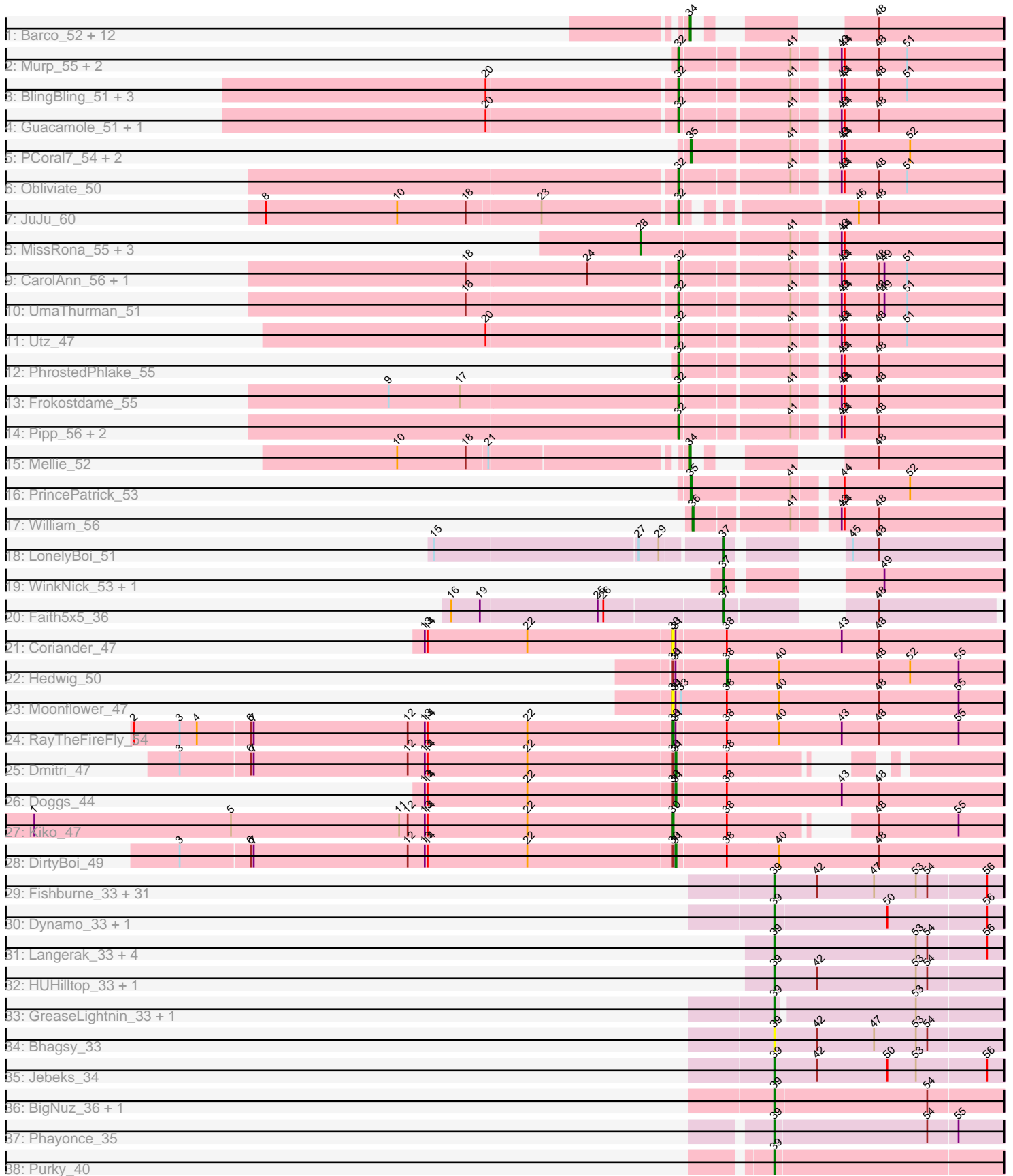


Pham 224450



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 224450 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224450 has 104 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Barco_52, Jalammah_57, Hitter_54, Fenry_52, Begonia_52, CaptainKirk2_54, Zarbodnamra_53, Wisp_53, Malachai_52, MintFen_54, Samba_53, ZiggyZoo_54, Delian_57
- Track 2 : Murp_55, KappaFarmDelta_55, Wocket_54
- Track 3 : BlingBling_51, Lysidious_55, Archis_57, Melba_53
- Track 4 : Guacamole_51, JasperJr_51
- Track 5 : PCoral7_54, Fairfaxidum_55, Toast_54
- Track 6 : Obliviate_50
- Track 7 : JuJu_60
- Track 8 : MissRona_55, Gambino_57, Azula_55, Blueberry_54
- Track 9 : CarolAnn_56, Blino_57
- Track 10 : UmaThurman_51
- Track 11 : Utz_47
- Track 12 : PhrostedPhlake_55
- Track 13 : Frokostdame_55
- Track 14 : Pipp_56, Petra_50, Walrus_52
- Track 15 : Mellie_52
- Track 16 : PrincePatrick_53
- Track 17 : William_56
- Track 18 : LonelyBoi_51
- Track 19 : WinkNick_53, Dolores_52
- Track 20 : Faith5x5_36
- Track 21 : Coriander_47
- Track 22 : Hedwig_50
- Track 23 : Moonflower_47
- Track 24 : RayTheFireFly_54
- Track 25 : Dmitri_47
- Track 26 : Doggs_44
- Track 27 : Kiko_47
- Track 28 : DirtyBoi_49
- Track 29 : Fishburne_33, Polkaroo_33, Brusacoram_33, Willsammy_32, Atcoo_33, Bartholomew_32, Venti_33, Gavriela_33, Phalm_33, Mangethe_33, Majeke_33, Jung_32, Vidya_33, Megiddo_33, Necropolis_33, Camster_33, Kari_33, FirstPlacePfu_33, Juniormint_33, KilKor_33, Etoile_33, Techage_33, Ksquared_33, Bunnies_33, Malithi_33, Sonah_33, Thespis_33, StressBall_33, CactusJack_33, Zilizabeth_33, Glaske_33, Phegasus_33
- Track 30 : Dynamo_33, Phineas_33

- Track 31 : Langerak_33, Shipwreck_35, Pygmy_35, Arib1_33, Bogie_35
- Track 32 : HUHilltop_33, Donovan_33
- Track 33 : GreaseLightnin_33, StevieRay_33
- Track 34 : Bhagsy_33
- Track 35 : Jebeks_34
- Track 36 : BigNuz_36, Nazo_37
- Track 37 : Phayonce_35
- Track 38 : Purky_40

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

The start number called the most often in the published annotations is 39, it was called in 44 of the 96 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arib1_33, Atcoo_33, Bartholomew_32, Bhagsy_33, BigNuz_36, Bogie_35, Brusacoram_33, Bunnies_33, CactusJack_33, Camster_33, Donovan_33, Dynamo_33, Etoile_33, FirstPlacePfu_33, Fishburne_33, Gavriela_33, Glaske_33, GreaseLightnin_33, HUHilltop_33, Jebeks_34, Jung_32, Juniormint_33, Kari_33, KilKor_33, Ksquared_33, Langerak_33, Majeke_33, Malithi_33, Mangethe_33, Megiddo_33, Nazo_37, Necropolis_33, Phalm_33, Phayonce_35, Pegasus_33, Phineas_33, Polkaro_33, Purky_40, Pygmy_35, Shipwreck_35, Sonah_33, StevieRay_33, StressBall_33, Techage_33, Thespis_33, Venti_33, Vidya_33, Willsammy_32, Zilizebeth_33,

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

-

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

- Archis_57, Azula_55, Barco_52, Begonia_52, BlingBling_51, Blino_57, Blueberry_54, CaptainKirk2_54, CarolAnn_56, Coriander_47, Delian_57, DirtyBoi_49, Dmitri_47, Doggs_44, Dolores_52, Fairfaxidum_55, Faith5x5_36, Fenry_52, Frokostdame_55, Gambino_57, Guacamole_51, Hedwig_50, Hitter_54, Jalammah_57, JasperJr_51, JuJu_60, KappaFarmDelta_55, Kiko_47, LonelyBoi_51, Lysidious_55, Malachai_52, Melba_53, Mellie_52, MintFen_54, MissRona_55, Moonflower_47, Murp_55, Oblivate_50, PCoral7_54, Petra_50, PhrostedPhlake_55, Pipp_56, PrincePatrick_53, RayTheFireFly_54, Samba_53, Toast_54, UmaThurman_51, Utz_47, Walrus_52, William_56, WinkNick_53, Wisp_53, Wocket_54, Zarbodnamra_53, ZiggyZoo_54,

Summary by start number:

Start 28:

- Found in 4 of 104 (3.8%) of genes in pham
- Manual Annotations of this start: 4 of 96
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azula_55 (CV), Blueberry_54 (CV), Gambino_57 (CV), MissRona_55 (CV),

Start 30:

- Found in 8 of 104 (7.7%) of genes in pham
- Manual Annotations of this start: 2 of 96
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Coriander_47 (DB), Kiko_47 (DB), Moonflower_47 (DB), RayTheFireFly_54 (DB),

Start 31:

- Found in 7 of 104 (6.7%) of genes in pham
- Manual Annotations of this start: 3 of 96
- Called 42.9% of time when present
- Phage (with cluster) where this start called: DirtyBoi_49 (DB), Dmitri_47 (DB), Doggs_44 (DB),

Start 32:

- Found in 20 of 104 (19.2%) of genes in pham
- Manual Annotations of this start: 20 of 96
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archis_57 (CV), BlingBling_51 (CV), Blino_57 (CV), CarolAnn_56 (CV), Frokostdame_55 (CV), Guacamole_51 (CV), JasperJr_51 (CV), JuJu_60 (CV), KappaFarmDelta_55 (CV), Lysidious_55 (CV), Melba_53 (CV), Murp_55 (CV), Obliviate_50 (CV), Petra_50 (CV), PhrostedPhlake_55 (CV), Pipp_56 (CV), UmaThurman_51 (CV), Utz_47 (CV), Walrus_52 (CV), Wocket_54 (CV),

Start 34:

- Found in 14 of 104 (13.5%) of genes in pham
- Manual Annotations of this start: 13 of 96
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barco_52 (CV), Begonia_52 (CV), CaptainKirk2_54 (CV), Delian_57 (CV), Fenry_52 (CV), Hitter_54 (CV), Jalammah_57 (CV), Malachai_52 (CV), Mellie_52 (CV), MintFen_54 (CV), Samba_53 (CV), Wisp_53 (CV), Zarbodnamra_53 (CV), ZiggyZoo_54 (CV),

Start 35:

- Found in 4 of 104 (3.8%) of genes in pham
- Manual Annotations of this start: 4 of 96
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fairfaxidum_55 (CV), PCoral7_54 (CV), PrincePatrick_53 (CV), Toast_54 (CV),

Start 36:

- Found in 1 of 104 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 96
- Called 100.0% of time when present
- Phage (with cluster) where this start called: William_56 (CV),

Start 37:

- Found in 4 of 104 (3.8%) of genes in pham
- Manual Annotations of this start: 4 of 96
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dolores_52 (CZ4), Faith5x5_36 (CZ6), LonelyBoi_51 (CY), WinkNick_53 (CZ4),

Start 38:

- Found in 8 of 104 (7.7%) of genes in pham
- Manual Annotations of this start: 1 of 96
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Hedwig_50 (DB),

Start 39:

- Found in 49 of 104 (47.1%) of genes in pham
- Manual Annotations of this start: 44 of 96
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arib1_33 (P1), Atcoo_33 (P1), Bartholomew_32 (P1), Bhagsy_33 (P1), BigNuz_36 (P4), Bogie_35 (P1), Brusacoram_33 (P1), Bunnies_33 (P1), CactusJack_33 (P1), Camster_33 (P1), Donovan_33 (P1), Dynamo_33 (P1), Etoile_33 (P1), FirstPlacePfu_33 (P1), Fishburne_33 (P1), Gavriela_33 (P1), Glaske_33 (P1), GreaseLightnin_33 (P1), HUHilltop_33 (P1), Jebeks_34 (P1), Jung_32 (P1), Juniormint_33 (P1), Kari_33 (P1), KilKor_33 (P1), Ksquared_33 (P1), Langerak_33 (P1), Majeke_33 (P1), Malithi_33 (P1), Mangethe_33 (P1), Megiddo_33 (P1), Nazo_37 (P4), Necropolis_33 (P1), Phalm_33 (P1), Phayonce_35 (P5), Phegasus_33 (P1), Phineas_33 (P1), Polkaroo_33 (P1), Purky_40 (P6), Pygmy_35 (P1), Shipwreck_35 (P1), Sonah_33 (P1), StevieRay_33 (P1), StressBall_33 (P1), Techage_33 (P1), Thespi_33 (P1), Venti_33 (P1), Vidya_33 (P1), Willsammy_32 (P1), Zilizebeth_33 (P1),

Summary by clusters:

There are 9 clusters represented in this pham: P1, P6, P4, P5, CZ6, DB, CZ4, CY, CV,

Info for manual annotations of cluster CV:

- Start number 28 was manually annotated 4 times for cluster CV.
- Start number 32 was manually annotated 20 times for cluster CV.
- Start number 34 was manually annotated 13 times for cluster CV.
- Start number 35 was manually annotated 4 times for cluster CV.
- Start number 36 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CY:

- Start number 37 was manually annotated 1 time for cluster CY.

Info for manual annotations of cluster CZ4:

- Start number 37 was manually annotated 2 times for cluster CZ4.

Info for manual annotations of cluster CZ6:

- Start number 37 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster DB:

- Start number 30 was manually annotated 2 times for cluster DB.
- Start number 31 was manually annotated 3 times for cluster DB.
- Start number 38 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster P1:

- Start number 39 was manually annotated 40 times for cluster P1.

Info for manual annotations of cluster P4:

•Start number 39 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

•Start number 39 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

•Start number 39 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: Archis_57 Start: 36449, Stop: 36763, Start Num: 32

Candidate Starts for Archis_57:

(20, 36254), (Start: 32 @36449 has 20 MA's), (41, 36554), (43, 36593), (44, 36596), (48, 36632), (51, 36662),

Gene: Arib1_33 Start: 27712, Stop: 27948, Start Num: 39

Candidate Starts for Arib1_33:

(Start: 39 @27712 has 44 MA's), (53, 27859), (54, 27871), (56, 27931),

Gene: Atcoo_33 Start: 28193, Stop: 28429, Start Num: 39

Candidate Starts for Atcoo_33:

(Start: 39 @28193 has 44 MA's), (42, 28238), (47, 28298), (53, 28340), (54, 28352), (56, 28412),

Gene: Azula_55 Start: 38102, Stop: 38458, Start Num: 28

Candidate Starts for Azula_55:

(Start: 28 @38102 has 4 MA's), (41, 38249), (43, 38288), (44, 38291),

Gene: Barco_52 Start: 35493, Stop: 35723, Start Num: 34

Candidate Starts for Barco_52:

(Start: 34 @35493 has 13 MA's), (48, 35592),

Gene: Bartholomew_32 Start: 27706, Stop: 27942, Start Num: 39

Candidate Starts for Bartholomew_32:

(Start: 39 @27706 has 44 MA's), (42, 27751), (47, 27811), (53, 27853), (54, 27865), (56, 27925),

Gene: Begonia_52 Start: 38032, Stop: 38262, Start Num: 34

Candidate Starts for Begonia_52:

(Start: 34 @38032 has 13 MA's), (48, 38131),

Gene: Bhagsy_33 Start: 27702, Stop: 27938, Start Num: 39

Candidate Starts for Bhagsy_33:

(Start: 39 @27702 has 44 MA's), (42, 27747), (47, 27807), (53, 27849), (54, 27861),

Gene: BigNuz_36 Start: 29834, Stop: 30067, Start Num: 39

Candidate Starts for BigNuz_36:

(Start: 39 @29834 has 44 MA's), (54, 29990),

Gene: BlingBling_51 Start: 36462, Stop: 36776, Start Num: 32

Candidate Starts for BlingBling_51:

(20, 36267), (Start: 32 @36462 has 20 MA's), (41, 36567), (43, 36606), (44, 36609), (48, 36645), (51, 36675),

Gene: Blino_57 Start: 41408, Stop: 41722, Start Num: 32

Candidate Starts for Blino_57:

(18, 41195), (24, 41318), (Start: 32 @41408 has 20 MA's), (41, 41513), (43, 41552), (44, 41555), (48, 41591), (49, 41597), (51, 41621),

Gene: Blueberry_54 Start: 38102, Stop: 38458, Start Num: 28

Candidate Starts for Blueberry_54:

(Start: 28 @38102 has 4 MA's), (41, 38249), (43, 38288), (44, 38291),

Gene: Bogie_35 Start: 29489, Stop: 29725, Start Num: 39

Candidate Starts for Bogie_35:

(Start: 39 @29489 has 44 MA's), (53, 29636), (54, 29648), (56, 29708),

Gene: Brusacoram_33 Start: 27699, Stop: 27935, Start Num: 39

Candidate Starts for Brusacoram_33:

(Start: 39 @27699 has 44 MA's), (42, 27744), (47, 27804), (53, 27846), (54, 27858), (56, 27918),

Gene: Bunnies_33 Start: 27720, Stop: 27956, Start Num: 39

Candidate Starts for Bunnies_33:

(Start: 39 @27720 has 44 MA's), (42, 27765), (47, 27825), (53, 27867), (54, 27879), (56, 27939),

Gene: CactusJack_33 Start: 27963, Stop: 28199, Start Num: 39

Candidate Starts for CactusJack_33:

(Start: 39 @27963 has 44 MA's), (42, 28008), (47, 28068), (53, 28110), (54, 28122), (56, 28182),

Gene: Camster_33 Start: 27736, Stop: 27972, Start Num: 39

Candidate Starts for Camster_33:

(Start: 39 @27736 has 44 MA's), (42, 27781), (47, 27841), (53, 27883), (54, 27895), (56, 27955),

Gene: CaptainKirk2_54 Start: 35741, Stop: 35971, Start Num: 34

Candidate Starts for CaptainKirk2_54:

(Start: 34 @35741 has 13 MA's), (48, 35840),

Gene: CarolAnn_56 Start: 41407, Stop: 41721, Start Num: 32

Candidate Starts for CarolAnn_56:

(18, 41194), (24, 41317), (Start: 32 @41407 has 20 MA's), (41, 41512), (43, 41551), (44, 41554), (48, 41590), (49, 41596), (51, 41620),

Gene: Coriander_47 Start: 34195, Stop: 34536, Start Num: 30

Candidate Starts for Coriander_47:

(13, 33937), (14, 33940), (22, 34045), (Start: 30 @34195 has 2 MA's), (Start: 31 @34198 has 3 MA's), (Start: 38 @34246 has 1 MA's), (43, 34366), (48, 34405),

Gene: Delian_57 Start: 35739, Stop: 35969, Start Num: 34

Candidate Starts for Delian_57:

(Start: 34 @35739 has 13 MA's), (48, 35838),

Gene: DirtyBoi_49 Start: 34236, Stop: 34574, Start Num: 31

Candidate Starts for DirtyBoi_49:

(3, 33720), (6, 33792), (7, 33795), (12, 33957), (13, 33975), (14, 33978), (22, 34083), (Start: 30 @34233 has 2 MA's), (Start: 31 @34236 has 3 MA's), (Start: 38 @34284 has 1 MA's), (40, 34338), (48, 34443),

Gene: Dmitri_47 Start: 35769, Stop: 36026, Start Num: 31
Candidate Starts for Dmitri_47:
(3, 35253), (6, 35325), (7, 35328), (12, 35490), (13, 35508), (14, 35511), (22, 35616), (Start: 30 @35766 has 2 MA's), (Start: 31 @35769 has 3 MA's), (Start: 38 @35817 has 1 MA's),

Gene: Doggs_44 Start: 34926, Stop: 35264, Start Num: 31
Candidate Starts for Doggs_44:
(13, 34665), (14, 34668), (22, 34773), (Start: 30 @34923 has 2 MA's), (Start: 31 @34926 has 3 MA's), (Start: 38 @34974 has 1 MA's), (43, 35094), (48, 35133),

Gene: Dolores_52 Start: 35935, Stop: 36165, Start Num: 37
Candidate Starts for Dolores_52:
(Start: 37 @35935 has 4 MA's), (49, 36040),

Gene: Donovan_33 Start: 27728, Stop: 27964, Start Num: 39
Candidate Starts for Donovan_33:
(Start: 39 @27728 has 44 MA's), (42, 27773), (53, 27875), (54, 27887),

Gene: Dynamo_33 Start: 28117, Stop: 28350, Start Num: 39
Candidate Starts for Dynamo_33:
(Start: 39 @28117 has 44 MA's), (50, 28231), (56, 28333),

Gene: Etoile_33 Start: 27706, Stop: 27942, Start Num: 39
Candidate Starts for Etoile_33:
(Start: 39 @27706 has 44 MA's), (42, 27751), (47, 27811), (53, 27853), (54, 27865), (56, 27925),

Gene: Fairfaxidum_55 Start: 38250, Stop: 38555, Start Num: 35
Candidate Starts for Fairfaxidum_55:
(Start: 35 @38250 has 4 MA's), (41, 38346), (43, 38385), (44, 38388), (52, 38457),

Gene: Faith5x5_36 Start: 28409, Stop: 28639, Start Num: 37
Candidate Starts for Faith5x5_36:
(16, 28133), (19, 28163), (25, 28283), (26, 28289), (Start: 37 @28409 has 4 MA's), (48, 28517),

Gene: Fenry_52 Start: 37237, Stop: 37467, Start Num: 34
Candidate Starts for Fenry_52:
(Start: 34 @37237 has 13 MA's), (48, 37336),

Gene: FirstPlacePfu_33 Start: 27738, Stop: 27974, Start Num: 39
Candidate Starts for FirstPlacePfu_33:
(Start: 39 @27738 has 44 MA's), (42, 27783), (47, 27843), (53, 27885), (54, 27897), (56, 27957),

Gene: Fishburne_33 Start: 27706, Stop: 27942, Start Num: 39
Candidate Starts for Fishburne_33:
(Start: 39 @27706 has 44 MA's), (42, 27751), (47, 27811), (53, 27853), (54, 27865), (56, 27925),

Gene: Frokostdame_55 Start: 37773, Stop: 38087, Start Num: 32
Candidate Starts for Frokostdame_55:
(9, 37473), (17, 37548), (Start: 32 @37773 has 20 MA's), (41, 37878), (43, 37917), (44, 37920), (48, 37956),

Gene: Gambino_57 Start: 38102, Stop: 38458, Start Num: 28

Candidate Starts for Gambino_57:

(Start: 28 @38102 has 4 MA's), (41, 38249), (43, 38288), (44, 38291),

Gene: Gavriela_33 Start: 27963, Stop: 28199, Start Num: 39

Candidate Starts for Gavriela_33:

(Start: 39 @27963 has 44 MA's), (42, 28008), (47, 28068), (53, 28110), (54, 28122), (56, 28182),

Gene: Glaske_33 Start: 27963, Stop: 28199, Start Num: 39

Candidate Starts for Glaske_33:

(Start: 39 @27963 has 44 MA's), (42, 28008), (47, 28068), (53, 28110), (54, 28122), (56, 28182),

Gene: GreaseLightnin_33 Start: 27955, Stop: 28182, Start Num: 39

Candidate Starts for GreaseLightnin_33:

(Start: 39 @27955 has 44 MA's), (53, 28093),

Gene: Guacamole_51 Start: 35884, Stop: 36198, Start Num: 32

Candidate Starts for Guacamole_51:

(20, 35689), (Start: 32 @35884 has 20 MA's), (41, 35989), (43, 36028), (44, 36031), (48, 36067),

Gene: HUHilltop_33 Start: 27739, Stop: 27975, Start Num: 39

Candidate Starts for HUHilltop_33:

(Start: 39 @27739 has 44 MA's), (42, 27784), (53, 27886), (54, 27898),

Gene: Hedwig_50 Start: 34705, Stop: 34995, Start Num: 38

Candidate Starts for Hedwig_50:

(Start: 30 @34654 has 2 MA's), (Start: 31 @34657 has 3 MA's), (Start: 38 @34705 has 1 MA's), (40, 34759), (48, 34864), (52, 34897), (55, 34948),

Gene: Hitter_54 Start: 35535, Stop: 35765, Start Num: 34

Candidate Starts for Hitter_54:

(Start: 34 @35535 has 13 MA's), (48, 35634),

Gene: Jalammah_57 Start: 38538, Stop: 38768, Start Num: 34

Candidate Starts for Jalammah_57:

(Start: 34 @38538 has 13 MA's), (48, 38637),

Gene: JasperJr_51 Start: 35884, Stop: 36198, Start Num: 32

Candidate Starts for JasperJr_51:

(20, 35689), (Start: 32 @35884 has 20 MA's), (41, 35989), (43, 36028), (44, 36031), (48, 36067),

Gene: Jebeks_34 Start: 27691, Stop: 27927, Start Num: 39

Candidate Starts for Jebeks_34:

(Start: 39 @27691 has 44 MA's), (42, 27736), (50, 27808), (53, 27838), (56, 27910),

Gene: JuJu_60 Start: 39886, Stop: 40185, Start Num: 32

Candidate Starts for JuJu_60:

(8, 39463), (10, 39601), (18, 39673), (23, 39748), (Start: 32 @39886 has 20 MA's), (46, 40033), (48, 40054),

Gene: Jung_32 Start: 27670, Stop: 27906, Start Num: 39

Candidate Starts for Jung_32:

(Start: 39 @27670 has 44 MA's), (42, 27715), (47, 27775), (53, 27817), (54, 27829), (56, 27889),

Gene: Juniormint_33 Start: 27742, Stop: 27978, Start Num: 39

Candidate Starts for Juniormint_33:

(Start: 39 @27742 has 44 MA's), (42, 27787), (47, 27847), (53, 27889), (54, 27901), (56, 27961),

Gene: KappaFarmDelta_55 Start: 36090, Stop: 36404, Start Num: 32

Candidate Starts for KappaFarmDelta_55:

(Start: 32 @36090 has 20 MA's), (41, 36195), (43, 36234), (44, 36237), (48, 36273), (51, 36303),

Gene: Kari_33 Start: 27703, Stop: 27939, Start Num: 39

Candidate Starts for Kari_33:

(Start: 39 @27703 has 44 MA's), (42, 27748), (47, 27808), (53, 27850), (54, 27862), (56, 27922),

Gene: Kiko_47 Start: 34593, Stop: 34889, Start Num: 30

Candidate Starts for Kiko_47:

(1, 33921), (5, 34128), (11, 34305), (12, 34314), (13, 34332), (14, 34335), (22, 34440), (Start: 30 @34593 has 2 MA's), (Start: 38 @34650 has 1 MA's), (48, 34758), (55, 34842),

Gene: KilKor_33 Start: 27963, Stop: 28199, Start Num: 39

Candidate Starts for KilKor_33:

(Start: 39 @27963 has 44 MA's), (42, 28008), (47, 28068), (53, 28110), (54, 28122), (56, 28182),

Gene: Ksquared_33 Start: 27720, Stop: 27956, Start Num: 39

Candidate Starts for Ksquared_33:

(Start: 39 @27720 has 44 MA's), (42, 27765), (47, 27825), (53, 27867), (54, 27879), (56, 27939),

Gene: Langerak_33 Start: 27722, Stop: 27958, Start Num: 39

Candidate Starts for Langerak_33:

(Start: 39 @27722 has 44 MA's), (53, 27869), (54, 27881), (56, 27941),

Gene: LonelyBoi_51 Start: 39893, Stop: 40123, Start Num: 37

Candidate Starts for LonelyBoi_51:

(15, 39602), (27, 39812), (29, 39833), (Start: 37 @39893 has 4 MA's), (45, 39965), (48, 39992),

Gene: Lysidious_55 Start: 37815, Stop: 38129, Start Num: 32

Candidate Starts for Lysidious_55:

(20, 37620), (Start: 32 @37815 has 20 MA's), (41, 37920), (43, 37959), (44, 37962), (48, 37998), (51, 38028),

Gene: Majeke_33 Start: 27744, Stop: 27980, Start Num: 39

Candidate Starts for Majeke_33:

(Start: 39 @27744 has 44 MA's), (42, 27789), (47, 27849), (53, 27891), (54, 27903), (56, 27963),

Gene: Malachai_52 Start: 38032, Stop: 38262, Start Num: 34

Candidate Starts for Malachai_52:

(Start: 34 @38032 has 13 MA's), (48, 38131),

Gene: Malithi_33 Start: 27629, Stop: 27865, Start Num: 39

Candidate Starts for Malithi_33:

(Start: 39 @27629 has 44 MA's), (42, 27674), (47, 27734), (53, 27776), (54, 27788), (56, 27848),

Gene: Mangethe_33 Start: 27744, Stop: 27980, Start Num: 39

Candidate Starts for Mangethe_33:

(Start: 39 @27744 has 44 MA's), (42, 27789), (47, 27849), (53, 27891), (54, 27903), (56, 27963),

Gene: Megiddo_33 Start: 27963, Stop: 28199, Start Num: 39

Candidate Starts for Megiddo_33:

(Start: 39 @27963 has 44 MA's), (42, 28008), (47, 28068), (53, 28110), (54, 28122), (56, 28182),

Gene: Melba_53 Start: 36287, Stop: 36601, Start Num: 32

Candidate Starts for Melba_53:

(20, 36092), (Start: 32 @36287 has 20 MA's), (41, 36392), (43, 36431), (44, 36434), (48, 36470), (51, 36500),

Gene: Mellie_52 Start: 35921, Stop: 36151, Start Num: 34

Candidate Starts for Mellie_52:

(10, 35639), (18, 35711), (21, 35732), (Start: 34 @35921 has 13 MA's), (48, 36020),

Gene: MintFen_54 Start: 36355, Stop: 36585, Start Num: 34

Candidate Starts for MintFen_54:

(Start: 34 @36355 has 13 MA's), (48, 36454),

Gene: MissRona_55 Start: 38103, Stop: 38459, Start Num: 28

Candidate Starts for MissRona_55:

(Start: 28 @38103 has 4 MA's), (41, 38250), (43, 38289), (44, 38292),

Gene: Moonflower_47 Start: 35624, Stop: 35968, Start Num: 30

Candidate Starts for Moonflower_47:

(Start: 30 @35624 has 2 MA's), (Start: 31 @35627 has 3 MA's), (33, 35630), (Start: 38 @35678 has 1 MA's), (40, 35732), (48, 35837), (55, 35921),

Gene: Murp_55 Start: 39677, Stop: 39991, Start Num: 32

Candidate Starts for Murp_55:

(Start: 32 @39677 has 20 MA's), (41, 39782), (43, 39821), (44, 39824), (48, 39860), (51, 39890),

Gene: Nazo_37 Start: 29836, Stop: 30069, Start Num: 39

Candidate Starts for Nazo_37:

(Start: 39 @29836 has 44 MA's), (54, 29992),

Gene: Necropolis_33 Start: 27703, Stop: 27939, Start Num: 39

Candidate Starts for Necropolis_33:

(Start: 39 @27703 has 44 MA's), (42, 27748), (47, 27808), (53, 27850), (54, 27862), (56, 27922),

Gene: Obliviate_50 Start: 34448, Stop: 34762, Start Num: 32

Candidate Starts for Obliviate_50:

(Start: 32 @34448 has 20 MA's), (41, 34553), (43, 34592), (44, 34595), (48, 34631), (51, 34661),

Gene: PCoral7_54 Start: 37667, Stop: 37972, Start Num: 35

Candidate Starts for PCoral7_54:

(Start: 35 @37667 has 4 MA's), (41, 37763), (43, 37802), (44, 37805), (52, 37874),

Gene: Petra_50 Start: 34588, Stop: 34902, Start Num: 32

Candidate Starts for Petra_50:

(Start: 32 @34588 has 20 MA's), (41, 34693), (43, 34732), (44, 34735), (48, 34771),

Gene: Phalm_33 Start: 27963, Stop: 28199, Start Num: 39

Candidate Starts for Phalm_33:

(Start: 39 @27963 has 44 MA's), (42, 28008), (47, 28068), (53, 28110), (54, 28122), (56, 28182),

Gene: Phayonce_35 Start: 29732, Stop: 29965, Start Num: 39

Candidate Starts for Phayonce_35:

(Start: 39 @29732 has 44 MA's), (54, 29888), (55, 29918),

Gene: Phegasus_33 Start: 27711, Stop: 27947, Start Num: 39

Candidate Starts for Phegasus_33:

(Start: 39 @27711 has 44 MA's), (42, 27756), (47, 27816), (53, 27858), (54, 27870), (56, 27930),

Gene: Phineas_33 Start: 28077, Stop: 28310, Start Num: 39

Candidate Starts for Phineas_33:

(Start: 39 @28077 has 44 MA's), (50, 28191), (56, 28293),

Gene: PhrostedPhlake_55 Start: 35882, Stop: 36196, Start Num: 32

Candidate Starts for PhrostedPhlake_55:

(Start: 32 @35882 has 20 MA's), (41, 35987), (43, 36026), (44, 36029), (48, 36065),

Gene: Pipp_56 Start: 36955, Stop: 37269, Start Num: 32

Candidate Starts for Pipp_56:

(Start: 32 @36955 has 20 MA's), (41, 37060), (43, 37099), (44, 37102), (48, 37138),

Gene: Polkaroo_33 Start: 27720, Stop: 27956, Start Num: 39

Candidate Starts for Polkaroo_33:

(Start: 39 @27720 has 44 MA's), (42, 27765), (47, 27825), (53, 27867), (54, 27879), (56, 27939),

Gene: PrincePatrick_53 Start: 36016, Stop: 36321, Start Num: 35

Candidate Starts for PrincePatrick_53:

(Start: 35 @36016 has 4 MA's), (41, 36112), (44, 36154), (52, 36223),

Gene: Purky_40 Start: 30459, Stop: 30692, Start Num: 39

Candidate Starts for Purky_40:

(Start: 39 @30459 has 44 MA's),

Gene: Pygmy_35 Start: 29545, Stop: 29781, Start Num: 39

Candidate Starts for Pygmy_35:

(Start: 39 @29545 has 44 MA's), (53, 29692), (54, 29704), (56, 29764),

Gene: RayTheFireFly_54 Start: 35821, Stop: 36162, Start Num: 30

Candidate Starts for RayTheFireFly_54:

(2, 35260), (3, 35308), (4, 35326), (6, 35380), (7, 35383), (12, 35545), (13, 35563), (14, 35566), (22, 35671), (Start: 30 @35821 has 2 MA's), (Start: 31 @35824 has 3 MA's), (Start: 38 @35872 has 1 MA's), (40, 35926), (43, 35992), (48, 36031), (55, 36115),

Gene: Samba_53 Start: 38568, Stop: 38798, Start Num: 34

Candidate Starts for Samba_53:

(Start: 34 @38568 has 13 MA's), (48, 38667),

Gene: Shipwreck_35 Start: 29520, Stop: 29756, Start Num: 39

Candidate Starts for Shipwreck_35:

(Start: 39 @29520 has 44 MA's), (53, 29667), (54, 29679), (56, 29739),

Gene: Sonah_33 Start: 27692, Stop: 27928, Start Num: 39

Candidate Starts for Sonah_33:

(Start: 39 @27692 has 44 MA's), (42, 27737), (47, 27797), (53, 27839), (54, 27851), (56, 27911),

Gene: StevieRay_33 Start: 27671, Stop: 27898, Start Num: 39

Candidate Starts for StevieRay_33:

(Start: 39 @27671 has 44 MA's), (53, 27809),

Gene: StressBall_33 Start: 27963, Stop: 28199, Start Num: 39

Candidate Starts for StressBall_33:

(Start: 39 @27963 has 44 MA's), (42, 28008), (47, 28068), (53, 28110), (54, 28122), (56, 28182),

Gene: Techage_33 Start: 27729, Stop: 27965, Start Num: 39

Candidate Starts for Techage_33:

(Start: 39 @27729 has 44 MA's), (42, 27774), (47, 27834), (53, 27876), (54, 27888), (56, 27948),

Gene: Thespis_33 Start: 27699, Stop: 27935, Start Num: 39

Candidate Starts for Thespis_33:

(Start: 39 @27699 has 44 MA's), (42, 27744), (47, 27804), (53, 27846), (54, 27858), (56, 27918),

Gene: Toast_54 Start: 37667, Stop: 37972, Start Num: 35

Candidate Starts for Toast_54:

(Start: 35 @37667 has 4 MA's), (41, 37763), (43, 37802), (44, 37805), (52, 37874),

Gene: UmaThurman_51 Start: 36685, Stop: 36999, Start Num: 32

Candidate Starts for UmaThurman_51:

(18, 36472), (Start: 32 @36685 has 20 MA's), (41, 36790), (43, 36829), (44, 36832), (48, 36868), (49, 36874), (51, 36898),

Gene: Utz_47 Start: 36827, Stop: 37141, Start Num: 32

Candidate Starts for Utz_47:

(20, 36632), (Start: 32 @36827 has 20 MA's), (41, 36932), (43, 36971), (44, 36974), (48, 37010), (51, 37040),

Gene: Venti_33 Start: 27706, Stop: 27942, Start Num: 39

Candidate Starts for Venti_33:

(Start: 39 @27706 has 44 MA's), (42, 27751), (47, 27811), (53, 27853), (54, 27865), (56, 27925),

Gene: Vidya_33 Start: 27739, Stop: 27975, Start Num: 39

Candidate Starts for Vidya_33:

(Start: 39 @27739 has 44 MA's), (42, 27784), (47, 27844), (53, 27886), (54, 27898), (56, 27958),

Gene: Walrus_52 Start: 35763, Stop: 36077, Start Num: 32

Candidate Starts for Walrus_52:

(Start: 32 @35763 has 20 MA's), (41, 35868), (43, 35907), (44, 35910), (48, 35946),

Gene: William_56 Start: 38345, Stop: 38647, Start Num: 36

Candidate Starts for William_56:

(Start: 36 @38345 has 1 MA's), (41, 38438), (43, 38477), (44, 38480), (48, 38516),

Gene: Willsammy_32 Start: 27446, Stop: 27682, Start Num: 39

Candidate Starts for Willsammy_32:

(Start: 39 @27446 has 44 MA's), (42, 27491), (47, 27551), (53, 27593), (54, 27605), (56, 27665),

Gene: WinkNick_53 Start: 35858, Stop: 36088, Start Num: 37

Candidate Starts for WinkNick_53:

(Start: 37 @35858 has 4 MA's), (49, 35963),

Gene: Wisp_53 Start: 37049, Stop: 37279, Start Num: 34

Candidate Starts for Wisp_53:

(Start: 34 @37049 has 13 MA's), (48, 37148),

Gene: Wocket_54 Start: 36257, Stop: 36571, Start Num: 32

Candidate Starts for Wocket_54:

(Start: 32 @36257 has 20 MA's), (41, 36362), (43, 36401), (44, 36404), (48, 36440), (51, 36470),

Gene: Zarbodnamra_53 Start: 35763, Stop: 35993, Start Num: 34

Candidate Starts for Zarbodnamra_53:

(Start: 34 @35763 has 13 MA's), (48, 35862),

Gene: ZiggyZoo_54 Start: 38096, Stop: 38326, Start Num: 34

Candidate Starts for ZiggyZoo_54:

(Start: 34 @38096 has 13 MA's), (48, 38195),

Gene: Zilizebeth_33 Start: 27738, Stop: 27974, Start Num: 39

Candidate Starts for Zilizebeth_33:

(Start: 39 @27738 has 44 MA's), (42, 27783), (47, 27843), (53, 27885), (54, 27897), (56, 27957),