for Xenia2_25:
(Start: 7 @16000 has 44 MA's), (17, 16108), (50, 16282), (52, 16285), (53, 16297), (62, 16375), (67, 16405), (68, 16414), (70, 16456), (72, 16480),

Gene: Yikes_26 Start: 17364, Stop: 17840, Start Num: 7
Candidate Starts for Yikes_26:
(Start: 7 @17364 has 44 MA's), (17, 17460), (46, 17616), (47, 17619), (50, 17628), (62, 17721), (65, 17736), (68, 17760), (69, 17793), (70, 17802),

Gene: Zany_23 Start: 16493, Stop: 16969, Start Num: 7
Candidate Starts for Zany_23:
(Start: 7 @16493 has 44 MA's), (17, 16589), (46, 16745), (47, 16748), (50, 16757), (62, 16850), (65, 16865), (68, 16889), (69, 16922), (70, 16931),