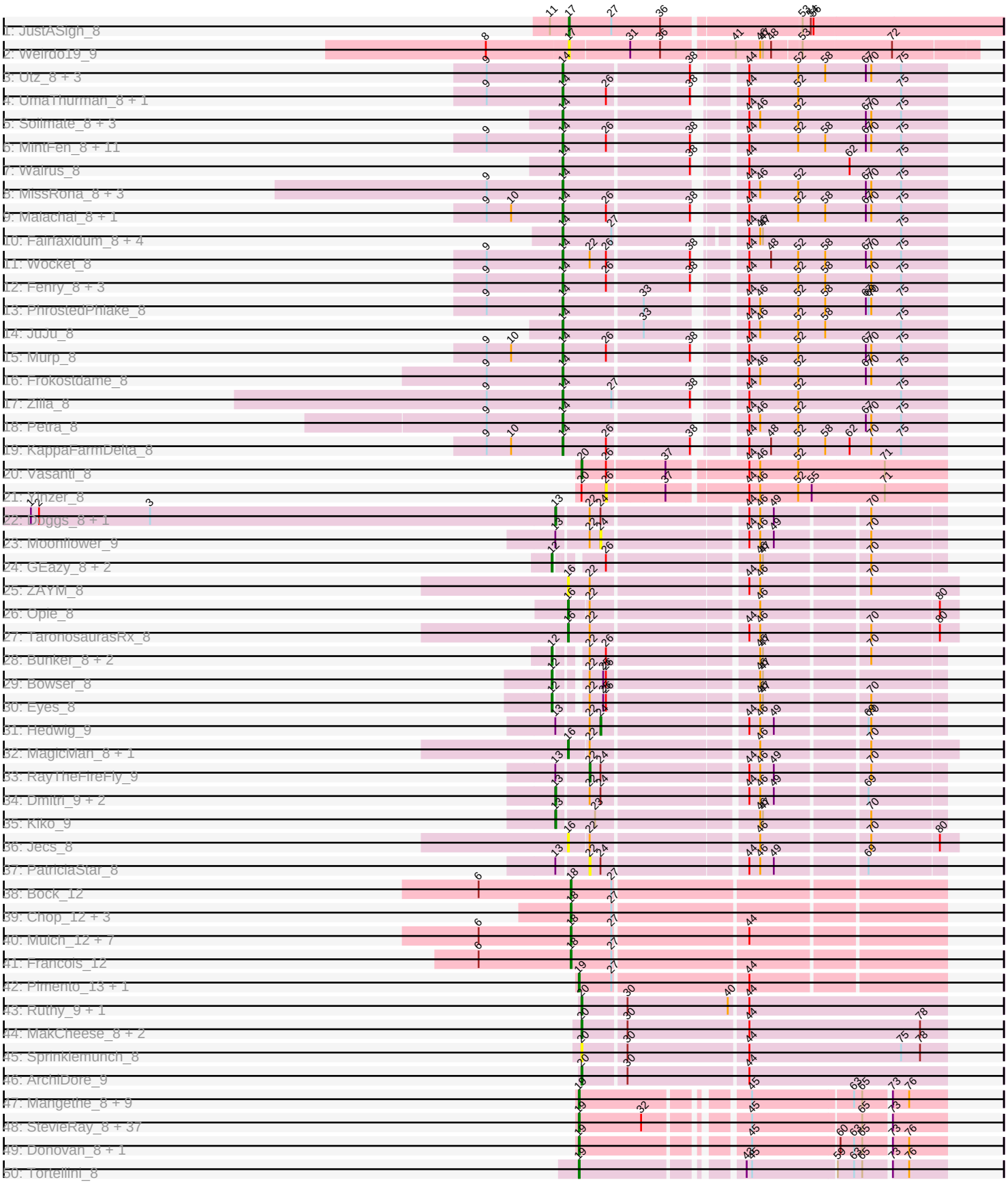
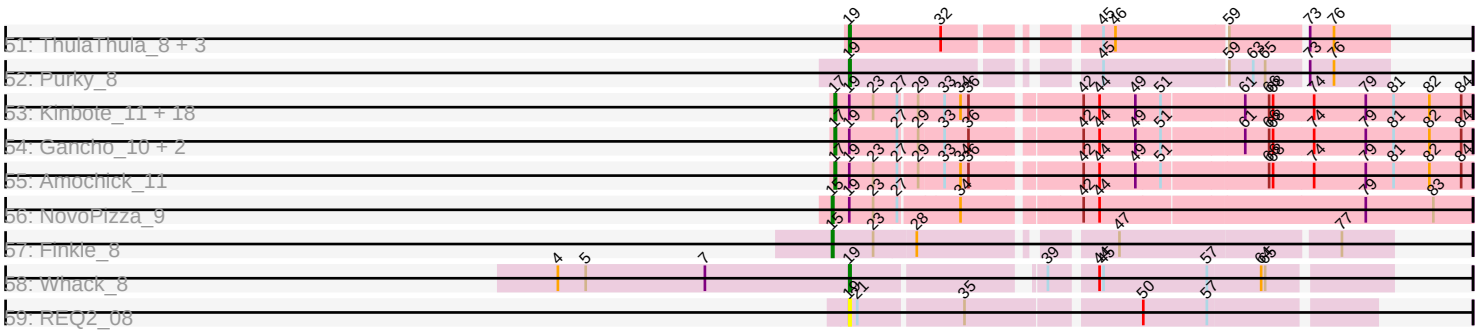
Pham 345420


1: JustASigh_8
2: Weirdo19_9
3: Otz_8 + 3
4: UmaThurman_8 + 1
5: Solimate_8 + 3
6: MintFen_8 + 11
7: Walrus_8
8: MissRona_8 + 3
9: Malachai_8 + 1
10: Fairiaxidum_8 + 4
11: Wocket_8
12: Fenry_8 + 3
13: PhrostedPhlake_8
14: JuJu_8
15: Murp_8
16: Frokostdame_8
17: Zilla_8
18: Petra_8
19: KappaFarmDelta_8
20: Vasanti_8
21: Yinzer_8
22: Dbggs_8 + 1
23: Moonflower_9
24: GEazy_8 + 2
25: ZAYM_8
26: Opie_8
27: TaronosaurasRx_8
28: Bunker_8 + 2
29: Bowser_8
30: Eyes_8
31: Hedwig_9
32: MagicMan_8 + 1
33: RayTheFireFly_9
34: Dmitri_9 + 2
35: Kiko_9
36: Jecs_8
37: PatriciaStar_8
38: Bock_12
39: Chop_12 + 3
40: Mulch_12 + 7
41: Francois_12
42: Pimento_13 + 1
43: Ruthy_9 + 1
44: MakCheese_8 + 2
45: Sprinklemunch_8
46: ArchiDore_9
47: Mangethe_8 + 9
48: StevieRay_8 + 37
49: Donovan_8 + 1
50: Tortellini_8

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51: ThulaThula_8 + 3
52: Purky_8
53: Kinbote_11 + 18
54: Gancho_10 + 2
55: Amochick_11
56: NovoPizza_9
57: Finkle_8
58: Whack_8
59: REQ2_08

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 345420 Report

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

Pham number 345420 has 180 members, 18 are drafts.

Phages represented in each track:
- Track 1 : JustASigh_8
- Track 2 : Weirdo19_9
- Track 3 : Utz_8, Lysidious_8, Wisp_8, BlingBling_8
- Track 4 : UmaThurman_8, Samba_8
- Track 5 : Soilmate_8, CarolAnn_8, CheeseSpider_8, Blino_8
- Track 6 : MintFen_8, Guacamole_8, Melba_8, Mellie_8, Barco_8, ZiggyZoo_8, JasperJr_8, Zarbodnamra_8, CaptainKirk2_8, Pipp_8, Delian_8, Obliviate_8
- Track 7 : Walrus_8
- Track 8 : MissRona_8, Azula_8, Blueberry_8, Gambino_8
- Track 9 : Malachai_8, Begonia_8
- Track 10 : Fairfaxidum_8, PCoral7_8, PrincePatrick_8, William_8, Toast_8
- Track 11 : Wocket_8
- Track 12 : Fenry_8, Jalammah_8, Archis_8, Hitter_8
- Track 13 : PhrostedPhlake_8
- Track 14 : JuJu_8
- Track 15 : Murp_8
- Track 16 : Frokostdame_8
- Track 17 : Zilla_8
- Track 18 : Petra_8
- Track 19 : KappaFarmDelta_8
- Track 20 : Vasanti_8
- Track 21 : Yinzer_8
- Track 22 : Doggs_8, Coriander_9
- Track 23 : Moonflower_9
- Track 24 : GEazy_8, NaLuna_8, HannahD_8
- Track 25 : ZAYM_8
- Track 26 : Opie_8
- Track 27 : TaronosaurasRx_8
- Track 28 : Bunker_8, BBQValindra_8, BackstagePass_8
- Track 29 : Bowser_8
- Track 30 : Eyes_8
- Track 31 : Hedwig_9
- Track 32 : MagicMan_8, Schnabeltier_8
- Track 33 : RayTheFireFly_9
- Track 34 : Dmitri_9, Chipko_9, DirtyBoi_9
- Track 35 : Kiko_9
- Track 36 : Jecs_8

• Track 37 : PatriciaStar_8
• Track 38 : Bock_12
• Track 39 : Chop_12, Ayotoya_12, GrandSlam_12, Hamood_12
• Track 40 : Mulch_12, WheatThin_12, Nadeem_12, BetterKatz_12, Brylie_12, Parada_12, SussRoloMann_12, NancyRae_12
• Track 41 : Francois_12
• Track 42 : Pimento_13, DelRio_13
• Track 43 : Ruthy_9, DumpsterDude_9
• Track 44 : MakCheese_8, Zodiariah_8, Malibo_8
• Track 45 : Sprinklemunch_8
• Track 46 : ArchiDore_9
• Track 47 : Mangethe_8, Langerak_8, Majeke_8, GaloreK_8, Techage_8, Arib1_8, Phegasus_8, Juniormint_8, Jebeks_8, BronnyJr_8
• Track 48 : StevieRay_8, Phalm_8, Glaske_8, FirstPlacePfu_8, Brusacoram_8, Dynamo_8, Venti_8, Shipwreck_8, Atcoo_8, Bunnies_8, Camster_8, Polkaroo_8, Chubbello_8, Jung_8, Pygmy_8, Etoile_8, Necropolis_8, HUHilltop_8, Phineas_8, Xavia_8, Bhagsy_8, Fishburne_8, Willsammy_8, GreaseLightnin_8, Megiddo_8, CactusJack_8, Bogie_8, PeanutPie_8, Zilizebeth_8, Bartholomew_8, Thespis_8, StressBall_8, Gavriela_8, Malithi_8, Kari_8, KilKor_8, Ksquared_8, Vidya_8
• Track 49 : Donovan_8, Sonah_8
• Track 50 : Tortellini_8
• Track 51 : ThulaThula_8, BigNuz_8, Nazo_8, Phayonce_8
• Track 52 : Purky_8
• Track 53 : Kinbote_11, BloominB_11, Ein37_11, OBUpride_11, HH92_11, Luna22_11, Ubuntu_11, Evanesce_11, DeepSoil15_11, Amymech_11, Dewey_11, Webster2_11, Giles_11, Wishmaker_11, Luke_11, Hail_11, LilHazelnut_11, Hadrien_11, Forge_11
• Track 54 : Gancho_10, Daegal_12, Gravaillia_11
• Track 55 : Amochick_11
• Track 56 : NovoPizza_9
• Track 57 : Finkle_8
• Track 58 : Whack_8
• Track 59 : REQ2_08

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

The start number called the most often in the published annotations is 19, it was called in 54 of the 162 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Arib1_8, Atcoo_8, Bartholomew_8, Bhagsy_8, BigNuz_8, Bogie_8, BronnyJr_8, Brusacoram_8, Bunnies_8, CactusJack_8, Camster_8, Chubbello_8, DelRio_13, Donovan_8, Dynamo_8, Etoile_8, FirstPlacePfu_8, Fishburne_8, GaloreK_8, Gavriela_8, Glaske_8, GreaseLightnin_8, HUHilltop_8, Jebeks_8, Jung_8, Juniormint_8, Kari_8, KilKor_8, Ksquared_8, Langerak_8, Majeke_8, Malithi_8, Mangethe_8, Megiddo_8, Nazo_8, Necropolis_8, PeanutPie_8, Phalm_8, Phayonce_8, Phegasus_8, Phineas_8, Pimento_13, Polkaroo_8, Purky_8, Pygmy_8, REQ2_08, Shipwreck_8, Sonah_8, StevieRay_8, StressBall_8, Techage_8, Thespis_8, ThulaThula_8, Tortellini_8, Venti_8, Vidya_8, Whack_8, Willsammy_8, Xavia_8, Zilizebeth_8,

Genes that have the "Most Annotated" start but do not call it:
• Amochick_11, Amymech_11, BloominB_11, Daegal_12, DeepSoil15_11, Dewey_11, Ein37_11, Evanesce_11, Forge_11, Gancho_10, Giles_11, Gravaillia_11, HH92_11, Hadrien_11, Hail_11, Kinbote_11, LilHazelnut_11, Luke_11, Luna22_11, NovoPizza_9, OBUpride_11, Ubuntu_11, Webster2_11, Wishmaker_11,

Genes that do not have the "Most Annotated" start:
• ArchiDore_9, Archis_8, Ayotoya_12, Azula_8, BBQValindra_8, BackstagePass_8, Barco_8, Begonia_8, BetterKatz_12, BlingBling_8, Blino_8, Blueberry_8, Bock_12, Bowser_8, Brylie_12, Bunker_8, CaptainKirk2_8, CarolAnn_8, CheeseSpider_8, Chipko_9, Chop_12, Coriander_9, Delian_8, DirtyBoi_9, Dmitri_9, Doggs_8, DumpsterDude_9, Eyes_8, Fairfaxidum_8, Fenry_8, Finkle_8, Francois_12, Frokostdame_8, GEazy_8, Gambino_8, GrandSlam_12, Guacamole_8, Hamood_12, HannahD_8, Hedwig_9, Hitter_8, Jalammah_8, JasperJr_8, Jecs_8, JuJu_8, JustASigh_8, KappaFarmDelta_8, Kiko_9, Lysidious_8, MagicMan_8, MakCheese_8, Malachai_8, Malibo_8, Melba_8, Mellie_8, MintFen_8, MissRona_8, Moonflower_9, Mulch_12, Murp_8, NaLuna_8, Nadeem_12, NancyRae_12, Obliviate_8, Opie_8, PCoral7_8, Parada_12, PatriciaStar_8, Petra_8, PhrostedPhlake_8, Pipp_8, PrincePatrick_8, RayTheFireFly_9, Ruthy_9, Samba_8, Schnabeltier_8, Soilmate_8, Sprinklemunch_8, SussRoloMann_12, TaronosaurasRx_8, Toast_8, UmaThurman_8, Utz_8, Vasanti_8, Walrus_8, Weirdo19_9, WheatThin_12, William_8, Wisp_8, Wocket_8, Yinzer_8, ZAYM_8, Zarbodnamra_8, ZiggyZoo_8, Zilla_8, Zodiariah_8,

Summary by start number:

Start 12:
• Found in 8 of 180 (4.4%) of genes in pham
• Manual Annotations of this start: 7 of 162
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BBQValindra_8 (DB), BackstagePass_8 (DB), Bowser_8 (DB), Bunker_8 (DB), Eyes_8 (DB), GEazy_8 (DB), HannahD_8 (DB), NaLuna_8 (DB),

Start 13:
• Found in 10 of 180 (5.6%) of genes in pham
• Manual Annotations of this start: 5 of 162
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Chipko_9 (DB), Coriander_9 (DB), DirtyBoi_9 (DB), Dmitri_9 (DB), Doggs_8 (DB), Kiko_9 (DB),

Start 14:
• Found in 46 of 180 (25.6%) of genes in pham
• Manual Annotations of this start: 45 of 162
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Archis_8 (CV), Azula_8 (CV), Barco_8 (CV), Begonia_8 (CV), BlingBling_8 (CV), Blino_8 (CV), Blueberry_8 (CV), CaptainKirk2_8 (CV), CarolAnn_8 (CV), CheeseSpider_8 (CV), Delian_8 (CV), Fairfaxidum_8 (CV), Fenry_8 (CV), Frokostdame_8 (CV), Gambino_8 (CV), Guacamole_8 (CV), Hitter_8 (CV), Jalammah_8 (CV), JasperJr_8 (CV), JuJu_8 (CV), KappaFarmDelta_8 (CV), Lysidious_8 (CV), Malachai_8 (CV), Melba_8 (CV), Mellie_8 (CV), MintFen_8 (CV), MissRona_8 (CV), Murp_8 (CV), Obliviate_8 (CV), PCoral7_8 (CV), Petra_8 (CV), PhrostedPhlake_8 (CV), Pipp_8 (CV), PrincePatrick_8

(CV), Samba_8 (CV), Soilmate_8 (CV), Toast_8 (CV), UmaThurman_8 (CV), Utz_8 (CV), Walrus_8 (CV), William_8 (CV), Wisp_8 (CV), Wocket_8 (CV), Zarbodnamra_8 (CV), ZiggyZoo_8 (CV), Zilla_8 (CV),

Start 15:
• Found in 2 of 180 (1.1%) of genes in pham
• Manual Annotations of this start: 2 of 162
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Finkle_8 (singleton), NovoPizza_9 (Q),

Start 16:
• Found in 6 of 180 (3.3%) of genes in pham
• Manual Annotations of this start: 4 of 162
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jecs_8 (DB), MagicMan_8 (DB), Opie_8 (DB), Schnabeltier_8 (DB), TaronosaurasRx_8 (DB), ZAYM_8 (DB),

Start 17:
• Found in 25 of 180 (13.9%) of genes in pham
• Manual Annotations of this start: 24 of 162
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amochick_11 (Q), Amymech_11 (Q), BloominB_11 (Q), Daegal_12 (Q), DeepSoil15_11 (Q), Dewey_11 (Q), Ein37_11 (Q), Evanesce_11 (Q), Forge_11 (Q), Gancho_10 (Q), Giles_11 (Q), Gravaillia_11 (Q), HH92_11 (Q), Hadrien_11 (Q), Hail_11 (Q), JustASigh_8 (AH), Kinbote_11 (Q), LilHazelnut_11 (Q), Luke_11 (Q), Luna22_11 (Q), OBUpride_11 (Q), Ubuntu_11 (Q), Webster2_11 (Q), Weirdo19_9 (AH), Wishmaker_11 (Q),

Start 18:
• Found in 14 of 180 (7.8%) of genes in pham
• Manual Annotations of this start: 13 of 162
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ayotoya_12 (DI), BetterKatz_12 (DI), Bock_12 (DI), Brylie_12 (DI), Chop_12 (DI), Francois_12 (DI), GrandSlam_12 (DI), Hamood_12 (DI), Mulch_12 (DI), Nadeem_12 (DI), NancyRae_12 (DI), Parada_12 (DI), SussRoloMann_12 (DI), WheatThin_12 (DI),

Start 19:
• Found in 84 of 180 (46.7%) of genes in pham
• Manual Annotations of this start: 54 of 162
• Called 71.4% of time when present
• Phage (with cluster) where this start called: Arib1_8 (P1), Atcoo_8 (P1), Bartholomew_8 (P1), Bhagsy_8 (P1), BigNuz_8 (P4), Bogie_8 (P1), BronnyJr_8 (P1), Brusacoram_8 (P1), Bunnies_8 (P1), CactusJack_8 (P1), Camster_8 (P1), Chubbello_8 (P1), DelRio_13 (DI), Donovan_8 (P1), Dynamo_8 (P1), Etoile_8 (P1), FirstPlacePfu_8 (P1), Fishburne_8 (P1), GaloreK_8 (P1), Gavriela_8 (P1), Glaske_8 (P1), GreaseLightnin_8 (P1), HUHilltop_8 (P1), Jebeks_8 (P1), Jung_8 (P1), Juniormint_8 (P1), Kari_8 (P1), KilKor_8 (P1), Ksquared_8 (P1), Langerak_8 (P1), Majeke_8 (P1), Malithi_8 (P1), Mangethe_8 (P1), Megiddo_8 (P1), Nazo_8 (P4), Necropolis_8 (P1), PeanutPie_8 (P1), Phalm_8 (P1), Phayonce_8 (P5), Phegasus_8 (P1), Phineas_8 (P1), Pimento_13 (DI), Polkaroo_8 (P1), Purky_8 (P6), Pygmy_8 (P1), REQ2_08 (singleton), Shipwreck_8 (P1), Sonah_8 (P1), StevieRay_8 (P1), StressBall_8 (P1), Techage_8 (P1), Thespis_8 (P1), ThulaThula_8 (P5), Tortellini_8

(P2), Venti_8 (P1), Vidya_8 (P1), Whack_8 (singleton), Willsammy_8 (P1), Xavia_8 (P3), Zilizebeth_8 (P1),

Start 20:
• Found in 9 of 180 (5.0%) of genes in pham
• Manual Annotations of this start: 6 of 162
• Called 88.9% of time when present
• Phage (with cluster) where this start called: ArchiDore_9 (DW), DumpsterDude_9 (DW), MakCheese_8 (DW), Malibo_8 (DW), Ruthy_9 (DW), Sprinklemunch_8 (DW), Vasanti_8 (CZ2), Zodiariah_8 (DW),

Start 22:
• Found in 21 of 180 (11.7%) of genes in pham
• Manual Annotations of this start: 1 of 162
• Called 9.5% of time when present
• Phage (with cluster) where this start called: PatriciaStar_8 (DB), RayTheFireFly_9 (DB),

Start 24:
• Found in 9 of 180 (5.0%) of genes in pham
• Manual Annotations of this start: 1 of 162
• Called 22.2% of time when present
• Phage (with cluster) where this start called: Hedwig_9 (DB), Moonflower_9 (DB),

Start 26:
• Found in 33 of 180 (18.3%) of genes in pham
• No Manual Annotations of this start.
• Called 3.0% of time when present
• Phage (with cluster) where this start called: Yinzer_8 (CZ2),

Summary by clusters:

There are 14 clusters represented in this pham: P2, P3, singleton, P1, P6, P4, DI, CZ2, AH, P5, DB, Q, DW, CV,

Info for manual annotations of cluster AH:
•Start number 17 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster CV:
•Start number 14 was manually annotated 45 times for cluster CV.

Info for manual annotations of cluster CZ2:
•Start number 20 was manually annotated 1 time for cluster CZ2.

Info for manual annotations of cluster DB:
•Start number 12 was manually annotated 7 times for cluster DB.
•Start number 13 was manually annotated 5 times for cluster DB.
•Start number 16 was manually annotated 4 times for cluster DB.
•Start number 22 was manually annotated 1 time for cluster DB.
•Start number 24 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DI:
•Start number 18 was manually annotated 13 times for cluster DI.

•Start number 19 was manually annotated 2 times for cluster DI.

Info for manual annotations of cluster DW:
•Start number 20 was manually annotated 5 times for cluster DW.

Info for manual annotations of cluster P1:
•Start number 19 was manually annotated 44 times for cluster P1.

Info for manual annotations of cluster P2:
•Start number 19 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:
•Start number 19 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:
•Start number 19 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:
•Start number 19 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:
•Start number 19 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:
•Start number 15 was manually annotated 1 time for cluster Q.
•Start number 17 was manually annotated 23 times for cluster Q.

Gene Information:

Gene: Amochick_11 Start: 7977, Stop: 8429, Start Num: 17
Candidate Starts for Amochick_11:
(Start: 17 @7977 has 24 MA's), (Start: 19 @7986 has 54 MA's), (23, 8004), (27, 8022), (29, 8034), (33, 8052), (34, 8064), (36, 8070), (42, 8145), (44, 8157), (49, 8184), (51, 8202), (66, 8277), (68, 8280), (74, 8310), (79, 8349), (81, 8370), (82, 8397), (84, 8421),

Gene: Amymech_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Amymech_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: ArchiDore_9 Start: 6962, Stop: 7354, Start Num: 20
Candidate Starts for ArchiDore_9:
(Start: 20 @6962 has 6 MA's), (30, 7007), (44, 7136),

Gene: Archis_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Archis_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (70, 6876), (75, 6909),

Gene: Arib1_8 Start: 6594, Stop: 6956, Start Num: 19

Candidate Starts for Arib1_8:
(Start: 19 @6594 has 54 MA's), (45, 6753), (63, 6861), (65, 6870), (73, 6897), (76, 6915),

Gene: Atcoo_8 Start: 6580, Stop: 6942, Start Num: 19
Candidate Starts for Atcoo_8:
(Start: 19 @6580 has 54 MA's), (32, 6649), (45, 6739), (65, 6856), (73, 6883),

Gene: Ayotoya_12 Start: 8519, Stop: 8911, Start Num: 18
Candidate Starts for Ayotoya_12:
(Start: 18 @8519 has 13 MA's), (27, 8564),

Gene: Azula_8 Start: 6443, Stop: 6835, Start Num: 14
Candidate Starts for Azula_8:
(9, 6359), (Start: 14 @6443 has 45 MA's), (44, 6617), (46, 6629), (52, 6671), (67, 6746), (70, 6752), (75, 6785),

Gene: BBQValindra_8 Start: 6485, Stop: 6868, Start Num: 12
Candidate Starts for BBQValindra_8:
(Start: 12 @6485 has 7 MA's), (Start: 22 @6506 has 1 MA's), (26, 6524), (46, 6677), (47, 6680), (70, 6788),

Gene: BackstagePass_8 Start: 6462, Stop: 6845, Start Num: 12
Candidate Starts for BackstagePass_8:
(Start: 12 @6462 has 7 MA's), (Start: 22 @6483 has 1 MA's), (26, 6501), (46, 6654), (47, 6657), (70, 6765),

Gene: Barco_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Barco_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: Bartholomew_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Bartholomew_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Begonia_8 Start: 6570, Stop: 6962, Start Num: 14
Candidate Starts for Begonia_8:
(9, 6486), (10, 6513), (Start: 14 @6570 has 45 MA's), (26, 6618), (38, 6705), (44, 6744), (52, 6798), (58, 6828), (67, 6873), (70, 6879), (75, 6912),

Gene: BetterKatz_12 Start: 8487, Stop: 8879, Start Num: 18
Candidate Starts for BetterKatz_12:
(6, 8385), (Start: 18 @8487 has 13 MA's), (27, 8532), (44, 8673),

Gene: Bhagsy_8 Start: 6583, Stop: 6945, Start Num: 19
Candidate Starts for Bhagsy_8:
(Start: 19 @6583 has 54 MA's), (32, 6652), (45, 6742), (65, 6859), (73, 6886),

Gene: BigNuz_8 Start: 6561, Stop: 6923, Start Num: 19
Candidate Starts for BigNuz_8:
(Start: 19 @6561 has 54 MA's), (32, 6630), (45, 6720), (46, 6729), (59, 6810), (73, 6864), (76, 6882),

Gene: BlingBling_8 Start: 6567, Stop: 6959, Start Num: 14

Candidate Starts for BlingBling_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: Blino_8 Start: 6467, Stop: 6859, Start Num: 14
Candidate Starts for Blino_8:
(Start: 14 @6467 has 45 MA's), (44, 6641), (46, 6653), (52, 6695), (67, 6770), (70, 6776), (75, 6809),

Gene: BloominB_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for BloominB_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Blueberry_8 Start: 6443, Stop: 6835, Start Num: 14
Candidate Starts for Blueberry_8:
(9, 6359), (Start: 14 @6443 has 45 MA's), (44, 6617), (46, 6629), (52, 6671), (67, 6746), (70, 6752), (75, 6785),

Gene: Bock_12 Start: 8237, Stop: 8629, Start Num: 18
Candidate Starts for Bock_12:
(6, 8135), (Start: 18 @8237 has 13 MA's), (27, 8282),

Gene: Bogie_8 Start: 6580, Stop: 6942, Start Num: 19
Candidate Starts for Bogie_8:
(Start: 19 @6580 has 54 MA's), (32, 6649), (45, 6739), (65, 6856), (73, 6883),

Gene: Bowser_8 Start: 6483, Stop: 6866, Start Num: 12
Candidate Starts for Bowser_8:
(Start: 12 @6483 has 7 MA's), (Start: 22 @6504 has 1 MA's), (25, 6519), (26, 6522), (46, 6675), (47, 6678),

Gene: BronnyJr_8 Start: 6597, Stop: 6959, Start Num: 19
Candidate Starts for BronnyJr_8:
(Start: 19 @6597 has 54 MA's), (45, 6756), (63, 6864), (65, 6873), (73, 6900), (76, 6918),

Gene: Brusacoram_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for Brusacoram_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: Brylie_12 Start: 8234, Stop: 8626, Start Num: 18
Candidate Starts for Brylie_12:
(6, 8132), (Start: 18 @8234 has 13 MA's), (27, 8279), (44, 8420),

Gene: Bunker_8 Start: 6485, Stop: 6868, Start Num: 12
Candidate Starts for Bunker_8:
(Start: 12 @6485 has 7 MA's), (Start: 22 @6506 has 1 MA's), (26, 6524), (46, 6677), (47, 6680), (70, 6788),

Gene: Bunnies_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Bunnies_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: CactusJack_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for CactusJack_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: Camster_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Camster_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: CaptainKirk2_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for CaptainKirk2_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: CarolAnn_8 Start: 6466, Stop: 6858, Start Num: 14
Candidate Starts for CarolAnn_8:
(Start: 14 @6466 has 45 MA's), (44, 6640), (46, 6652), (52, 6694), (67, 6769), (70, 6775), (75, 6808),

Gene: CheeseSpider_8 Start: 6443, Stop: 6835, Start Num: 14
Candidate Starts for CheeseSpider_8:
(Start: 14 @6443 has 45 MA's), (44, 6617), (46, 6629), (52, 6671), (67, 6746), (70, 6752), (75, 6785),

Gene: Chipko_9 Start: 6871, Stop: 7266, Start Num: 13
Candidate Starts for Chipko_9:
(Start: 13 @6871 has 5 MA's), (Start: 22 @6904 has 1 MA's), (Start: 24 @6916 has 1 MA's), (44, 7063), (46, 7075), (49, 7090), (69, 7183),

Gene: Chop_12 Start: 8267, Stop: 8659, Start Num: 18
Candidate Starts for Chop_12:
(Start: 18 @8267 has 13 MA's), (27, 8312),

Gene: Chubbello_8 Start: 6591, Stop: 6953, Start Num: 19
Candidate Starts for Chubbello_8:
(Start: 19 @6591 has 54 MA's), (32, 6660), (45, 6750), (65, 6867), (73, 6894),

Gene: Coriander_9 Start: 6870, Stop: 7265, Start Num: 13
Candidate Starts for Coriander_9:
(1, 6291), (2, 6300), (3, 6423), (Start: 13 @6870 has 5 MA's), (Start: 22 @6903 has 1 MA's), (Start: 24 @6915 has 1 MA's), (44, 7062), (46, 7074), (49, 7089), (70, 7185),

Gene: Daegal_12 Start: 8274, Stop: 8726, Start Num: 17
Candidate Starts for Daegal_12:
(Start: 17 @8274 has 24 MA's), (Start: 19 @8283 has 54 MA's), (27, 8319), (29, 8331), (33, 8349), (36, 8367), (42, 8442), (44, 8454), (49, 8481), (51, 8499), (61, 8556), (66, 8574), (68, 8577), (74, 8607), (79, 8646), (81, 8667), (82, 8694), (84, 8718),

Gene: DeepSoil15_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for DeepSoil15_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: DelRio_13 Start: 8753, Stop: 9136, Start Num: 19
Candidate Starts for DelRio_13:

(Start: 19 @8753 has 54 MA's), (27, 8789), (44, 8930),

Gene: Delian_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Delian_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: Dewey_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Dewey_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: DirtyBoi_9 Start: 6843, Stop: 7238, Start Num: 13
Candidate Starts for DirtyBoi_9:
(Start: 13 @6843 has 5 MA's), (Start: 22 @6876 has 1 MA's), (Start: 24 @6888 has 1 MA's), (44, 7035), (46, 7047), (49, 7062), (69, 7155),

Gene: Dmitri_9 Start: 6852, Stop: 7247, Start Num: 13
Candidate Starts for Dmitri_9:
(Start: 13 @6852 has 5 MA's), (Start: 22 @6885 has 1 MA's), (Start: 24 @6897 has 1 MA's), (44, 7044), (46, 7056), (49, 7071), (69, 7164),

Gene: Doggs_8 Start: 6567, Stop: 6962, Start Num: 13
Candidate Starts for Doggs_8:
(1, 5988), (2, 5997), (3, 6120), (Start: 13 @6567 has 5 MA's), (Start: 22 @6600 has 1 MA's), (Start: 24 @6612 has 1 MA's), (44, 6759), (46, 6771), (49, 6786), (70, 6882),

Gene: Donovan_8 Start: 6594, Stop: 6956, Start Num: 19
Candidate Starts for Donovan_8:
(Start: 19 @6594 has 54 MA's), (45, 6753), (60, 6846), (63, 6861), (65, 6870), (73, 6897), (76, 6915),

Gene: DumpsterDude_9 Start: 6975, Stop: 7367, Start Num: 20
Candidate Starts for DumpsterDude_9:
(Start: 20 @6975 has 6 MA's), (30, 7020), (40, 7131), (44, 7149),

Gene: Dynamo_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Dynamo_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Ein37_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Ein37_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Etoile_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Etoile_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Evanesce_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Evanesce_11:

(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Eyes_8 Start: 6492, Stop: 6875, Start Num: 12
Candidate Starts for Eyes_8:
(Start: 12 @6492 has 7 MA's), (Start: 22 @6513 has 1 MA's), (25, 6528), (26, 6531), (46, 6684), (47, 6687), (70, 6795),

Gene: Fairfaxidum_8 Start: 6551, Stop: 6937, Start Num: 14
Candidate Starts for Fairfaxidum_8:
(Start: 14 @6551 has 45 MA's), (27, 6605), (44, 6719), (46, 6731), (47, 6734), (75, 6887),

Gene: Fenry_8 Start: 6576, Stop: 6968, Start Num: 14
Candidate Starts for Fenry_8:
(9, 6492), (Start: 14 @6576 has 45 MA's), (26, 6624), (38, 6711), (44, 6750), (52, 6804), (58, 6834), (70, 6885), (75, 6918),

Gene: Finkle_8 Start: 6251, Stop: 6634, Start Num: 15
Candidate Starts for Finkle_8:
(Start: 15 @6251 has 2 MA's), (23, 6281), (28, 6311), (47, 6437), (77, 6596),

Gene: FirstPlacePfu_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for FirstPlacePfu_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Fishburne_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Fishburne_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Forge_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Forge_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Francois_12 Start: 8248, Stop: 8640, Start Num: 18
Candidate Starts for Francois_12:
(6, 8146), (Start: 18 @8248 has 13 MA's), (27, 8293),

Gene: Frokostdame_8 Start: 6562, Stop: 6954, Start Num: 14
Candidate Starts for Frokostdame_8:
(9, 6478), (Start: 14 @6562 has 45 MA's), (44, 6736), (46, 6748), (52, 6790), (67, 6865), (70, 6871), (75, 6904),

Gene: GEazy_8 Start: 6494, Stop: 6877, Start Num: 12
Candidate Starts for GEazy_8:
(Start: 12 @6494 has 7 MA's), (26, 6533), (46, 6686), (47, 6689), (70, 6797),

Gene: GaloreK_8 Start: 6595, Stop: 6957, Start Num: 19
Candidate Starts for GaloreK_8:
(Start: 19 @6595 has 54 MA's), (45, 6754), (63, 6862), (65, 6871), (73, 6898), (76, 6916),

Gene: Gambino_8 Start: 6443, Stop: 6835, Start Num: 14
Candidate Starts for Gambino_8:
(9, 6359), (Start: 14 @6443 has 45 MA's), (44, 6617), (46, 6629), (52, 6671), (67, 6746), (70, 6752), (75, 6785),

Gene: Gancho_10 Start: 7683, Stop: 8135, Start Num: 17
Candidate Starts for Gancho_10:
(Start: 17 @7683 has 24 MA's), (Start: 19 @7692 has 54 MA's), (27, 7728), (29, 7740), (33, 7758), (36, 7776), (42, 7851), (44, 7863), (49, 7890), (51, 7908), (61, 7965), (66, 7983), (68, 7986), (74, 8016), (79, 8055), (81, 8076), (82, 8103), (84, 8127),

Gene: Gavriela_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for Gavriela_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: Giles_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Giles_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Glaske_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for Glaske_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: GrandSlam_12 Start: 8267, Stop: 8659, Start Num: 18
Candidate Starts for GrandSlam_12:
(Start: 18 @8267 has 13 MA's), (27, 8312),

Gene: Gravaillia_11 Start: 7716, Stop: 8168, Start Num: 17
Candidate Starts for Gravaillia_11:
(Start: 17 @7716 has 24 MA's), (Start: 19 @7725 has 54 MA's), (27, 7761), (29, 7773), (33, 7791), (36, 7809), (42, 7884), (44, 7896), (49, 7923), (51, 7941), (61, 7998), (66, 8016), (68, 8019), (74, 8049), (79, 8088), (81, 8109), (82, 8136), (84, 8160),

Gene: GreaseLightnin_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for GreaseLightnin_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Guacamole_8 Start: 6571, Stop: 6963, Start Num: 14
Candidate Starts for Guacamole_8:
(9, 6487), (Start: 14 @6571 has 45 MA's), (26, 6619), (38, 6706), (44, 6745), (52, 6799), (58, 6829), (67, 6874), (70, 6880), (75, 6913),

Gene: HH92_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for HH92_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: HUHilltop_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for HUHilltop_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Hadrien_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Hadrien_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Hail_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Hail_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Hamood_12 Start: 8267, Stop: 8659, Start Num: 18
Candidate Starts for Hamood_12:
(Start: 18 @8267 has 13 MA's), (27, 8312),

Gene: HannahD_8 Start: 6494, Stop: 6877, Start Num: 12
Candidate Starts for HannahD_8:
(Start: 12 @6494 has 7 MA's), (26, 6533), (46, 6686), (47, 6689), (70, 6797),

Gene: Hedwig_9 Start: 6888, Stop: 7238, Start Num: 24
Candidate Starts for Hedwig_9:
(Start: 13 @6843 has 5 MA's), (Start: 22 @6876 has 1 MA's), (Start: 24 @6888 has 1 MA's), (44, 7035), (46, 7047), (49, 7062), (69, 7155), (70, 7158),

Gene: Hitter_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Hitter_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (70, 6876), (75, 6909),

Gene: Jalammah_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Jalammah_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (70, 6876), (75, 6909),

Gene: JasperJr_8 Start: 6571, Stop: 6963, Start Num: 14
Candidate Starts for JasperJr_8:
(9, 6487), (Start: 14 @6571 has 45 MA's), (26, 6619), (38, 6706), (44, 6745), (52, 6799), (58, 6829), (67, 6874), (70, 6880), (75, 6913),

Gene: Jebeks_8 Start: 6594, Stop: 6956, Start Num: 19
Candidate Starts for Jebeks_8:
(Start: 19 @6594 has 54 MA's), (45, 6753), (63, 6861), (65, 6870), (73, 6897), (76, 6915),

Gene: Jecs_8 Start: 6817, Stop: 7212, Start Num: 16
Candidate Starts for Jecs_8:
(Start: 16 @6817 has 4 MA's), (Start: 22 @6838 has 1 MA's), (46, 7009), (70, 7120), (80, 7192),

Gene: JuJu_8 Start: 6492, Stop: 6884, Start Num: 14
Candidate Starts for JuJu_8:
(Start: 14 @6492 has 45 MA's), (33, 6576), (44, 6666), (46, 6678), (52, 6720), (58, 6750), (75, 6834),

Gene: Jung_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for Jung_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: Juniormint_8 Start: 6597, Stop: 6959, Start Num: 19
Candidate Starts for Juniormint_8:
(Start: 19 @6597 has 54 MA's), (45, 6756), (63, 6864), (65, 6873), (73, 6900), (76, 6918),

Gene: JustASigh_8 Start: 7097, Stop: 7558, Start Num: 17
Candidate Starts for JustASigh_8:
(11, 7076), (Start: 17 @7097 has 24 MA's), (27, 7142), (36, 7196), (53, 7340), (54, 7349), (56, 7352),

Gene: KappaFarmDelta_8 Start: 6605, Stop: 6997, Start Num: 14
Candidate Starts for KappaFarmDelta_8:
(9, 6521), (10, 6548), (Start: 14 @6605 has 45 MA's), (26, 6653), (38, 6740), (44, 6779), (48, 6803), (52, 6833), (58, 6863), (62, 6890), (70, 6914), (75, 6947),

Gene: Kari_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Kari_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Kiko_9 Start: 6686, Stop: 7078, Start Num: 13
Candidate Starts for Kiko_9:
(Start: 13 @6686 has 5 MA's), (23, 6722), (46, 6887), (47, 6890), (70, 6998),

Gene: KilKor_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for KilKor_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: Kinbote_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Kinbote_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Ksquared_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Ksquared_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Langerak_8 Start: 6594, Stop: 6956, Start Num: 19
Candidate Starts for Langerak_8:
(Start: 19 @6594 has 54 MA's), (45, 6753), (63, 6861), (65, 6870), (73, 6897), (76, 6915),

Gene: LilHazelnut_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for LilHazelnut_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Luke_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Luke_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68,

8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Luna22_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Luna22_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Lysidious_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Lysidious_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: MagicMan_8 Start: 6823, Stop: 7218, Start Num: 16
Candidate Starts for MagicMan_8:
(Start: 16 @6823 has 4 MA's), (Start: 22 @6844 has 1 MA's), (46, 7015), (70, 7126),

Gene: Majeke_8 Start: 6594, Stop: 6956, Start Num: 19
Candidate Starts for Majeke_8:
(Start: 19 @6594 has 54 MA's), (45, 6753), (63, 6861), (65, 6870), (73, 6897), (76, 6915),

Gene: MakCheese_8 Start: 6782, Stop: 7174, Start Num: 20
Candidate Starts for MakCheese_8:
(Start: 20 @6782 has 6 MA's), (30, 6827), (44, 6956), (78, 7145),

Gene: Malachai_8 Start: 6570, Stop: 6962, Start Num: 14
Candidate Starts for Malachai_8:
(9, 6486), (10, 6513), (Start: 14 @6570 has 45 MA's), (26, 6618), (38, 6705), (44, 6744), (52, 6798), (58, 6828), (67, 6873), (70, 6879), (75, 6912),

Gene: Malibo_8 Start: 6765, Stop: 7157, Start Num: 20
Candidate Starts for Malibo_8:
(Start: 20 @6765 has 6 MA's), (30, 6810), (44, 6939), (78, 7128),

Gene: Malithi_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Malithi_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Mangethe_8 Start: 6594, Stop: 6956, Start Num: 19
Candidate Starts for Mangethe_8:
(Start: 19 @6594 has 54 MA's), (45, 6753), (63, 6861), (65, 6870), (73, 6897), (76, 6915),

Gene: Megiddo_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for Megiddo_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: Melba_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Melba_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: Mellie_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Mellie_8:

(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: MintFen_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for MintFen_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: MissRona_8 Start: 6443, Stop: 6835, Start Num: 14
Candidate Starts for MissRona_8:
(9, 6359), (Start: 14 @6443 has 45 MA's), (44, 6617), (46, 6629), (52, 6671), (67, 6746), (70, 6752), (75, 6785),

Gene: Moonflower_9 Start: 6920, Stop: 7270, Start Num: 24
Candidate Starts for Moonflower_9:
(Start: 13 @6875 has 5 MA's), (Start: 22 @6908 has 1 MA's), (Start: 24 @6920 has 1 MA's), (44, 7067), (46, 7079), (49, 7094), (70, 7190),

Gene: Mulch_12 Start: 8234, Stop: 8626, Start Num: 18
Candidate Starts for Mulch_12:
(6, 8132), (Start: 18 @8234 has 13 MA's), (27, 8279), (44, 8420),

Gene: Murp_8 Start: 6608, Stop: 7000, Start Num: 14
Candidate Starts for Murp_8:
(9, 6524), (10, 6551), (Start: 14 @6608 has 45 MA's), (26, 6656), (38, 6743), (44, 6782), (52, 6836), (67, 6911), (70, 6917), (75, 6950),

Gene: NaLuna_8 Start: 6494, Stop: 6877, Start Num: 12
Candidate Starts for NaLuna_8:
(Start: 12 @6494 has 7 MA's), (26, 6533), (46, 6686), (47, 6689), (70, 6797),

Gene: Nadeem_12 Start: 8234, Stop: 8626, Start Num: 18
Candidate Starts for Nadeem_12:
(6, 8132), (Start: 18 @8234 has 13 MA's), (27, 8279), (44, 8420),

Gene: NancyRae_12 Start: 8234, Stop: 8626, Start Num: 18
Candidate Starts for NancyRae_12:
(6, 8132), (Start: 18 @8234 has 13 MA's), (27, 8279), (44, 8420),

Gene: Nazo_8 Start: 6561, Stop: 6923, Start Num: 19
Candidate Starts for Nazo_8:
(Start: 19 @6561 has 54 MA's), (32, 6630), (45, 6720), (46, 6729), (59, 6810), (73, 6864), (76, 6882),

Gene: Necropolis_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Necropolis_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: NovoPizza_9 Start: 8112, Stop: 8564, Start Num: 15
Candidate Starts for NovoPizza_9:
(Start: 15 @8112 has 2 MA's), (Start: 19 @8124 has 54 MA's), (23, 8142), (27, 8160), (34, 8202), (42, 8280), (44, 8292), (79, 8484), (83, 8535),

Gene: OBUpride_11 Start: 7977, Stop: 8429, Start Num: 17

Candidate Starts for OBUpride_11:
(Start: 17 @7977 has 24 MA's), (Start: 19 @7986 has 54 MA's), (23, 8004), (27, 8022), (29, 8034), (33, 8052), (34, 8064), (36, 8070), (42, 8145), (44, 8157), (49, 8184), (51, 8202), (61, 8259), (66, 8277), (68, 8280), (74, 8310), (79, 8349), (81, 8370), (82, 8397), (84, 8421),

Gene: Obliviate_8 Start: 6591, Stop: 6983, Start Num: 14
Candidate Starts for Obliviate_8:
(9, 6507), (Start: 14 @6591 has 45 MA's), (26, 6639), (38, 6726), (44, 6765), (52, 6819), (58, 6849), (67, 6894), (70, 6900), (75, 6933),

Gene: Opie_8 Start: 6838, Stop: 7233, Start Num: 16
Candidate Starts for Opie_8:
(Start: 16 @6838 has 4 MA's), (Start: 22 @6859 has 1 MA's), (46, 7030), (80, 7213),

Gene: PCoral7_8 Start: 6551, Stop: 6937, Start Num: 14
Candidate Starts for PCoral7_8:
(Start: 14 @6551 has 45 MA's), (27, 6605), (44, 6719), (46, 6731), (47, 6734), (75, 6887),

Gene: Parada_12 Start: 8234, Stop: 8626, Start Num: 18
Candidate Starts for Parada_12:
(6, 8132), (Start: 18 @8234 has 13 MA's), (27, 8279), (44, 8420),

Gene: PatriciaStar_8 Start: 6521, Stop: 6883, Start Num: 22
Candidate Starts for PatriciaStar_8:
(Start: 13 @6488 has 5 MA's), (Start: 22 @6521 has 1 MA's), (Start: 24 @6533 has 1 MA's), (44, 6680), (46, 6692), (49, 6707), (69, 6800),

Gene: PeanutPie_8 Start: 6583, Stop: 6945, Start Num: 19
Candidate Starts for PeanutPie_8:
(Start: 19 @6583 has 54 MA's), (32, 6652), (45, 6742), (65, 6859), (73, 6886),

Gene: Petra_8 Start: 6473, Stop: 6865, Start Num: 14
Candidate Starts for Petra_8:
(9, 6389), (Start: 14 @6473 has 45 MA's), (44, 6647), (46, 6659), (52, 6701), (67, 6776), (70, 6782), (75, 6815),

Gene: Phalm_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for Phalm_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: Phayonce_8 Start: 6581, Stop: 6943, Start Num: 19
Candidate Starts for Phayonce_8:
(Start: 19 @6581 has 54 MA's), (32, 6650), (45, 6740), (46, 6749), (59, 6830), (73, 6884), (76, 6902),

Gene: Phegasus_8 Start: 6594, Stop: 6956, Start Num: 19
Candidate Starts for Phegasus_8:
(Start: 19 @6594 has 54 MA's), (45, 6753), (63, 6861), (65, 6870), (73, 6897), (76, 6915),

Gene: Phineas_8 Start: 6580, Stop: 6942, Start Num: 19
Candidate Starts for Phineas_8:
(Start: 19 @6580 has 54 MA's), (32, 6649), (45, 6739), (65, 6856), (73, 6883),

Gene: PhrostedPhlake_8 Start: 6648, Stop: 7040, Start Num: 14

Candidate Starts for PhrostedPhlake_8:
(9, 6564), (Start: 14 @6648 has 45 MA's), (33, 6732), (44, 6822), (46, 6834), (52, 6876), (58, 6906), (67, 6951), (69, 6954), (70, 6957), (75, 6990),

Gene: Pimento_13 Start: 8447, Stop: 8830, Start Num: 19
Candidate Starts for Pimento_13:
(Start: 19 @8447 has 54 MA's), (27, 8483), (44, 8624),

Gene: Pipp_8 Start: 6591, Stop: 6983, Start Num: 14
Candidate Starts for Pipp_8:
(9, 6507), (Start: 14 @6591 has 45 MA's), (26, 6639), (38, 6726), (44, 6765), (52, 6819), (58, 6849), (67, 6894), (70, 6900), (75, 6933),

Gene: Polkaroo_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Polkaroo_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: PrincePatrick_8 Start: 6552, Stop: 6938, Start Num: 14
Candidate Starts for PrincePatrick_8:
(Start: 14 @6552 has 45 MA's), (27, 6606), (44, 6720), (46, 6732), (47, 6735), (75, 6888),

Gene: Purky_8 Start: 6597, Stop: 6959, Start Num: 19
Candidate Starts for Purky_8:
(Start: 19 @6597 has 54 MA's), (45, 6756), (59, 6846), (63, 6864), (65, 6873), (73, 6900), (76, 6918),

Gene: Pygmy_8 Start: 6580, Stop: 6942, Start Num: 19
Candidate Starts for Pygmy_8:
(Start: 19 @6580 has 54 MA's), (32, 6649), (45, 6739), (65, 6856), (73, 6883),

Gene: REQ2_08 Start: 6272, Stop: 6640, Start Num: 19
Candidate Starts for REQ2_08:
(Start: 19 @6272 has 54 MA's), (21, 6278), (35, 6353), (50, 6476), (57, 6524),

Gene: RayTheFireFly_9 Start: 6909, Stop: 7271, Start Num: 22
Candidate Starts for RayTheFireFly_9:
(Start: 13 @6876 has 5 MA's), (Start: 22 @6909 has 1 MA's), (Start: 24 @6921 has 1 MA's), (44, 7068), (46, 7080), (49, 7095), (70, 7191),

Gene: Ruthy_9 Start: 7046, Stop: 7438, Start Num: 20
Candidate Starts for Ruthy_9:
(Start: 20 @7046 has 6 MA's), (30, 7091), (40, 7202), (44, 7220),

Gene: Samba_8 Start: 6568, Stop: 6960, Start Num: 14
Candidate Starts for Samba_8:
(9, 6484), (Start: 14 @6568 has 45 MA's), (26, 6616), (38, 6703), (44, 6742), (52, 6796), (75, 6910),

Gene: Schnabeltier_8 Start: 6824, Stop: 7219, Start Num: 16
Candidate Starts for Schnabeltier_8:
(Start: 16 @6824 has 4 MA's), (Start: 22 @6845 has 1 MA's), (46, 7016), (70, 7127),

Gene: Shipwreck_8 Start: 6580, Stop: 6942, Start Num: 19
Candidate Starts for Shipwreck_8:
(Start: 19 @6580 has 54 MA's), (32, 6649), (45, 6739), (65, 6856), (73, 6883),

Gene: Soilmate_8 Start: 6466, Stop: 6858, Start Num: 14
Candidate Starts for Soilmate_8:
(Start: 14 @6466 has 45 MA's), (44, 6640), (46, 6652), (52, 6694), (67, 6769), (70, 6775), (75, 6808),

Gene: Sonah_8 Start: 6594, Stop: 6956, Start Num: 19
Candidate Starts for Sonah_8:
(Start: 19 @6594 has 54 MA's), (45, 6753), (60, 6846), (63, 6861), (65, 6870), (73, 6897), (76, 6915),

Gene: Sprinklemunch_8 Start: 6822, Stop: 7214, Start Num: 20
Candidate Starts for Sprinklemunch_8:
(Start: 20 @6822 has 6 MA's), (30, 6867), (44, 6996), (75, 7164), (78, 7185),

Gene: StevieRay_8 Start: 6583, Stop: 6945, Start Num: 19
Candidate Starts for StevieRay_8:
(Start: 19 @6583 has 54 MA's), (32, 6652), (45, 6742), (65, 6859), (73, 6886),

Gene: StressBall_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for StressBall_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: SussRoloMann_12 Start: 8234, Stop: 8626, Start Num: 18
Candidate Starts for SussRoloMann_12:
(6, 8132), (Start: 18 @8234 has 13 MA's), (27, 8279), (44, 8420),

Gene: TaronosaurasRx_8 Start: 6834, Stop: 7232, Start Num: 16
Candidate Starts for TaronosaurasRx_8:
(Start: 16 @6834 has 4 MA's), (Start: 22 @6858 has 1 MA's), (44, 7017), (46, 7029), (70, 7140), (80, 7212),

Gene: Techage_8 Start: 6597, Stop: 6959, Start Num: 19
Candidate Starts for Techage_8:
(Start: 19 @6597 has 54 MA's), (45, 6756), (63, 6864), (65, 6873), (73, 6900), (76, 6918),

Gene: Thespis_8 Start: 6579, Stop: 6941, Start Num: 19
Candidate Starts for Thespis_8:
(Start: 19 @6579 has 54 MA's), (32, 6648), (45, 6738), (65, 6855), (73, 6882),

Gene: ThulaThula_8 Start: 6626, Stop: 6988, Start Num: 19
Candidate Starts for ThulaThula_8:
(Start: 19 @6626 has 54 MA's), (32, 6695), (45, 6785), (46, 6794), (59, 6875), (73, 6929), (76, 6947),

Gene: Toast_8 Start: 6551, Stop: 6937, Start Num: 14
Candidate Starts for Toast_8:
(Start: 14 @6551 has 45 MA's), (27, 6605), (44, 6719), (46, 6731), (47, 6734), (75, 6887),

Gene: Tortellini_8 Start: 6539, Stop: 6901, Start Num: 19
Candidate Starts for Tortellini_8:
(Start: 19 @6539 has 54 MA's), (43, 6692), (45, 6698), (59, 6788), (63, 6806), (65, 6815), (73, 6842), (76, 6860),

Gene: Ubuntu_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Ubuntu_11:

(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: UmaThurman_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for UmaThurman_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (26, 6615), (38, 6702), (44, 6741), (52, 6795), (75, 6909),

Gene: Utz_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Utz_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: Vasanti_8 Start: 6132, Stop: 6515, Start Num: 20
Candidate Starts for Vasanti_8:
(Start: 20 @6132 has 6 MA's), (26, 6159), (37, 6219), (44, 6300), (46, 6312), (52, 6354), (71, 6447),

Gene: Venti_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Venti_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Vidya_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Vidya_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Walrus_8 Start: 6479, Stop: 6871, Start Num: 14
Candidate Starts for Walrus_8:
(Start: 14 @6479 has 45 MA's), (38, 6614), (44, 6653), (62, 6764), (75, 6821),

Gene: Webster2_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Webster2_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Weirdo19_9 Start: 6915, Stop: 7337, Start Num: 17
Candidate Starts for Weirdo19_9:
(8, 6825), (Start: 17 @6915 has 24 MA's), (31, 6978), (36, 7011), (41, 7083), (46, 7110), (47, 7113), (48, 7122), (53, 7152), (72, 7248),

Gene: Whack_8 Start: 6270, Stop: 6635, Start Num: 19
Candidate Starts for Whack_8:
(4, 6051), (5, 6072), (7, 6162), (Start: 19 @6270 has 54 MA's), (39, 6396), (44, 6426), (45, 6429), (57, 6507), (64, 6546), (65, 6549),

Gene: WheatThin_12 Start: 8234, Stop: 8626, Start Num: 18
Candidate Starts for WheatThin_12:
(6, 8132), (Start: 18 @8234 has 13 MA's), (27, 8279), (44, 8420),

Gene: William_8 Start: 6566, Stop: 6952, Start Num: 14
Candidate Starts for William_8:
(Start: 14 @6566 has 45 MA's), (27, 6620), (44, 6734), (46, 6746), (47, 6749), (75, 6902),

Gene: Willsammy_8 Start: 6582, Stop: 6944, Start Num: 19
Candidate Starts for Willsammy_8:
(Start: 19 @6582 has 54 MA's), (32, 6651), (45, 6741), (65, 6858), (73, 6885),

Gene: Wishmaker_11 Start: 7983, Stop: 8435, Start Num: 17
Candidate Starts for Wishmaker_11:
(Start: 17 @7983 has 24 MA's), (Start: 19 @7992 has 54 MA's), (23, 8010), (27, 8028), (29, 8040), (33, 8058), (34, 8070), (36, 8076), (42, 8151), (44, 8163), (49, 8190), (51, 8208), (61, 8265), (66, 8283), (68, 8286), (74, 8316), (79, 8355), (81, 8376), (82, 8403), (84, 8427),

Gene: Wisp_8 Start: 6567, Stop: 6959, Start Num: 14
Candidate Starts for Wisp_8:
(9, 6483), (Start: 14 @6567 has 45 MA's), (38, 6702), (44, 6741), (52, 6795), (58, 6825), (67, 6870), (70, 6876), (75, 6909),

Gene: Wocket_8 Start: 6632, Stop: 7024, Start Num: 14
Candidate Starts for Wocket_8:
(9, 6548), (Start: 14 @6632 has 45 MA's), (Start: 22 @6662 has 1 MA's), (26, 6680), (38, 6767), (44, 6806), (48, 6830), (52, 6860), (58, 6890), (67, 6935), (70, 6941), (75, 6974),

Gene: Xavia_8 Start: 6594, Stop: 6956, Start Num: 19
Candidate Starts for Xavia_8:
(Start: 19 @6594 has 54 MA's), (32, 6663), (45, 6753), (65, 6870), (73, 6897),

Gene: Yinzer_8 Start: 6155, Stop: 6511, Start Num: 26
Candidate Starts for Yinzer_8:
(Start: 20 @6128 has 6 MA's), (26, 6155), (37, 6215), (44, 6296), (46, 6308), (52, 6350), (55, 6365), (71, 6443),

Gene: ZAYM_8 Start: 6827, Stop: 7225, Start Num: 16
Candidate Starts for ZAYM_8:
(Start: 16 @6827 has 4 MA's), (Start: 22 @6851 has 1 MA's), (44, 7010), (46, 7022), (70, 7133),

Gene: Zarbodnamra_8 Start: 6566, Stop: 6958, Start Num: 14
Candidate Starts for Zarbodnamra_8:
(9, 6482), (Start: 14 @6566 has 45 MA's), (26, 6614), (38, 6701), (44, 6740), (52, 6794), (58, 6824), (67, 6869), (70, 6875), (75, 6908),

Gene: ZiggyZoo_8 Start: 6591, Stop: 6983, Start Num: 14
Candidate Starts for ZiggyZoo_8:
(9, 6507), (Start: 14 @6591 has 45 MA's), (26, 6639), (38, 6726), (44, 6765), (52, 6819), (58, 6849), (67, 6894), (70, 6900), (75, 6933),

Gene: Zilizebeth_8 Start: 6592, Stop: 6954, Start Num: 19
Candidate Starts for Zilizebeth_8:
(Start: 19 @6592 has 54 MA's), (32, 6661), (45, 6751), (65, 6868), (73, 6895),

Gene: Zilla_8 Start: 6619, Stop: 7011, Start Num: 14
Candidate Starts for Zilla_8:
(9, 6535), (Start: 14 @6619 has 45 MA's), (27, 6673), (38, 6754), (44, 6793), (52, 6847), (75, 6961),

Gene: Zodiariah_8 Start: 6772, Stop: 7164, Start Num: 20
Candidate Starts for Zodiariah_8:

(Start: 20 @6772 has 6 MA's), (30, 6817), (44, 6946), (78, 7135),