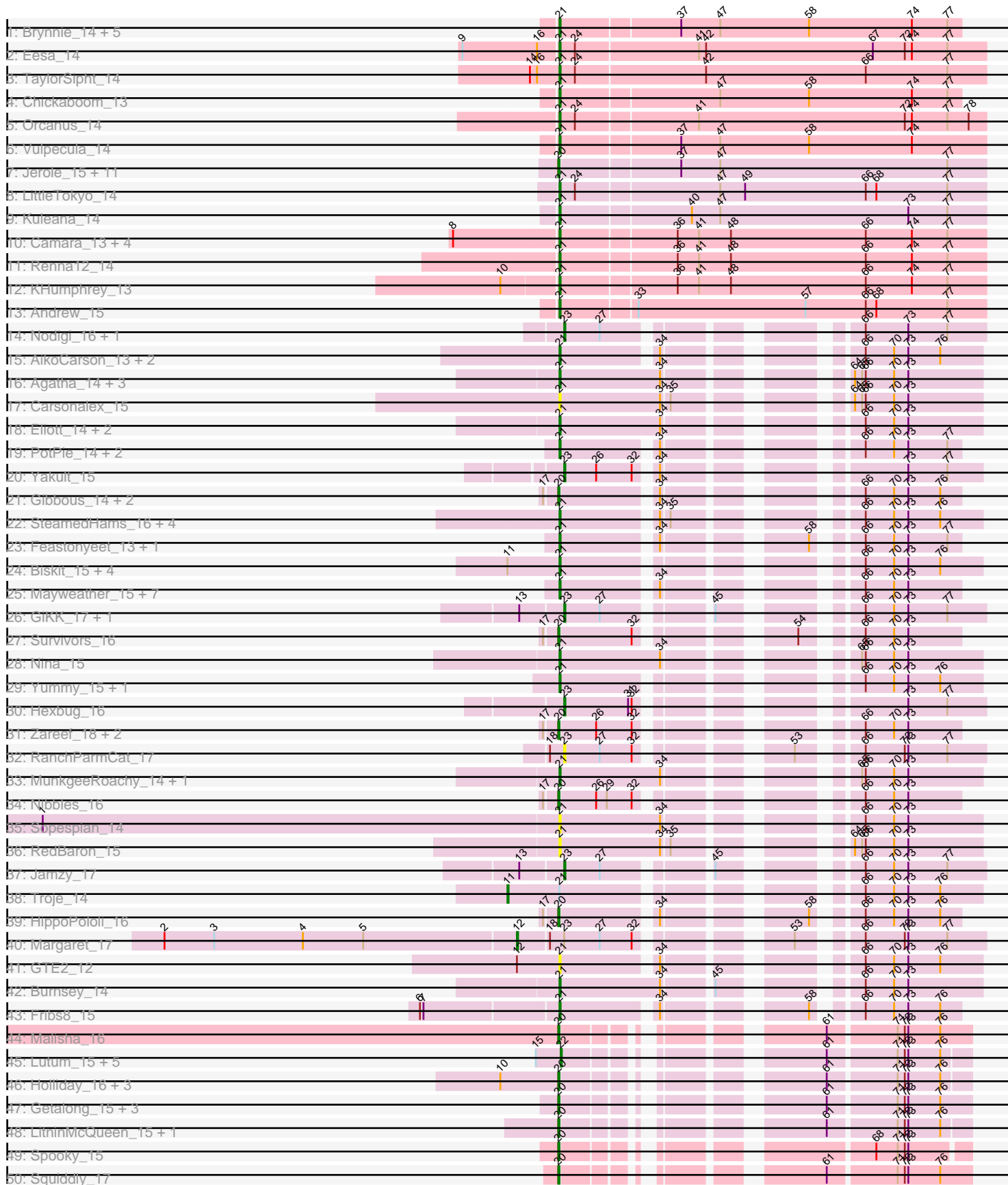


Pham 196304



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 196304 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196304 has 196 members, 27 are drafts.

Phages represented in each track:

- Track 1 : Brynnie_14, Abidatro_14, Ruchi_14, Jamun_14, Basilisk_14, Galaxy_14
- Track 2 : Eesa_14
- Track 3 : TaylorSipht_14
- Track 4 : Chickaboom_13
- Track 5 : Orcanus_14
- Track 6 : Vulpecula_14
- Track 7 : Jerole_15, Melons_15, Amelia_15, Polka_14, Cote_15, Bedetta_15, Lunar_16, Daob_15, Coral_14, Colusalem_14, Kepler_14, HannahPhantana_15
- Track 8 : LittleTokyo_14
- Track 9 : Kuleana_14
- Track 10 : Camara_13, Juno112_13, PhluffyCoco_13, Leona_13, RedFox_13
- Track 11 : Renna12_14
- Track 12 : KHumphrey_13
- Track 13 : Andrew_15
- Track 14 : Nodigi_16, Orla_16
- Track 15 : AikoCarson_13, Amok_13, Emalyn_13
- Track 16 : Agatha_14, Cozz_14, Axym_14, GoldHunter_15
- Track 17 : Carsonalex_15
- Track 18 : Elliott_14, Quasar_15, PsychoKiller_14
- Track 19 : PotPie_14, SummitAcademy_13, Lauer_13
- Track 20 : Yakult_15
- Track 21 : Gibbous_14, Dre3_14, Cleo_14
- Track 22 : SteamedHams_16, Tolls_16, BillDoor_16, Yarn_13, AndPeggy_13
- Track 23 : Feastonyeet_13, BigChungus_13
- Track 24 : Biskit_15, SweatNTears_16, Buttrmlkdreams_14, SketchMex_13, MScarn_16
- Track 25 : Mayweather_15, Vine_15, CherryonLim_15, KayGee_14, MAnor_14, SheckWes_13, Elinal_15, Pons_14
- Track 26 : GiKK_17, Button_15
- Track 27 : Survivors_16
- Track 28 : Nina_15
- Track 29 : Yummy_15, Horseradish_15
- Track 30 : Hexbug_16
- Track 31 : Zareef_18, MaVan_16, Azira_16
- Track 32 : RanchParmCat_17
- Track 33 : MunkgeeRoachy_14, Typhonmarchy_15
- Track 34 : Nibbles_16

- Track 35 : Sopespian_14
- Track 36 : RedBaron_15
- Track 37 : Jamzy_17
- Track 38 : Troje_14
- Track 39 : HippoPololi_16
- Track 40 : Margaret_17
- Track 41 : GTE2_12
- Track 42 : Burnsey_14
- Track 43 : Fribs8_15
- Track 44 : Malisha_16
- Track 45 : Lutum_15, Leroy_15, BENtherdunthat_15, Horus_15, Frickyeah_15, Asapag_15
- Track 46 : Holliday_16, CheeseTouch_15, Budski_15, Kamaru_15
- Track 47 : Getalong_15, Periwinkle_15, Whitney_15, Phistory_15
- Track 48 : LitninMcQueen_15, Phabuloso_15
- Track 49 : Spooky_15
- Track 50 : Squiddly_17
- Track 51 : Keelan_44
- Track 52 : Volt_48, Fryberger_46, Ziko_49, Ronaldo_49
- Track 53 : Guey18_51
- Track 54 : Swervy_13, Cashington_13, Abigail_13, Arroyo_14, Jovita_13, Burritobowl_13, DickRichards_13, BubbaBear_13, Albedo_13, Doobus_13, Albright_13, Slay_13, Johnathan_13, CroZenni_13, QMacho_14, Phisb_13, SansAfet_13, TukTuk_13, Finalfrontier_14, BelmontSKP_14, LimaBean_13, Avocadoman_13, SarBear_13, Kenzers_13, Eula_13, Lynlen_13, AnnaLie_14
- Track 55 : Armstrong_13, Clayda5_12, Rollins_13, Coltrane_13, Vitas_12, Brahms_13, Bernstein_13, Skylord_12
- Track 56 : DirtyBubble_13, Stromboli_13, Elva_14, SanaSana_14, BabyYoda_13, Stoor_13
- Track 57 : BAjuniper_13
- Track 58 : FlameThrower_13, Celaena_13, Bachaco_13, Katzastrophic_13
- Track 59 : Kate33_13, BabyDaisy_14, Didgeridoo_14, IndyLu_13, Lahqtemish_13
- Track 60 : Franklin22_12
- Track 61 : Nicky22_14
- Track 62 : Gack_12
- Track 63 : Quenya_14
- Track 64 : Loviatar_22
- Track 65 : Icarian_14
- Track 66 : CliffHanger_14
- Track 67 : Squircle_13, Olliecat_13
- Track 68 : Kieran_13, ChiliPepper_13, Sharkboy_13, Dismas_13, Rona_13
- Track 69 : Eden_12
- Track 70 : Buldak_13
- Track 71 : WalkingDead_13
- Track 72 : Teagster_12, Shayna_12, SunnyD_12
- Track 73 : AvGardian_13
- Track 74 : Nebkiss_11
- Track 75 : DS6A_17
- Track 76 : LilSpotty_13

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

The start number called the most often in the published annotations is 21, it was called in 116 of the 169 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abidatro_14, Abigail_13, Agatha_14, AikoCarson_13, Albedo_13, Albright_13, Amok_13, AndPeggy_13, Andrew_15, AnnaLie_14, Armstrong_13, Arroyo_14, AvGardian_13, Avocadoman_13, Axym_14, BAJuniper_13, BabyDaisy_14, BabyYoda_13, Bachaco_13, Basilisk_14, BelmontSKP_14, Bernstein_13, BigChungus_13, BillDoor_16, Biskit_15, Brahms_13, Brynnie_14, BubbaBear_13, Buldak_13, Burnsey_14, Burritobowl_13, Buttrmlkdreams_14, Camara_13, Carsonalex_15, Cashington_13, Celaena_13, CherryonLim_15, Chickaboom_13, ChiliPepper_13, Clayda5_12, CliffHanger_14, Coltrane_13, Cozz_14, CroZenni_13, DickRichards_13, Didgeridoo_14, DirtyBubble_13, Dismas_13, Doobus_13, Eden_12, Eesa_14, Elinal_15, Elliott_14, Elva_14, Emalyn_13, Eula_13, Feastonyeet_13, Finalfrontier_14, FlameThrower_13, Franklin22_12, Fribs8_15, GTE2_12, Gack_12, Galaxy_14, GoldHunter_15, Horseradish_15, Icarian_14, IndyLu_13, Jamun_14, Johnathan_13, Jovita_13, Juno112_13, KHumphrey_13, Kate33_13, Katzastrophic_13, KayGee_14, Kenzers_13, Kieran_13, Kuleana_14, Lahqtemish_13, Lauer_13, Leona_13, LimaBean_13, LittleTokyo_14, Loviatar_22, Lynlen_13, MAnor_14, MScarn_16, Mayweather_15, MunkgeeRoachy_14, Nicky22_14, Nina_15, Olliecat_13, Orcanus_14, Phisb_13, PhluffyCoco_13, Pons_14, PotPie_14, PsychoKiller_14, QMacho_14, Quasar_15, Quenya_14, RedBaron_15, RedFox_13, Renna12_14, Rollins_13, Rona_13, Ruchi_14, SanaSana_14, SansAfet_13, SarBear_13, Sharkboy_13, Shayna_12, SheckWes_13, SketchMex_13, Skylord_12, Slay_13, Sopespian_14, Squirrel_13, SteamedHams_16, Stoor_13, Stromboli_13, SummitAcademy_13, SunnyD_12, SweatNTears_16, Swervy_13, TaylorSipht_14, Teagster_12, Tolls_16, TukTuk_13, Typhonmarchy_15, Vine_15, Vitas_12, Vulpecula_14, WalkingDead_13, Yarn_13, Yummy_15,

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

- Troje_14,

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

- Amelia_15, Asapag_15, Azira_16, BENtherdunthat_15, Bedetta_15, Budski_15, Button_15, CheeseTouch_15, Cleo_14, Colusalem_14, Coral_14, Cote_15, DS6A_17, Daob_15, Dre3_14, Frickyeah_15, Fryberger_46, Getalong_15, GiKK_17, Gibbous_14, Guey18_51, HannahPhantana_15, Hexbug_16, HippoPololi_16, Holliday_16, Horus_15, Jamzy_17, Jerole_15, Kamaru_15, Keelan_44, Kepler_14, Leroy_15, LilSpotty_13, LitninMcQueen_15, Lunar_16, Lutum_15, MaVan_16, Malisha_16, Margaret_17, Melons_15, Nebkiss_11, Nibbles_16, Nodigi_16, Orla_16, Periwinkle_15, Phabuloso_15, Phistory_15, Polka_14, RanchParmCat_17, Ronaldo_49, Spooky_15, Squiddly_17, Survivors_16, Volt_48, Whitney_15, Yakult_15, Zareef_18, Ziko_49,

Summary by start number:

Start 11:

- Found in 6 of 196 (3.1%) of genes in pham
- Manual Annotations of this start: 1 of 169
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Troje_14 (CT),

Start 12:

- Found in 2 of 196 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 169
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Margaret_17 (CT),

Start 19:

- Found in 7 of 196 (3.6%) of genes in pham
- Manual Annotations of this start: 7 of 169
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DS6A_17 (singleton), Fryberger_46 (DP), Guey18_51 (DP), Keelan_44 (DP), Ronaldo_49 (DP), Volt_48 (DP), Ziko_49 (DP),

Start 20:

- Found in 34 of 196 (17.3%) of genes in pham
- Manual Annotations of this start: 30 of 169
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amelia_15 (AS2), Azira_16 (CT), Bedetta_15 (AS2), Budski_15 (DN), CheeseTouch_15 (DN1), Cleo_14 (CT), Colusalem_14 (AS2), Coral_14 (AS2), Cote_15 (AS2), Daob_15 (AS2), Dre3_14 (CT), Getalong_15 (DN1), Gibbous_14 (CT), HannahPhantana_15 (AS2), HippoPololi_16 (CT), Holliday_16 (DN1), Jerole_15 (AS2), Kamaru_15 (DN1), Kepler_14 (AS2), LitninMcQueen_15 (DN1), Lunar_16 (AS2), MaVan_16 (CT), Malisha_16 (DN), Melons_15 (AS2), Nibbles_16 (CT), Periwinkle_15 (DN1), Phabuloso_15 (DN1), Phistory_15 (DN1), Polka_14 (AS2), Spooky_15 (DN2), Squiddly_17 (DN2), Survivors_16 (CT), Whitney_15 (DN1), Zareef_18 (CT),

Start 21:

- Found in 138 of 196 (70.4%) of genes in pham
- Manual Annotations of this start: 116 of 169
- Called 99.3% of time when present
- Phage (with cluster) where this start called: Abidatro_14 (AS1), Abigail_13 (EB), Agatha_14 (CT), AikoCarson_13 (CT), Albedo_13 (EB), Albright_13 (EB), Amok_13 (CT), AndPeggy_13 (CT), Andrew_15 (AS3), AnnaLie_14 (EB), Armstrong_13 (EB), Arroyo_14 (EB), AvGardian_13 (EB), Avocadoman_13 (EB), Axym_14 (CT), BAjuniper_13 (EB), BabyDaisy_14 (EB), BabyYoda_13 (EB), Bachaco_13 (EB), Basilisk_14 (AS1), BelmontSKP_14 (EB), Bernstein_13 (EB), BigChungus_13 (CT), BillDoor_16 (CT), Biskit_15 (CT), Brahms_13 (EB), Brynnie_14 (AS1), BubbaBear_13 (EB), Buldak_13 (EB), Burnsey_14 (CT), Burritobowl_13 (EB), Buttrmikedreams_14 (CT), Camara_13 (AS3), Carsonalex_15 (CT), Cashington_13 (EB), Celaena_13 (EB), CherryonLim_15 (CT), Chickaboom_13 (AS1), ChiliPepper_13 (EB), Clayda5_12 (EB), CliffHanger_14 (EB), Coltrane_13 (EB), Cozz_14 (CT), CroZenni_13 (EB), DickRichards_13 (EB), Didgeridoo_14 (EB), DirtyBubble_13 (EB), Dismas_13 (EB), Doobus_13 (EB), Eden_12 (EB), Eesa_14 (AS1), Elinal_15 (CT), Elliott_14 (CT), Elva_14 (EB), Emalyn_13 (CT), Eula_13 (EB), Feastonyet_13 (CT), Finalfrontier_14 (EB), FlameThrower_13 (EB), Franklin22_12 (EB), Fribs8_15 (CT), GTE2_12 (CT), Gack_12 (EB), Galaxy_14 (AS1), GoldHunter_15 (CT), Horseradish_15 (CT), Icarian_14 (EB), IndyLu_13 (EB), Jamun_14 (AS1), Johnathan_13 (EB), Jovita_13 (EB), Juno112_13 (AS3), KHumphrey_13 (AS3), Kate33_13 (EB), Katzastrophic_13 (EB), KayGee_14 (CT), Kenzers_13 (EB), Kieran_13 (EB), Kuleana_14 (AS2), Lahqtemish_13 (EB), Lauer_13 (CT), Leona_13

(AS3), LimaBean_13 (EB), LittleTokyo_14 (AS2), Loviatar_22 (EB), Lynlen_13 (EB), MAnor_14 (CT), MScarn_16 (CT), Mayweather_15 (CT), MunkgeeRoachy_14 (CT), Nicky22_14 (EB), Nina_15 (CT), Olliecat_13 (EB), Orcanus_14 (AS1), Phisb_13 (EB), PhluffyCoco_13 (AS3), Pons_14 (CT), PotPie_14 (CT), PsychoKiller_14 (CT), QMacho_14 (EB), Quasar_15 (CT), Quenya_14 (EB), RedBaron_15 (CT), RedFox_13 (AS3), Renna12_14 (AS3), Rollins_13 (EB), Rona_13 (EB), Ruchi_14 (AS1), SanaSana_14 (EB), SansAfet_13 (EB), SarBear_13 (EB), Sharkboy_13 (EB), Shayna_12 (EB), SheckWes_13 (CT), SketchMex_13 (CT), Skylord_12 (EB), Slay_13 (EB), Sopespian_14 (CT), Squircle_13 (EB), SteamedHams_16 (CT), Stoor_13 (EB), Stromboli_13 (EB), SummitAcademy_13 (CT), SunnyD_12 (EB), SweatNTears_16 (CT), Swervy_13 (EB), TaylorSipht_14 (AS1), Teagster_12 (EB), Tolls_16 (CT), TukTuk_13 (EB), Typhonomachy_15 (CT), Vine_15 (CT), Vitas_12 (EB), Vulpecula_14 (AS1), WalkingDead_13 (EB), Yarn_13 (CT), Yummy_15 (CT),

Start 22:

- Found in 6 of 196 (3.1%) of genes in pham
- Manual Annotations of this start: 5 of 169
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Asapag_15 (DN1), BENtherdunthat_15 (DN1), Frickyeah_15 (DN1), Horus_15 (DN1), Leroy_15 (DN1), Lutum_15 (DN1),

Start 23:

- Found in 15 of 196 (7.7%) of genes in pham
- Manual Annotations of this start: 7 of 169
- Called 53.3% of time when present
- Phage (with cluster) where this start called: Button_15 (CT), GiKK_17 (CT), Hexbug_16 (CT), Jamzy_17 (CT), Nodigi_16 (CT), Orla_16 (CT), RanchParmCat_17 (CT), Yakult_15 (CT),

Start 25:

- Found in 2 of 196 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 169
- Called 50.0% of time when present
- Phage (with cluster) where this start called: LilSpotty_13 (singleton),

Start 28:

- Found in 1 of 196 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 169
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nebkiss_11 (X),

Summary by clusters:

There are 11 clusters represented in this pham: AS3, AS2, AS1, singleton, EB, DN1, DN2, X, DN, DP, CT,

Info for manual annotations of cluster AS1:

- Start number 21 was manually annotated 11 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 20 was manually annotated 9 times for cluster AS2.
- Start number 21 was manually annotated 2 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 21 was manually annotated 6 times for cluster AS3.

Info for manual annotations of cluster CT:

- Start number 11 was manually annotated 1 time for cluster CT.
- Start number 12 was manually annotated 1 time for cluster CT.
- Start number 20 was manually annotated 8 times for cluster CT.
- Start number 21 was manually annotated 36 times for cluster CT.
- Start number 23 was manually annotated 7 times for cluster CT.

Info for manual annotations of cluster DN:

- Start number 20 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 20 was manually annotated 9 times for cluster DN1.
- Start number 22 was manually annotated 5 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 20 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DP:

- Start number 19 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster EB:

- Start number 21 was manually annotated 61 times for cluster EB.

Info for manual annotations of cluster X:

- Start number 28 was manually annotated 1 time for cluster X.

Gene Information:

Gene: Abidatro_14 Start: 9744, Stop: 10076, Start Num: 21

Candidate Starts for Abidatro_14:

(Start: 21 @9744 has 116 MA's), (37, 9840), (47, 9873), (58, 9948), (74, 10035), (77, 10065),

Gene: Abigail_13 Start: 9362, Stop: 9670, Start Num: 21

Candidate Starts for Abigail_13:

(Start: 21 @9362 has 116 MA's), (41, 9473), (57, 9536), (71, 9593), (73, 9602), (77, 9635),

Gene: Agatha_14 Start: 8885, Stop: 9190, Start Num: 21

Candidate Starts for Agatha_14:

(Start: 21 @8885 has 116 MA's), (34, 8969), (64, 9083), (65, 9089), (66, 9092), (70, 9116), (73, 9128),

Gene: AikoCarson_13 Start: 8613, Stop: 8906, Start Num: 21

Candidate Starts for AikoCarson_13:

(Start: 21 @8613 has 116 MA's), (34, 8685), (66, 8808), (70, 8832), (73, 8844), (76, 8871),

Gene: Albedo_13 Start: 9208, Stop: 9516, Start Num: 21

Candidate Starts for Albedo_13:

(Start: 21 @9208 has 116 MA's), (41, 9319), (57, 9382), (71, 9439), (73, 9448), (77, 9481),

Gene: Albright_13 Start: 9243, Stop: 9551, Start Num: 21

Candidate Starts for Albright_13:

(Start: 21 @9243 has 116 MA's), (41, 9354), (57, 9417), (71, 9474), (73, 9483), (77, 9516),

Gene: Amelia_15 Start: 9644, Stop: 9997, Start Num: 20

Candidate Starts for Amelia_15:

(Start: 20 @9644 has 30 MA's), (37, 9740), (47, 9773), (77, 9965),

Gene: Amok_13 Start: 8613, Stop: 8906, Start Num: 21

Candidate Starts for Amok_13:

(Start: 21 @8613 has 116 MA's), (34, 8685), (66, 8808), (70, 8832), (73, 8844), (76, 8871),

Gene: AndPeggy_13 Start: 8901, Stop: 9194, Start Num: 21

Candidate Starts for AndPeggy_13:

(Start: 21 @8901 has 116 MA's), (34, 8973), (35, 8979), (66, 9096), (70, 9120), (73, 9132), (76, 9159),

Gene: Andrew_15 Start: 9438, Stop: 9791, Start Num: 21

Candidate Starts for Andrew_15:

(Start: 21 @9438 has 116 MA's), (33, 9498), (57, 9639), (66, 9690), (68, 9699), (77, 9759),

Gene: AnnaLie_14 Start: 9652, Stop: 9960, Start Num: 21

Candidate Starts for AnnaLie_14:

(Start: 21 @9652 has 116 MA's), (41, 9763), (57, 9826), (71, 9883), (73, 9892), (77, 9925),

Gene: Armstrong_13 Start: 8785, Stop: 9084, Start Num: 21

Candidate Starts for Armstrong_13:

(Start: 21 @8785 has 116 MA's), (41, 8893), (73, 9025), (77, 9058),

Gene: Arroyo_14 Start: 9713, Stop: 10021, Start Num: 21

Candidate Starts for Arroyo_14:

(Start: 21 @9713 has 116 MA's), (41, 9824), (57, 9887), (71, 9944), (73, 9953), (77, 9986),

Gene: Asapag_15 Start: 8335, Stop: 8613, Start Num: 22

Candidate Starts for Asapag_15:

(15, 8314), (Start: 22 @8335 has 5 MA's), (61, 8500), (71, 8554), (72, 8560), (73, 8563), (76, 8590),

Gene: AvGardian_13 Start: 9267, Stop: 9575, Start Num: 21

Candidate Starts for AvGardian_13:

(Start: 21 @9267 has 116 MA's), (40, 9372), (66, 9471), (71, 9498), (73, 9507), (77, 9540),

Gene: Avocadoman_13 Start: 9305, Stop: 9613, Start Num: 21

Candidate Starts for Avocadoman_13:

(Start: 21 @9305 has 116 MA's), (41, 9416), (57, 9479), (71, 9536), (73, 9545), (77, 9578),

Gene: Axym_14 Start: 8885, Stop: 9190, Start Num: 21

Candidate Starts for Axym_14:

(Start: 21 @8885 has 116 MA's), (34, 8969), (64, 9083), (65, 9089), (66, 9092), (70, 9116), (73, 9128),

Gene: Azira_16 Start: 9884, Stop: 10159, Start Num: 20

Candidate Starts for Azira_16:

(17, 9875), (Start: 20 @9884 has 30 MA's), (26, 9914), (32, 9944), (66, 10079), (70, 10103), (73, 10115),

Gene: BAjuniper_13 Start: 8933, Stop: 9241, Start Num: 21

Candidate Starts for BAjuniper_13:

(Start: 21 @8933 has 116 MA's), (73, 9173), (77, 9206),

Gene: BENtherdunthat_15 Start: 8335, Stop: 8613, Start Num: 22

Candidate Starts for BENtherdunthat_15:

(15, 8314), (Start: 22 @8335 has 5 MA's), (61, 8500), (71, 8554), (72, 8560), (73, 8563), (76, 8590),

Gene: BabyDaisy_14 Start: 9464, Stop: 9772, Start Num: 21

Candidate Starts for BabyDaisy_14:

(Start: 21 @9464 has 116 MA's), (Start: 23 @9467 has 7 MA's), (40, 9569), (66, 9668), (71, 9695), (77, 9737),

Gene: BabyYoda_13 Start: 9464, Stop: 9772, Start Num: 21

Candidate Starts for BabyYoda_13:

(Start: 21 @9464 has 116 MA's), (50, 9614), (66, 9668), (73, 9704),

Gene: Bachaco_13 Start: 9138, Stop: 9446, Start Num: 21

Candidate Starts for Bachaco_13:

(Start: 21 @9138 has 116 MA's), (71, 9369), (73, 9378), (77, 9411),

Gene: Basilisk_14 Start: 10064, Stop: 10396, Start Num: 21

Candidate Starts for Basilisk_14:

(Start: 21 @10064 has 116 MA's), (37, 10160), (47, 10193), (58, 10268), (74, 10355), (77, 10385),

Gene: Bedetta_15 Start: 9644, Stop: 9997, Start Num: 20

Candidate Starts for Bedetta_15:

(Start: 20 @9644 has 30 MA's), (37, 9740), (47, 9773), (77, 9965),

Gene: BelmontSKP_14 Start: 9652, Stop: 9960, Start Num: 21

Candidate Starts for BelmontSKP_14:

(Start: 21 @9652 has 116 MA's), (41, 9763), (57, 9826), (71, 9883), (73, 9892), (77, 9925),

Gene: Bernstein_13 Start: 8845, Stop: 9144, Start Num: 21

Candidate Starts for Bernstein_13:

(Start: 21 @8845 has 116 MA's), (41, 8953), (73, 9085), (77, 9118),

Gene: BigChungus_13 Start: 8662, Stop: 8937, Start Num: 21

Candidate Starts for BigChungus_13:

(Start: 21 @8662 has 116 MA's), (34, 8734), (58, 8830), (66, 8857), (70, 8881), (73, 8893), (77, 8926),

Gene: BillDoor_16 Start: 8866, Stop: 9159, Start Num: 21

Candidate Starts for BillDoor_16:

(Start: 21 @8866 has 116 MA's), (34, 8938), (35, 8944), (66, 9061), (70, 9085), (73, 9097), (76, 9124),

Gene: Biskit_15 Start: 8872, Stop: 9165, Start Num: 21

Candidate Starts for Biskit_15:

(Start: 11 @8830 has 1 MA's), (Start: 21 @8872 has 116 MA's), (66, 9067), (70, 9091), (73, 9103), (76, 9130),

Gene: Brahms_13 Start: 8785, Stop: 9084, Start Num: 21

Candidate Starts for Brahms_13:

(Start: 21 @8785 has 116 MA's), (41, 8893), (73, 9025), (77, 9058),

Gene: Brynnie_14 Start: 9876, Stop: 10208, Start Num: 21

Candidate Starts for Brynnie_14:

(Start: 21 @9876 has 116 MA's), (37, 9972), (47, 10005), (58, 10080), (74, 10167), (77, 10197),

Gene: BubbaBear_13 Start: 9208, Stop: 9516, Start Num: 21

Candidate Starts for BubbaBear_13:

(Start: 21 @9208 has 116 MA's), (41, 9319), (57, 9382), (71, 9439), (73, 9448), (77, 9481),

Gene: Budski_15 Start: 8319, Stop: 8597, Start Num: 20

Candidate Starts for Budski_15:

(10, 8271), (Start: 20 @8319 has 30 MA's), (61, 8484), (71, 8538), (72, 8544), (73, 8547), (76, 8574),

Gene: Buldak_13 Start: 9315, Stop: 9626, Start Num: 21

Candidate Starts for Buldak_13:

(Start: 21 @9315 has 116 MA's), (62, 9507), (73, 9567), (77, 9600),

Gene: Burnsey_14 Start: 8886, Stop: 9191, Start Num: 21

Candidate Starts for Burnsey_14:

(Start: 21 @8886 has 116 MA's), (34, 8970), (45, 9006), (66, 9093), (70, 9117), (73, 9129),

Gene: Burritobowl_13 Start: 9270, Stop: 9578, Start Num: 21

Candidate Starts for Burritobowl_13:

(Start: 21 @9270 has 116 MA's), (41, 9381), (57, 9444), (71, 9501), (73, 9510), (77, 9543),

Gene: Button_15 Start: 8897, Stop: 9190, Start Num: 23

Candidate Starts for Button_15:

(13, 8864), (Start: 23 @8897 has 7 MA's), (27, 8927), (45, 9002), (66, 9089), (70, 9113), (73, 9125), (77, 9158),

Gene: Buttrmlkdreams_14 Start: 8857, Stop: 9150, Start Num: 21

Candidate Starts for Buttrmlkdreams_14:

(Start: 11 @8815 has 1 MA's), (Start: 21 @8857 has 116 MA's), (66, 9052), (70, 9076), (73, 9088), (76, 9115),

Gene: Camara_13 Start: 9061, Stop: 9414, Start Num: 21

Candidate Starts for Camara_13:

(8, 8977), (Start: 21 @9061 has 116 MA's), (36, 9154), (41, 9172), (48, 9199), (66, 9313), (74, 9352), (77, 9382),

Gene: Carsonalex_15 Start: 8943, Stop: 9248, Start Num: 21

Candidate Starts for Carsonalex_15:

(Start: 21 @8943 has 116 MA's), (34, 9027), (35, 9033), (64, 9141), (65, 9147), (66, 9150), (70, 9174), (73, 9186),

Gene: Cashington_13 Start: 9260, Stop: 9568, Start Num: 21

Candidate Starts for Cashington_13:

(Start: 21 @9260 has 116 MA's), (41, 9371), (57, 9434), (71, 9491), (73, 9500), (77, 9533),

Gene: Celaena_13 Start: 9074, Stop: 9382, Start Num: 21

Candidate Starts for Celaena_13:

(Start: 21 @9074 has 116 MA's), (71, 9305), (73, 9314), (77, 9347),

Gene: CheeseTouch_15 Start: 8319, Stop: 8597, Start Num: 20
Candidate Starts for CheeseTouch_15:
(10, 8271), (Start: 20 @8319 has 30 MA's), (61, 8484), (71, 8538), (72, 8544), (73, 8547), (76, 8574),

Gene: CherryonLim_15 Start: 9392, Stop: 9667, Start Num: 21
Candidate Starts for CherryonLim_15:
(Start: 21 @9392 has 116 MA's), (34, 9464), (66, 9587), (70, 9611), (73, 9623),

Gene: Chickaboom_13 Start: 9421, Stop: 9753, Start Num: 21
Candidate Starts for Chickaboom_13:
(Start: 21 @9421 has 116 MA's), (47, 9550), (58, 9625), (74, 9712), (77, 9742),

Gene: ChiliPepper_13 Start: 9439, Stop: 9747, Start Num: 21
Candidate Starts for ChiliPepper_13:
(Start: 21 @9439 has 116 MA's), (71, 9670), (73, 9679), (77, 9712),

Gene: Clayda5_12 Start: 8785, Stop: 9084, Start Num: 21
Candidate Starts for Clayda5_12:
(Start: 21 @8785 has 116 MA's), (41, 8893), (73, 9025), (77, 9058),

Gene: Cleo_14 Start: 9174, Stop: 9449, Start Num: 20
Candidate Starts for Cleo_14:
(17, 9165), (Start: 20 @9174 has 30 MA's), (34, 9246), (66, 9369), (70, 9393), (73, 9405), (76, 9432),

Gene: CliffHanger_14 Start: 8968, Stop: 9285, Start Num: 21
Candidate Starts for CliffHanger_14:
(Start: 21 @8968 has 116 MA's), (Start: 23 @8971 has 7 MA's), (40, 9073), (48, 9097), (73, 9217),
(77, 9250),

Gene: Coltrane_13 Start: 8785, Stop: 9084, Start Num: 21
Candidate Starts for Coltrane_13:
(Start: 21 @8785 has 116 MA's), (41, 8893), (73, 9025), (77, 9058),

Gene: Colusalem_14 Start: 9483, Stop: 9836, Start Num: 20
Candidate Starts for Colusalem_14:
(Start: 20 @9483 has 30 MA's), (37, 9579), (47, 9612), (77, 9804),

Gene: Coral_14 Start: 9483, Stop: 9836, Start Num: 20
Candidate Starts for Coral_14:
(Start: 20 @9483 has 30 MA's), (37, 9579), (47, 9612), (77, 9804),

Gene: Cote_15 Start: 9644, Stop: 9997, Start Num: 20
Candidate Starts for Cote_15:
(Start: 20 @9644 has 30 MA's), (37, 9740), (47, 9773), (77, 9965),

Gene: Cozz_14 Start: 8886, Stop: 9191, Start Num: 21
Candidate Starts for Cozz_14:
(Start: 21 @8886 has 116 MA's), (34, 8970), (64, 9084), (65, 9090), (66, 9093), (70, 9117), (73, 9129),

Gene: CroZenni_13 Start: 9243, Stop: 9551, Start Num: 21
Candidate Starts for CroZenni_13:
(Start: 21 @9243 has 116 MA's), (41, 9354), (57, 9417), (71, 9474), (73, 9483), (77, 9516),

Gene: DS6A_17 Start: 11578, Stop: 11886, Start Num: 19

Candidate Starts for DS6A_17:

(Start: 19 @11578 has 7 MA's), (Start: 25 @11602 has 1 MA's), (29, 11623), (30, 11635), (31, 11641), (43, 11704), (44, 11707), (46, 11713), (51, 11755), (75, 11848),

Gene: Daob_15 Start: 9647, Stop: 10000, Start Num: 20

Candidate Starts for Daob_15:

(Start: 20 @9647 has 30 MA's), (37, 9743), (47, 9776), (77, 9968),

Gene: DickRichards_13 Start: 9737, Stop: 10045, Start Num: 21

Candidate Starts for DickRichards_13:

(Start: 21 @9737 has 116 MA's), (41, 9848), (57, 9911), (71, 9968), (73, 9977), (77, 10010),

Gene: Didgeridoo_14 Start: 9466, Stop: 9774, Start Num: 21

Candidate Starts for Didgeridoo_14:

(Start: 21 @9466 has 116 MA's), (Start: 23 @9469 has 7 MA's), (40, 9571), (66, 9670), (71, 9697), (77, 9739),

Gene: DirtyBubble_13 Start: 9472, Stop: 9780, Start Num: 21

Candidate Starts for DirtyBubble_13:

(Start: 21 @9472 has 116 MA's), (50, 9622), (66, 9676), (73, 9712),

Gene: Dismas_13 Start: 9439, Stop: 9747, Start Num: 21

Candidate Starts for Dismas_13:

(Start: 21 @9439 has 116 MA's), (71, 9670), (73, 9679), (77, 9712),

Gene: Doobus_13 Start: 9474, Stop: 9782, Start Num: 21

Candidate Starts for Doobus_13:

(Start: 21 @9474 has 116 MA's), (41, 9585), (57, 9648), (71, 9705), (73, 9714), (77, 9747),

Gene: Dre3_14 Start: 9121, Stop: 9396, Start Num: 20

Candidate Starts for Dre3_14:

(17, 9112), (Start: 20 @9121 has 30 MA's), (34, 9193), (66, 9316), (70, 9340), (73, 9352), (76, 9379),

Gene: Eden_12 Start: 8899, Stop: 9198, Start Num: 21

Candidate Starts for Eden_12:

(Start: 21 @8899 has 116 MA's), (40, 9001), (41, 9007), (73, 9139), (77, 9172),

Gene: Eesa_14 Start: 9662, Stop: 10018, Start Num: 21

Candidate Starts for Eesa_14:

(9, 9584), (16, 9647), (Start: 21 @9662 has 116 MA's), (24, 9674), (41, 9776), (42, 9782), (67, 9923), (72, 9950), (74, 9956), (77, 9986),

Gene: Elinal_15 Start: 8643, Stop: 8918, Start Num: 21

Candidate Starts for Elinal_15:

(Start: 21 @8643 has 116 MA's), (34, 8715), (66, 8838), (70, 8862), (73, 8874),

Gene: Elliott_14 Start: 8885, Stop: 9190, Start Num: 21

Candidate Starts for Elliott_14:

(Start: 21 @8885 has 116 MA's), (34, 8969), (66, 9092), (70, 9116), (73, 9128),

Gene: Elva_14 Start: 9524, Stop: 9832, Start Num: 21

Candidate Starts for Elva_14:

(Start: 21 @9524 has 116 MA's), (50, 9674), (66, 9728), (73, 9764),

Gene: Emalyn_13 Start: 8612, Stop: 8905, Start Num: 21

Candidate Starts for Emalyn_13:

(Start: 21 @8612 has 116 MA's), (34, 8684), (66, 8807), (70, 8831), (73, 8843), (76, 8870),

Gene: Eula_13 Start: 9244, Stop: 9552, Start Num: 21

Candidate Starts for Eula_13:

(Start: 21 @9244 has 116 MA's), (41, 9355), (57, 9418), (71, 9475), (73, 9484), (77, 9517),

Gene: Feastonyeet_13 Start: 8662, Stop: 8937, Start Num: 21

Candidate Starts for Feastonyeet_13:

(Start: 21 @8662 has 116 MA's), (34, 8734), (58, 8830), (66, 8857), (70, 8881), (73, 8893), (77, 8926),

Gene: Finalfrontier_14 Start: 9756, Stop: 10064, Start Num: 21

Candidate Starts for Finalfrontier_14:

(Start: 21 @9756 has 116 MA's), (41, 9867), (57, 9930), (71, 9987), (73, 9996), (77, 10029),

Gene: FlameThrower_13 Start: 8962, Stop: 9270, Start Num: 21

Candidate Starts for FlameThrower_13:

(Start: 21 @8962 has 116 MA's), (71, 9193), (73, 9202), (77, 9235),

Gene: Franklin22_12 Start: 8878, Stop: 9177, Start Num: 21

Candidate Starts for Franklin22_12:

(Start: 21 @8878 has 116 MA's), (41, 8986), (50, 9025), (73, 9118), (77, 9151),

Gene: Fribs8_15 Start: 9689, Stop: 9964, Start Num: 21

Candidate Starts for Fribs8_15:

(6, 9578), (7, 9581), (Start: 21 @9689 has 116 MA's), (34, 9761), (58, 9857), (66, 9884), (70, 9908), (73, 9920), (76, 9947),

Gene: Frickyeah_15 Start: 8335, Stop: 8613, Start Num: 22

Candidate Starts for Frickyeah_15:

(15, 8314), (Start: 22 @8335 has 5 MA's), (61, 8500), (71, 8554), (72, 8560), (73, 8563), (76, 8590),

Gene: Fryberger_46 Start: 17619, Stop: 17933, Start Num: 19

Candidate Starts for Fryberger_46:

(Start: 19 @17619 has 7 MA's), (37, 17715), (55, 17787), (56, 17790), (60, 17805), (63, 17820), (68, 17844), (77, 17904),

Gene: GTE2_12 Start: 8563, Stop: 8856, Start Num: 21

Candidate Starts for GTE2_12:

(Start: 12 @8527 has 1 MA's), (Start: 21 @8563 has 116 MA's), (34, 8635), (66, 8758), (70, 8782), (73, 8794), (76, 8821),

Gene: Gack_12 Start: 8940, Stop: 9239, Start Num: 21

Candidate Starts for Gack_12:

(Start: 21 @8940 has 116 MA's), (41, 9048), (50, 9087), (52, 9096), (73, 9180), (76, 9207), (77, 9213),

Gene: Galaxy_14 Start: 9750, Stop: 10082, Start Num: 21

Candidate Starts for Galaxy_14:

(Start: 21 @9750 has 116 MA's), (37, 9846), (47, 9879), (58, 9954), (74, 10041), (77, 10071),

Gene: Getalong_15 Start: 8315, Stop: 8596, Start Num: 20

Candidate Starts for Getalong_15:

(Start: 20 @8315 has 30 MA's), (61, 8480), (71, 8534), (72, 8540), (73, 8543), (76, 8570),

Gene: GiKK_17 Start: 9200, Stop: 9493, Start Num: 23

Candidate Starts for GiKK_17:

(13, 9167), (Start: 23 @9200 has 7 MA's), (27, 9230), (45, 9305), (66, 9392), (70, 9416), (73, 9428), (77, 9461),

Gene: Gibbous_14 Start: 9121, Stop: 9396, Start Num: 20

Candidate Starts for Gibbous_14:

(17, 9112), (Start: 20 @9121 has 30 MA's), (34, 9193), (66, 9316), (70, 9340), (73, 9352), (76, 9379),

Gene: GoldHunter_15 Start: 8886, Stop: 9191, Start Num: 21

Candidate Starts for GoldHunter_15:

(Start: 21 @8886 has 116 MA's), (34, 8970), (64, 9084), (65, 9090), (66, 9093), (70, 9117), (73, 9129),

Gene: Guey18_51 Start: 18811, Stop: 19125, Start Num: 19

Candidate Starts for Guey18_51:

(Start: 19 @18811 has 7 MA's), (37, 18907), (55, 18979), (56, 18982), (60, 18997), (63, 19012), (68, 19036), (77, 19096),

Gene: HannahPhantana_15 Start: 9647, Stop: 10000, Start Num: 20

Candidate Starts for HannahPhantana_15:

(Start: 20 @9647 has 30 MA's), (37, 9743), (47, 9776), (77, 9968),

Gene: Hexbug_16 Start: 9883, Stop: 10176, Start Num: 23

Candidate Starts for Hexbug_16:

(Start: 23 @9883 has 7 MA's), (31, 9937), (32, 9940), (73, 10111), (77, 10144),

Gene: HippoPololi_16 Start: 9778, Stop: 10053, Start Num: 20

Candidate Starts for HippoPololi_16:

(17, 9769), (Start: 20 @9778 has 30 MA's), (34, 9850), (58, 9946), (66, 9973), (70, 9997), (73, 10009), (76, 10036),

Gene: Holliday_16 Start: 8319, Stop: 8597, Start Num: 20

Candidate Starts for Holliday_16:

(10, 8271), (Start: 20 @8319 has 30 MA's), (61, 8484), (71, 8538), (72, 8544), (73, 8547), (76, 8574),

Gene: Horseradish_15 Start: 8771, Stop: 9064, Start Num: 21

Candidate Starts for Horseradish_15:

(Start: 21 @8771 has 116 MA's), (66, 8966), (70, 8990), (73, 9002), (76, 9029),

Gene: Horus_15 Start: 8335, Stop: 8613, Start Num: 22

Candidate Starts for Horus_15:

(15, 8314), (Start: 22 @8335 has 5 MA's), (61, 8500), (71, 8554), (72, 8560), (73, 8563), (76, 8590),

Gene: Icarian_14 Start: 9446, Stop: 9754, Start Num: 21

Candidate Starts for Icarian_14:

(Start: 21 @9446 has 116 MA's), (66, 9650), (71, 9677), (73, 9686), (77, 9719),

Gene: IndyLu_13 Start: 9288, Stop: 9596, Start Num: 21

Candidate Starts for IndyLu_13:

(Start: 21 @9288 has 116 MA's), (Start: 23 @9291 has 7 MA's), (40, 9393), (66, 9492), (71, 9519), (77, 9561),

Gene: Jamun_14 Start: 10088, Stop: 10441, Start Num: 21

Candidate Starts for Jamun_14:

(Start: 21 @10088 has 116 MA's), (37, 10184), (47, 10217), (58, 10292), (74, 10379), (77, 10409),

Gene: Jamzy_17 Start: 9210, Stop: 9503, Start Num: 23

Candidate Starts for Jamzy_17:

(13, 9177), (Start: 23 @9210 has 7 MA's), (27, 9240), (45, 9315), (66, 9402), (70, 9426), (73, 9438), (77, 9471),

Gene: Jerole_15 Start: 9644, Stop: 9997, Start Num: 20

Candidate Starts for Jerole_15:

(Start: 20 @9644 has 30 MA's), (37, 9740), (47, 9773), (77, 9965),

Gene: Johnathan_13 Start: 9243, Stop: 9551, Start Num: 21

Candidate Starts for Johnathan_13:

(Start: 21 @9243 has 116 MA's), (41, 9354), (57, 9417), (71, 9474), (73, 9483), (77, 9516),

Gene: Jovita_13 Start: 9345, Stop: 9653, Start Num: 21

Candidate Starts for Jovita_13:

(Start: 21 @9345 has 116 MA's), (41, 9456), (57, 9519), (71, 9576), (73, 9585), (77, 9618),

Gene: Juno112_13 Start: 9061, Stop: 9414, Start Num: 21

Candidate Starts for Juno112_13:

(8, 8977), (Start: 21 @9061 has 116 MA's), (36, 9154), (41, 9172), (48, 9199), (66, 9313), (74, 9352), (77, 9382),

Gene: KHumphrey_13 Start: 9058, Stop: 9411, Start Num: 21

Candidate Starts for KHumphrey_13:

(10, 9016), (Start: 21 @9058 has 116 MA's), (36, 9151), (41, 9169), (48, 9196), (66, 9310), (74, 9349), (77, 9379),

Gene: Kamaru_15 Start: 8319, Stop: 8597, Start Num: 20

Candidate Starts for Kamaru_15:

(10, 8271), (Start: 20 @8319 has 30 MA's), (61, 8484), (71, 8538), (72, 8544), (73, 8547), (76, 8574),

Gene: Kate33_13 Start: 9287, Stop: 9595, Start Num: 21

Candidate Starts for Kate33_13:

(Start: 21 @9287 has 116 MA's), (Start: 23 @9290 has 7 MA's), (40, 9392), (66, 9491), (71, 9518), (77, 9560),

Gene: Katzastrophic_13 Start: 9137, Stop: 9445, Start Num: 21

Candidate Starts for Katzastrophic_13:

(Start: 21 @9137 has 116 MA's), (71, 9368), (73, 9377), (77, 9410),

Gene: KayGee_14 Start: 8643, Stop: 8918, Start Num: 21

Candidate Starts for KayGee_14:

(Start: 21 @8643 has 116 MA's), (34, 8715), (66, 8838), (70, 8862), (73, 8874),

Gene: Keelan_44 Start: 17620, Stop: 17934, Start Num: 19

Candidate Starts for Keelan_44:

(Start: 19 @17620 has 7 MA's), (37, 17716), (48, 17749), (56, 17791), (60, 17806), (68, 17845), (77, 17905),

Gene: Kenzers_13 Start: 9260, Stop: 9568, Start Num: 21

Candidate Starts for Kenzers_13:

(Start: 21 @9260 has 116 MA's), (41, 9371), (57, 9434), (71, 9491), (73, 9500), (77, 9533),

Gene: Kepler_14 Start: 9482, Stop: 9835, Start Num: 20

Candidate Starts for Kepler_14:

(Start: 20 @9482 has 30 MA's), (37, 9578), (47, 9611), (77, 9803),

Gene: Kieran_13 Start: 9442, Stop: 9750, Start Num: 21

Candidate Starts for Kieran_13:

(Start: 21 @9442 has 116 MA's), (71, 9673), (73, 9682), (77, 9715),

Gene: Kuleana_14 Start: 9441, Stop: 9794, Start Num: 21

Candidate Starts for Kuleana_14:

(Start: 21 @9441 has 116 MA's), (40, 9546), (47, 9570), (73, 9729), (77, 9762),

Gene: Lahqtemish_13 Start: 9360, Stop: 9668, Start Num: 21

Candidate Starts for Lahqtemish_13:

(Start: 21 @9360 has 116 MA's), (Start: 23 @9363 has 7 MA's), (40, 9465), (66, 9564), (71, 9591), (77, 9633),

Gene: Lauer_13 Start: 8692, Stop: 8967, Start Num: 21

Candidate Starts for Lauer_13:

(Start: 21 @8692 has 116 MA's), (34, 8764), (66, 8887), (70, 8911), (73, 8923), (77, 8956),

Gene: Leona_13 Start: 9111, Stop: 9464, Start Num: 21

Candidate Starts for Leona_13:

(8, 9027), (Start: 21 @9111 has 116 MA's), (36, 9204), (41, 9222), (48, 9249), (66, 9363), (74, 9402), (77, 9432),

Gene: Leroy_15 Start: 8336, Stop: 8614, Start Num: 22

Candidate Starts for Leroy_15:

(15, 8315), (Start: 22 @8336 has 5 MA's), (61, 8501), (71, 8555), (72, 8561), (73, 8564), (76, 8591),

Gene: LilSpotty_13 Start: 8433, Stop: 8762, Start Num: 25

Candidate Starts for LilSpotty_13:

(Start: 25 @8433 has 1 MA's), (38, 8502), (39, 8508), (51, 8559), (65, 8604), (71, 8634), (75, 8652),

Gene: LimaBean_13 Start: 9243, Stop: 9551, Start Num: 21

Candidate Starts for LimaBean_13:

(Start: 21 @9243 has 116 MA's), (41, 9354), (57, 9417), (71, 9474), (73, 9483), (77, 9516),

Gene: LitninMcQueen_15 Start: 8320, Stop: 8598, Start Num: 20

Candidate Starts for LitninMcQueen_15:

(Start: 20 @8320 has 30 MA's), (61, 8485), (71, 8539), (72, 8545), (73, 8548), (76, 8575),

Gene: LittleTokyo_14 Start: 9395, Stop: 9748, Start Num: 21

Candidate Starts for LittleTokyo_14:

(Start: 21 @9395 has 116 MA's), (24, 9407), (47, 9524), (49, 9545), (66, 9647), (68, 9656), (77, 9716),

Gene: Loviatar_22 Start: 9533, Stop: 9841, Start Num: 21
Candidate Starts for Loviatar_22:
(Start: 21 @9533 has 116 MA's), (66, 9737), (73, 9773), (77, 9806),

Gene: Lunar_16 Start: 9644, Stop: 9997, Start Num: 20
Candidate Starts for Lunar_16:
(Start: 20 @9644 has 30 MA's), (37, 9740), (47, 9773), (77, 9965),

Gene: Lutum_15 Start: 8335, Stop: 8613, Start Num: 22
Candidate Starts for Lutum_15:
(15, 8314), (Start: 22 @8335 has 5 MA's), (61, 8500), (71, 8554), (72, 8560), (73, 8563), (76, 8590),

Gene: Lynlen_13 Start: 9260, Stop: 9568, Start Num: 21
Candidate Starts for Lynlen_13:
(Start: 21 @9260 has 116 MA's), (41, 9371), (57, 9434), (71, 9491), (73, 9500), (77, 9533),

Gene: MAnor_14 Start: 8635, Stop: 8910, Start Num: 21
Candidate Starts for MAnor_14:
(Start: 21 @8635 has 116 MA's), (34, 8707), (66, 8830), (70, 8854), (73, 8866),

Gene: MScarn_16 Start: 8857, Stop: 9150, Start Num: 21
Candidate Starts for MScarn_16:
(Start: 11 @8815 has 1 MA's), (Start: 21 @8857 has 116 MA's), (66, 9052), (70, 9076), (73, 9088),
(76, 9115),

Gene: MaVan_16 Start: 9884, Stop: 10159, Start Num: 20
Candidate Starts for MaVan_16:
(17, 9875), (Start: 20 @9884 has 30 MA's), (26, 9914), (32, 9944), (66, 10079), (70, 10103), (73,
10115),

Gene: Malisha_16 Start: 10116, Stop: 10397, Start Num: 20
Candidate Starts for Malisha_16:
(Start: 20 @10116 has 30 MA's), (61, 10281), (71, 10335), (72, 10341), (73, 10344), (76, 10371),

Gene: Margaret_17 Start: 9558, Stop: 9884, Start Num: 12
Candidate Starts for Margaret_17:
(2, 9264), (3, 9306), (4, 9381), (5, 9432), (Start: 12 @9558 has 1 MA's), (18, 9582), (Start: 23 @9591
has 7 MA's), (27, 9621), (32, 9648), (53, 9744), (66, 9783), (72, 9816), (73, 9819), (77, 9852),

Gene: Mayweather_15 Start: 9265, Stop: 9540, Start Num: 21
Candidate Starts for Mayweather_15:
(Start: 21 @9265 has 116 MA's), (34, 9337), (66, 9460), (70, 9484), (73, 9496),

Gene: Melons_15 Start: 9644, Stop: 9997, Start Num: 20
Candidate Starts for Melons_15:
(Start: 20 @9644 has 30 MA's), (37, 9740), (47, 9773), (77, 9965),

Gene: MunkgeeRoachy_14 Start: 8933, Stop: 9238, Start Num: 21
Candidate Starts for MunkgeeRoachy_14:
(Start: 21 @8933 has 116 MA's), (34, 9017), (65, 9137), (66, 9140), (70, 9164), (73, 9176),

Gene: Nebkiss_11 Start: 8761, Stop: 9018, Start Num: 28
Candidate Starts for Nebkiss_11:

(Start: 28 @8761 has 1 MA's), (34, 8806), (51, 8890), (53, 8899), (59, 8914), (65, 8935), (69, 8959),

Gene: Nibbles_16 Start: 9884, Stop: 10159, Start Num: 20

Candidate Starts for Nibbles_16:

(17, 9875), (Start: 20 @9884 has 30 MA's), (26, 9914), (29, 9923), (32, 9944), (66, 10079), (70, 10103), (73, 10115),

Gene: Nicky22_14 Start: 9691, Stop: 9999, Start Num: 21

Candidate Starts for Nicky22_14:

(Start: 21 @9691 has 116 MA's), (41, 9802), (57, 9865), (66, 9895), (71, 9922), (73, 9931), (77, 9964),

Gene: Nina_15 Start: 9918, Stop: 10223, Start Num: 21

Candidate Starts for Nina_15:

(Start: 21 @9918 has 116 MA's), (34, 10002), (65, 10122), (66, 10125), (70, 10149), (73, 10161),

Gene: Nodigi_16 Start: 9874, Stop: 10167, Start Num: 23

Candidate Starts for Nodigi_16:

(Start: 23 @9874 has 7 MA's), (27, 9904), (66, 10066), (73, 10102), (77, 10135),

Gene: Olliecat_13 Start: 9271, Stop: 9582, Start Num: 21

Candidate Starts for Olliecat_13:

(Start: 21 @9271 has 116 MA's), (62, 9463), (73, 9523), (77, 9556),

Gene: Orcanus_14 Start: 9449, Stop: 9802, Start Num: 21

Candidate Starts for Orcanus_14:

(Start: 21 @9449 has 116 MA's), (24, 9461), (41, 9560), (72, 9734), (74, 9740), (77, 9770), (78, 9788),

Gene: Orla_16 Start: 9878, Stop: 10171, Start Num: 23

Candidate Starts for Orla_16:

(Start: 23 @9878 has 7 MA's), (27, 9908), (66, 10070), (73, 10106), (77, 10139),

Gene: Periwinkle_15 Start: 8315, Stop: 8593, Start Num: 20

Candidate Starts for Periwinkle_15:

(Start: 20 @8315 has 30 MA's), (61, 8480), (71, 8534), (72, 8540), (73, 8543), (76, 8570),

Gene: Phabuloso_15 Start: 8320, Stop: 8598, Start Num: 20

Candidate Starts for Phabuloso_15:

(Start: 20 @8320 has 30 MA's), (61, 8485), (71, 8539), (72, 8545), (73, 8548), (76, 8575),

Gene: Phisb_13 Start: 9208, Stop: 9516, Start Num: 21

Candidate Starts for Phisb_13:

(Start: 21 @9208 has 116 MA's), (41, 9319), (57, 9382), (71, 9439), (73, 9448), (77, 9481),

Gene: Phistory_15 Start: 8304, Stop: 8582, Start Num: 20

Candidate Starts for Phistory_15:

(Start: 20 @8304 has 30 MA's), (61, 8469), (71, 8523), (72, 8529), (73, 8532), (76, 8559),

Gene: PhluffyCoco_13 Start: 9060, Stop: 9413, Start Num: 21

Candidate Starts for PhluffyCoco_13:

(8, 8976), (Start: 21 @9060 has 116 MA's), (36, 9153), (41, 9171), (48, 9198), (66, 9312), (74, 9351), (77, 9381),

Gene: Polka_14 Start: 9483, Stop: 9836, Start Num: 20

Candidate Starts for Polka_14:

(Start: 20 @9483 has 30 MA's), (37, 9579), (47, 9612), (77, 9804),

Gene: Pons_14 Start: 8643, Stop: 8918, Start Num: 21

Candidate Starts for Pons_14:

(Start: 21 @8643 has 116 MA's), (34, 8715), (66, 8838), (70, 8862), (73, 8874),

Gene: PotPie_14 Start: 9496, Stop: 9771, Start Num: 21

Candidate Starts for PotPie_14:

(Start: 21 @9496 has 116 MA's), (34, 9568), (66, 9691), (70, 9715), (73, 9727), (77, 9760),

Gene: PsychoKiller_14 Start: 8885, Stop: 9190, Start Num: 21

Candidate Starts for PsychoKiller_14:

(Start: 21 @8885 has 116 MA's), (34, 8969), (66, 9092), (70, 9116), (73, 9128),

Gene: QMacho_14 Start: 9727, Stop: 10035, Start Num: 21

Candidate Starts for QMacho_14:

(Start: 21 @9727 has 116 MA's), (41, 9838), (57, 9901), (71, 9958), (73, 9967), (77, 10000),

Gene: Quasar_15 Start: 9494, Stop: 9799, Start Num: 21

Candidate Starts for Quasar_15:

(Start: 21 @9494 has 116 MA's), (34, 9578), (66, 9701), (70, 9725), (73, 9737),

Gene: Quenya_14 Start: 9138, Stop: 9446, Start Num: 21

Candidate Starts for Quenya_14:

(Start: 21 @9138 has 116 MA's), (71, 9369), (73, 9378), (77, 9411),

Gene: RanchParmCat_17 Start: 9591, Stop: 9884, Start Num: 23

Candidate Starts for RanchParmCat_17:

(18, 9582), (Start: 23 @9591 has 7 MA's), (27, 9621), (32, 9648), (53, 9744), (66, 9783), (72, 9816), (73, 9819), (77, 9852),

Gene: RedBaron_15 Start: 8929, Stop: 9234, Start Num: 21

Candidate Starts for RedBaron_15:

(Start: 21 @8929 has 116 MA's), (34, 9013), (35, 9019), (64, 9127), (65, 9133), (66, 9136), (70, 9160), (73, 9172),

Gene: RedFox_13 Start: 9060, Stop: 9413, Start Num: 21

Candidate Starts for RedFox_13:

(8, 8976), (Start: 21 @9060 has 116 MA's), (36, 9153), (41, 9171), (48, 9198), (66, 9312), (74, 9351), (77, 9381),

Gene: Renna12_14 Start: 9269, Stop: 9622, Start Num: 21

Candidate Starts for Renna12_14:

(Start: 21 @9269 has 116 MA's), (36, 9362), (41, 9380), (48, 9407), (66, 9521), (74, 9560), (77, 9590),

Gene: Rollins_13 Start: 8845, Stop: 9144, Start Num: 21

Candidate Starts for Rollins_13:

(Start: 21 @8845 has 116 MA's), (41, 8953), (73, 9085), (77, 9118),

Gene: Rona_13 Start: 9439, Stop: 9747, Start Num: 21

Candidate Starts for Rona_13:

(Start: 21 @9439 has 116 MA's), (71, 9670), (73, 9679), (77, 9712),

Gene: Ronaldo_49 Start: 18576, Stop: 18890, Start Num: 19
Candidate Starts for Ronaldo_49:
(Start: 19 @18576 has 7 MA's), (37, 18672), (55, 18744), (56, 18747), (60, 18762), (63, 18777), (68, 18801), (77, 18861),

Gene: Ruchi_14 Start: 10010, Stop: 10342, Start Num: 21
Candidate Starts for Ruchi_14:
(Start: 21 @10010 has 116 MA's), (37, 10106), (47, 10139), (58, 10214), (74, 10301), (77, 10331),

Gene: SanaSana_14 Start: 9463, Stop: 9771, Start Num: 21
Candidate Starts for SanaSana_14:
(Start: 21 @9463 has 116 MA's), (50, 9613), (66, 9667), (73, 9703),

Gene: SansAfet_13 Start: 9254, Stop: 9562, Start Num: 21
Candidate Starts for SansAfet_13:
(Start: 21 @9254 has 116 MA's), (41, 9365), (57, 9428), (71, 9485), (73, 9494), (77, 9527),

Gene: SarBear_13 Start: 9220, Stop: 9528, Start Num: 21
Candidate Starts for SarBear_13:
(Start: 21 @9220 has 116 MA's), (41, 9331), (57, 9394), (71, 9451), (73, 9460), (77, 9493),

Gene: Sharkboy_13 Start: 9438, Stop: 9746, Start Num: 21
Candidate Starts for Sharkboy_13:
(Start: 21 @9438 has 116 MA's), (71, 9669), (73, 9678), (77, 9711),

Gene: Shayna_12 Start: 8829, Stop: 9149, Start Num: 21
Candidate Starts for Shayna_12:
(Start: 21 @8829 has 116 MA's), (48, 8958), (73, 9081),

Gene: SheckWes_13 Start: 8631, Stop: 8906, Start Num: 21
Candidate Starts for SheckWes_13:
(Start: 21 @8631 has 116 MA's), (34, 8703), (66, 8826), (70, 8850), (73, 8862),

Gene: SketchMex_13 Start: 8872, Stop: 9165, Start Num: 21
Candidate Starts for SketchMex_13:
(Start: 11 @8830 has 1 MA's), (Start: 21 @8872 has 116 MA's), (66, 9067), (70, 9091), (73, 9103), (76, 9130),

Gene: Skylord_12 Start: 8785, Stop: 9084, Start Num: 21
Candidate Starts for Skylord_12:
(Start: 21 @8785 has 116 MA's), (41, 8893), (73, 9025), (77, 9058),

Gene: Slay_13 Start: 9696, Stop: 10004, Start Num: 21
Candidate Starts for Slay_13:
(Start: 21 @9696 has 116 MA's), (41, 9807), (57, 9870), (71, 9927), (73, 9936), (77, 9969),

Gene: Sopespian_14 Start: 8886, Stop: 9191, Start Num: 21
Candidate Starts for Sopespian_14:
(1, 8451), (Start: 21 @8886 has 116 MA's), (34, 8970), (66, 9093), (70, 9117), (73, 9129),

Gene: Spooky_15 Start: 8326, Stop: 8601, Start Num: 20
Candidate Starts for Spooky_15:

(Start: 20 @8326 has 30 MA's), (68, 8527), (71, 8545), (72, 8551), (73, 8554),

Gene: Squiddly_17 Start: 9737, Stop: 10018, Start Num: 20

Candidate Starts for Squiddly_17:

(Start: 20 @9737 has 30 MA's), (61, 9902), (71, 9956), (72, 9962), (73, 9965), (76, 9992),

Gene: Squircle_13 Start: 9270, Stop: 9581, Start Num: 21

Candidate Starts for Squircle_13:

(Start: 21 @9270 has 116 MA's), (62, 9462), (73, 9522), (77, 9555),

Gene: SteamedHams_16 Start: 8902, Stop: 9195, Start Num: 21

Candidate Starts for SteamedHams_16:

(Start: 21 @8902 has 116 MA's), (34, 8974), (35, 8980), (66, 9097), (70, 9121), (73, 9133), (76, 9160),

Gene: Stoor_13 Start: 9460, Stop: 9768, Start Num: 21

Candidate Starts for Stoor_13:

(Start: 21 @9460 has 116 MA's), (50, 9610), (66, 9664), (73, 9700),

Gene: Stromboli_13 Start: 9463, Stop: 9771, Start Num: 21

Candidate Starts for Stromboli_13:

(Start: 21 @9463 has 116 MA's), (50, 9613), (66, 9667), (73, 9703),

Gene: SummitAcademy_13 Start: 8711, Stop: 8986, Start Num: 21

Candidate Starts for SummitAcademy_13:

(Start: 21 @8711 has 116 MA's), (34, 8783), (66, 8906), (70, 8930), (73, 8942), (77, 8975),

Gene: SunnyD_12 Start: 8829, Stop: 9149, Start Num: 21

Candidate Starts for SunnyD_12:

(Start: 21 @8829 has 116 MA's), (48, 8958), (73, 9081),

Gene: Survivors_16 Start: 9739, Stop: 10014, Start Num: 20

Candidate Starts for Survivors_16:

(17, 9730), (Start: 20 @9739 has 30 MA's), (32, 9799), (54, 9898), (66, 9934), (70, 9958), (73, 9970),

Gene: SweatNTears_16 Start: 9383, Stop: 9676, Start Num: 21

Candidate Starts for SweatNTears_16:

(Start: 11 @9341 has 1 MA's), (Start: 21 @9383 has 116 MA's), (66, 9578), (70, 9602), (73, 9614), (76, 9641),

Gene: Swervy_13 Start: 9220, Stop: 9528, Start Num: 21

Candidate Starts for Swervy_13:

(Start: 21 @9220 has 116 MA's), (41, 9331), (57, 9394), (71, 9451), (73, 9460), (77, 9493),

Gene: TaylorSipht_14 Start: 9540, Stop: 9896, Start Num: 21

Candidate Starts for TaylorSipht_14:

(14, 9516), (16, 9522), (Start: 21 @9540 has 116 MA's), (24, 9552), (42, 9660), (66, 9795), (77, 9864),

Gene: Teagster_12 Start: 8829, Stop: 9149, Start Num: 21

Candidate Starts for Teagster_12:

(Start: 21 @8829 has 116 MA's), (48, 8958), (73, 9081),

Gene: Tolls_16 Start: 8905, Stop: 9198, Start Num: 21

Candidate Starts for Tolls_16:

(Start: 21 @8905 has 116 MA's), (34, 8977), (35, 8983), (66, 9100), (70, 9124), (73, 9136), (76, 9163),

Gene: Troje_14 Start: 8815, Stop: 9150, Start Num: 11

Candidate Starts for Troje_14:

(Start: 11 @8815 has 1 MA's), (Start: 21 @8857 has 116 MA's), (66, 9052), (70, 9076), (73, 9088), (76, 9115),

Gene: TukTuk_13 Start: 9280, Stop: 9588, Start Num: 21

Candidate Starts for TukTuk_13:

(Start: 21 @9280 has 116 MA's), (41, 9391), (57, 9454), (71, 9511), (73, 9520), (77, 9553),

Gene: Typhonomachy_15 Start: 8885, Stop: 9190, Start Num: 21

Candidate Starts for Typhonomachy_15:

(Start: 21 @8885 has 116 MA's), (34, 8969), (65, 9089), (66, 9092), (70, 9116), (73, 9128),

Gene: Vine_15 Start: 9640, Stop: 9915, Start Num: 21

Candidate Starts for Vine_15:

(Start: 21 @9640 has 116 MA's), (34, 9712), (66, 9835), (70, 9859), (73, 9871),

Gene: Vitas_12 Start: 8785, Stop: 9084, Start Num: 21

Candidate Starts for Vitas_12:

(Start: 21 @8785 has 116 MA's), (41, 8893), (73, 9025), (77, 9058),

Gene: Volt_48 Start: 18576, Stop: 18890, Start Num: 19

Candidate Starts for Volt_48:

(Start: 19 @18576 has 7 MA's), (37, 18672), (55, 18744), (56, 18747), (60, 18762), (63, 18777), (68, 18801), (77, 18861),

Gene: Vulpecula_14 Start: 10086, Stop: 10439, Start Num: 21

Candidate Starts for Vulpecula_14:

(Start: 21 @10086 has 116 MA's), (37, 10182), (47, 10215), (58, 10290), (74, 10377),

Gene: WalkingDead_13 Start: 9451, Stop: 9759, Start Num: 21

Candidate Starts for WalkingDead_13:

(Start: 21 @9451 has 116 MA's), (66, 9655), (73, 9691), (77, 9724), (79, 9748),

Gene: Whitney_15 Start: 8315, Stop: 8596, Start Num: 20

Candidate Starts for Whitney_15:

(Start: 20 @8315 has 30 MA's), (61, 8480), (71, 8534), (72, 8540), (73, 8543), (76, 8570),

Gene: Yakult_15 Start: 8776, Stop: 9066, Start Num: 23

Candidate Starts for Yakult_15:

(Start: 23 @8776 has 7 MA's), (26, 8803), (32, 8833), (34, 8845), (73, 9004), (77, 9037),

Gene: Yarn_13 Start: 8895, Stop: 9188, Start Num: 21

Candidate Starts for Yarn_13:

(Start: 21 @8895 has 116 MA's), (34, 8967), (35, 8973), (66, 9090), (70, 9114), (73, 9126), (76, 9153),

Gene: Yummy_15 Start: 8771, Stop: 9064, Start Num: 21

Candidate Starts for Yummy_15:

(Start: 21 @8771 has 116 MA's), (66, 8966), (70, 8990), (73, 9002), (76, 9029),

Gene: Zareef_18 Start: 9885, Stop: 10160, Start Num: 20

Candidate Starts for Zareef_18:

(17, 9876), (Start: 20 @9885 has 30 MA's), (26, 9915), (32, 9945), (66, 10080), (70, 10104), (73, 10116),

Gene: Ziko_49 Start: 18516, Stop: 18830, Start Num: 19

Candidate Starts for Ziko_49:

(Start: 19 @18516 has 7 MA's), (37, 18612), (55, 18684), (56, 18687), (60, 18702), (63, 18717), (68, 18741), (77, 18801),