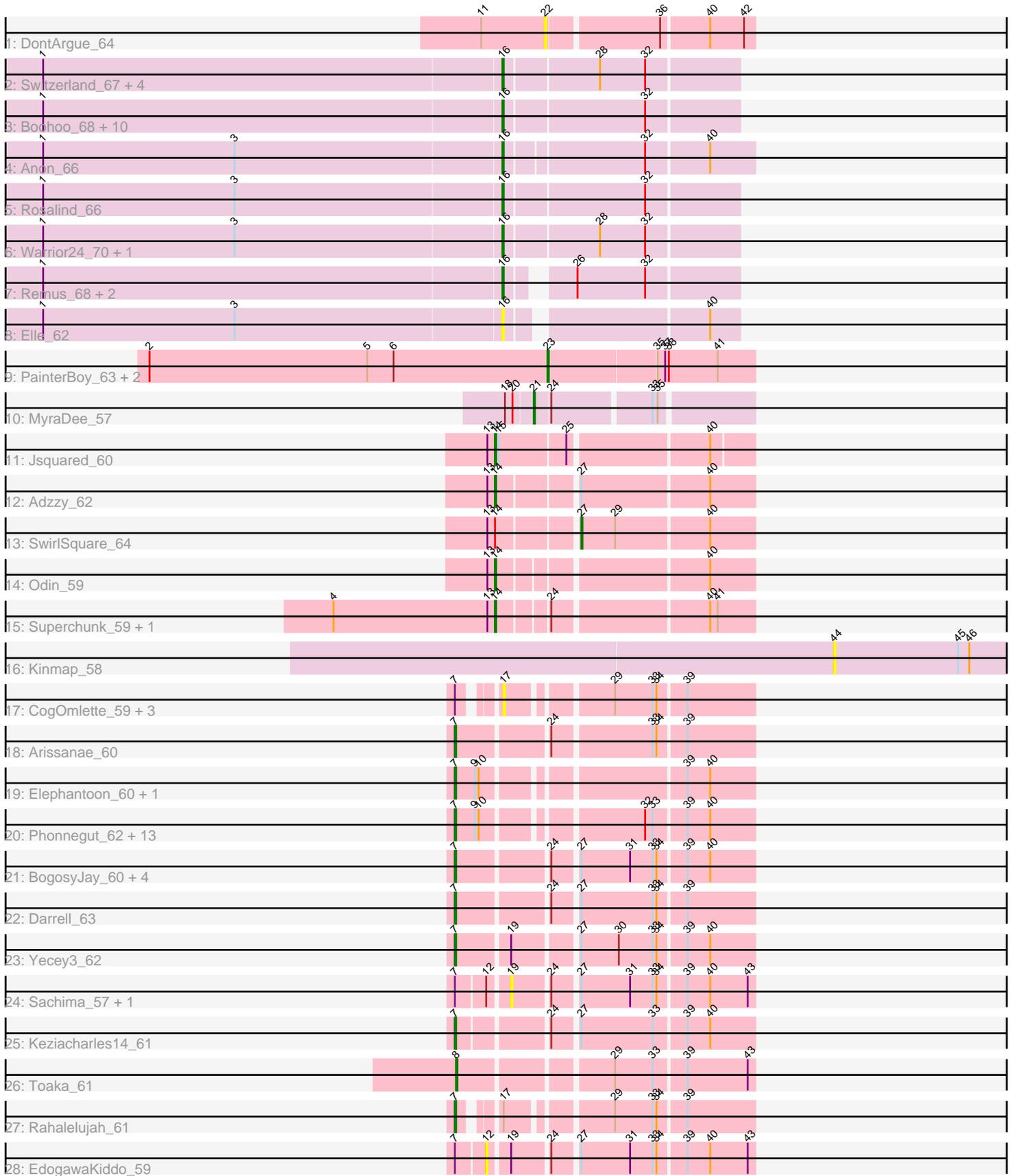


Pham 287871



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 287871 Report

This analysis was run 03/28/26 on database version 641.

Pham number 287871 has 70 members, 17 are drafts.

Phages represented in each track:

- Track 1 : DontArgue_64
- Track 2 : Switzerland_67, Soups_68, DekHockey33_69, ShayRa_68, KatherineG_68
- Track 3 : Boohoo_68, Nebulosus_66, Anaysia_68, Waits_68, LastResort_66, JSwag_67, Epsocamisio_65, MinecraftSteve_68, ReMo_66, Battleship_70, Looper_67
- Track 4 : Anon_66
- Track 5 : Rosalind_66
- Track 6 : Warrior24_70, Oofda_69
- Track 7 : Remus_68, Ravana_70, Strosahl_68
- Track 8 : Elle_62
- Track 9 : PainterBoy_63, EagleEye_64, Lucyedi_63
- Track 10 : MyraDee_57
- Track 11 : Jsquared_60
- Track 12 : Adzzy_62
- Track 13 : SwirlSquare_64
- Track 14 : Odin_59
- Track 15 : Superchunk_59, Caraxes_60
- Track 16 : Kinmap_58
- Track 17 : CogOmlette_59, Minispark_59, WorldCup_59, Bellris_59
- Track 18 : Arissanae_60
- Track 19 : Elephantoon_60, LoneWolf_62
- Track 20 : Phonnegut_62, Ugenie5_58, HortumSL17_62, Scherzo_62, Jiawan_59, Aliter_62, Hanray_60, Pioneer_62, RyeScarlet_63, Myxus_61, Onglai_60, Halex_60, Catalina_63, Beemo_62
- Track 21 : BogosyJay_60, Tubs_61, Maminiaina_60, Phaeder_61, PackMan_60
- Track 22 : Darrell_63
- Track 23 : Yecey3_62
- Track 24 : Sachima_57, Lilleskat_58
- Track 25 : Keziacharles14_61
- Track 26 : Toaka_61
- Track 27 : Rahalelujah_61
- Track 28 : EdogawaKiddo_59

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

The start number called the most often in the published annotations is 16, it was called in 22 of the 53 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anaysia_68, Anon_66, Battleship_70, Boohoo_68, DekHockey33_69, Elle_62, Epsocamisio_65, JSwag_67, KatherineG_68, LastResort_66, Looper_67, MinecraftSteve_68, Nebulosus_66, Oofda_69, Ravana_70, ReMo_66, Remus_68, Rosalind_66, ShayRa_68, Soups_68, Strosahl_68, Switzerland_67, Waits_68, Warrior24_70,

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

-

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

- Adzzy_62, Aliter_62, Arissanae_60, Beemo_62, Bellris_59, BogosyJay_60, Caraxes_60, Catalina_63, CogOmlette_59, Darrell_63, DontArgue_64, EagleEye_64, EdogawaKiddo_59, Elephantoon_60, Hanray_60, Horex_60, HortumSL17_62, Jiawan_59, Jsquared_60, Keziacharles14_61, Kinmap_58, Lilleskat_58, LoneWolf_62, Lucyedi_63, Maminina_60, Minispark_59, MyraDee_57, Myxus_61, Odin_59, Onglai_60, PackMan_60, PainterBoy_63, Phaeder_61, Phonnegut_62, Pioneer_62, Rahalelujah_61, RyeScarlet_63, Sachima_57, Scherzo_62, Superchunk_59, SwirlSquare_64, Toaka_61, Tubs_61, Ugenie5_58, WorldCup_59, Yecey3_62,

Summary by start number:

Start 7:

- Found in 33 of 70 (47.1%) of genes in pham
- Manual Annotations of this start: 21 of 53
- Called 78.8% of time when present
- Phage (with cluster) where this start called: Aliter_62 (A9), Arissanae_60 (A9), Beemo_62 (A9), BogosyJay_60 (A9), Catalina_63 (A9), Darrell_63 (A9), Elephantoon_60 (A9), Hanray_60 (A9), Horex_60 (A9), HortumSL17_62 (A9), Jiawan_59 (A9), Keziacharles14_61 (A9), LoneWolf_62 (A9), Maminina_60 (A9), Myxus_61 (A9), Onglai_60 (A9), PackMan_60 (A9), Phaeder_61 (A9), Phonnegut_62 (A9), Pioneer_62 (A9), Rahalelujah_61 (A9), RyeScarlet_63 (A9), Scherzo_62 (A9), Tubs_61 (A9), Ugenie5_58 (A9), Yecey3_62 (A9),

Start 8:

- Found in 1 of 70 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Toaka_61 (A9),

Start 12:

- Found in 3 of 70 (4.3%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: EdogawaKiddo_59 (A9),

Start 14:

- Found in 6 of 70 (8.6%) of genes in pham

- Manual Annotations of this start: 4 of 53
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Adzzy_62 (A2), Caraxes_60 (A2), Jsquared_60 (A2), Odin_59 (A2), Superchunk_59 (A2),

Start 16:

- Found in 24 of 70 (34.3%) of genes in pham
- Manual Annotations of this start: 22 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anaysia_68 (A15), Anon_66 (A15), Battleship_70 (A15), Boohoo_68 (A15), DekHockey33_69 (A15), Elle_62 (A15), Epsocamisio_65 (A15), JSwag_67 (A15), KatherineG_68 (A15), LastResort_66 (A15), Looper_67 (A15), MinecraftSteve_68 (A15), Nebulosus_66 (A15), Oofda_69 (A15), Ravana_70 (A15), ReMo_66 (A15), Remus_68 (A15), Rosalind_66 (A15), ShayRa_68 (A15), Soups_68 (A15), Strosahl_68 (A15), Switzerland_67 (A15), Waits_68 (A15), Warrior24_70 (A15),

Start 17:

- Found in 5 of 70 (7.1%) of genes in pham
- No Manual Annotations of this start.
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Bellris_59 (A9), CogOmlette_59 (A9), Minispark_59 (A9), WorldCup_59 (A9),

Start 19:

- Found in 4 of 70 (5.7%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Lilleskat_58 (A9), Sachima_57 (A9),

Start 21:

- Found in 1 of 70 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MyraDee_57 (A18),

Start 22:

- Found in 1 of 70 (1.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DontArgue_64 (A10),

Start 23:

- Found in 3 of 70 (4.3%) of genes in pham
- Manual Annotations of this start: 3 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EagleEye_64 (A16), Lucyedi_63 (A16), PainterBoy_63 (A16),

Start 27:

- Found in 13 of 70 (18.6%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 7.7% of time when present

- Phage (with cluster) where this start called: SwirlSquare_64 (A2),

Start 44:

- Found in 1 of 70 (1.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kinmap_58 (A21),

Summary by clusters:

There are 7 clusters represented in this pham: A15, A21, A16, A10, A18, A2, A9,

Info for manual annotations of cluster A15:

- Start number 16 was manually annotated 22 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 23 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 21 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 14 was manually annotated 4 times for cluster A2.
- Start number 27 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A9:

- Start number 7 was manually annotated 21 times for cluster A9.
- Start number 8 was manually annotated 1 time for cluster A9.

Gene Information:

Gene: Adzzy_62 Start: 38280, Stop: 38089, Start Num: 14

Candidate Starts for Adzzy_62:

(13, 38286), (Start: 14 @38280 has 4 MA's), (Start: 27 @38223 has 1 MA's), (40, 38124),

Gene: Aliter_62 Start: 39332, Stop: 39120, Start Num: 7

Candidate Starts for Aliter_62:

(Start: 7 @39332 has 21 MA's), (9, 39317), (10, 39314), (32, 39203), (33, 39197), (39, 39173), (40, 39155),

Gene: Anaysia_68 Start: 38921, Stop: 38742, Start Num: 16

Candidate Starts for Anaysia_68:

(1, 39284), (Start: 16 @38921 has 22 MA's), (32, 38813),

Gene: Anon_66 Start: 38696, Stop: 38508, Start Num: 16

Candidate Starts for Anon_66:

(1, 39059), (3, 38906), (Start: 16 @38696 has 22 MA's), (32, 38591), (40, 38543),

Gene: Arissanae_60 Start: 39898, Stop: 39680, Start Num: 7

Candidate Starts for Arissanae_60:

(Start: 7 @39898 has 21 MA's), (24, 39832), (33, 39757), (34, 39754), (39, 39733),

Gene: Battleship_70 Start: 39127, Stop: 38948, Start Num: 16

Candidate Starts for Battleship_70:

(1, 39490), (Start: 16 @39127 has 22 MA's), (32, 39019),

Gene: Beemo_62 Start: 39502, Stop: 39290, Start Num: 7

Candidate Starts for Beemo_62:

(Start: 7 @39502 has 21 MA's), (9, 39487), (10, 39484), (32, 39373), (33, 39367), (39, 39343), (40, 39325),

Gene: Bellris_59 Start: 39004, Stop: 38825, Start Num: 17

Candidate Starts for Bellris_59:

(Start: 7 @39025 has 21 MA's), (17, 39004), (29, 38932), (33, 38902), (34, 38899), (39, 38878),

Gene: BogosyJay_60 Start: 39299, Stop: 39081, Start Num: 7

Candidate Starts for BogosyJay_60:

(Start: 7 @39299 has 21 MA's), (24, 39233), (Start: 27 @39215 has 1 MA's), (31, 39176), (33, 39158), (34, 39155), (39, 39134), (40, 39116),

Gene: Boohoo_68 Start: 38921, Stop: 38742, Start Num: 16

Candidate Starts for Boohoo_68:

(1, 39284), (Start: 16 @38921 has 22 MA's), (32, 38813),

Gene: Caraxes_60 Start: 37974, Stop: 37786, Start Num: 14

Candidate Starts for Caraxes_60:

(4, 38103), (13, 37980), (Start: 14 @37974 has 4 MA's), (24, 37938), (40, 37821), (41, 37815),

Gene: Catalina_63 Start: 39405, Stop: 39193, Start Num: 7

Candidate Starts for Catalina_63:

(Start: 7 @39405 has 21 MA's), (9, 39390), (10, 39387), (32, 39276), (33, 39270), (39, 39246), (40, 39228),

Gene: CogOmlette_59 Start: 39001, Stop: 38822, Start Num: 17

Candidate Starts for CogOmlette_59:

(Start: 7 @39022 has 21 MA's), (17, 39001), (29, 38929), (33, 38899), (34, 38896), (39, 38875),

Gene: Darrell_63 Start: 39973, Stop: 39755, Start Num: 7

Candidate Starts for Darrell_63:

(Start: 7 @39973 has 21 MA's), (24, 39907), (Start: 27 @39889 has 1 MA's), (33, 39832), (34, 39829), (39, 39808),

Gene: DekHockey33_69 Start: 39213, Stop: 39034, Start Num: 16

Candidate Starts for DekHockey33_69:

(1, 39576), (Start: 16 @39213 has 22 MA's), (28, 39141), (32, 39105),

Gene: DontArgue_64 Start: 40985, Stop: 40830, Start Num: 22

Candidate Starts for DontArgue_64:

(11, 41036), (22, 40985), (36, 40901), (40, 40865), (42, 40838),

Gene: EagleEye_64 Start: 39391, Stop: 39230, Start Num: 23

Candidate Starts for EagleEye_64:

(2, 39709), (5, 39535), (6, 39514), (Start: 23 @39391 has 3 MA's), (35, 39307), (37, 39301), (38, 39298), (41, 39259),

Gene: EdogawaKiddo_59 Start: 39348, Stop: 39154, Start Num: 12

Candidate Starts for EdogawaKiddo_59:

(Start: 7 @39369 has 21 MA's), (12, 39348), (19, 39333), (24, 39306), (Start: 27 @39288 has 1 MA's), (31, 39249), (33, 39231), (34, 39228), (39, 39207), (40, 39189), (43, 39159),

Gene: Elephantoon_60 Start: 38712, Stop: 38500, Start Num: 7

Candidate Starts for Elephantoon_60:

(Start: 7 @38712 has 21 MA's), (9, 38697), (10, 38694), (39, 38553), (40, 38535),

Gene: Elle_62 Start: 37281, Stop: 37114, Start Num: 16

Candidate Starts for Elle_62:

(1, 37644), (3, 37491), (Start: 16 @37281 has 22 MA's), (40, 37137),

Gene: Epsocamisio_65 Start: 38456, Stop: 38277, Start Num: 16

Candidate Starts for Epsocamisio_65:

(1, 38819), (Start: 16 @38456 has 22 MA's), (32, 38348),

Gene: Hanray_60 Start: 39457, Stop: 39245, Start Num: 7

Candidate Starts for Hanray_60:

(Start: 7 @39457 has 21 MA's), (9, 39442), (10, 39439), (32, 39328), (33, 39322), (39, 39298), (40, 39280),

Gene: Horex_60 Start: 39473, Stop: 39261, Start Num: 7

Candidate Starts for Horex_60:

(Start: 7 @39473 has 21 MA's), (9, 39458), (10, 39455), (32, 39344), (33, 39338), (39, 39314), (40, 39296),

Gene: HortumSL17_62 Start: 39404, Stop: 39192, Start Num: 7

Candidate Starts for HortumSL17_62:

(Start: 7 @39404 has 21 MA's), (9, 39389), (10, 39386), (32, 39275), (33, 39269), (39, 39245), (40, 39227),

Gene: JSwag_67 Start: 38645, Stop: 38466, Start Num: 16

Candidate Starts for JSwag_67:

(1, 39008), (Start: 16 @38645 has 22 MA's), (32, 38537),

Gene: Jiawan_59 Start: 39489, Stop: 39277, Start Num: 7

Candidate Starts for Jiawan_59:

(Start: 7 @39489 has 21 MA's), (9, 39474), (10, 39471), (32, 39360), (33, 39354), (39, 39330), (40, 39312),

Gene: Jsquared_60 Start: 38644, Stop: 38453, Start Num: 14

Candidate Starts for Jsquared_60:

(13, 38650), (Start: 14 @38644 has 4 MA's), (15, 38641), (25, 38590), (40, 38485),

Gene: KatherineG_68 Start: 39118, Stop: 38939, Start Num: 16

Candidate Starts for KatherineG_68:

(1, 39481), (Start: 16 @39118 has 22 MA's), (28, 39046), (32, 39010),

Gene: Keziacharles14_61 Start: 40467, Stop: 40252, Start Num: 7

Candidate Starts for Keziacharles14_61:

(Start: 7 @40467 has 21 MA's), (24, 40404), (Start: 27 @40386 has 1 MA's), (33, 40329), (39, 40305), (40, 40287),

Gene: Kinmap_58 Start: 37671, Stop: 37513, Start Num: 44

Candidate Starts for Kinmap_58:

(44, 37671), (45, 37572), (46, 37563),

Gene: LastResort_66 Start: 38697, Stop: 38518, Start Num: 16

Candidate Starts for LastResort_66:

(1, 39060), (Start: 16 @38697 has 22 MA's), (32, 38589),

Gene: Lilleskat_58 Start: 39286, Stop: 39107, Start Num: 19

Candidate Starts for Lilleskat_58:

(Start: 7 @39322 has 21 MA's), (12, 39301), (19, 39286), (24, 39259), (Start: 27 @39241 has 1 MA's), (31, 39202), (33, 39184), (34, 39181), (39, 39160), (40, 39142), (43, 39112),

Gene: LoneWolf_62 Start: 39434, Stop: 39222, Start Num: 7

Candidate Starts for LoneWolf_62:

(Start: 7 @39434 has 21 MA's), (9, 39419), (10, 39416), (39, 39275), (40, 39257),

Gene: Looper_67 Start: 38609, Stop: 38430, Start Num: 16

Candidate Starts for Looper_67:

(1, 38972), (Start: 16 @38609 has 22 MA's), (32, 38501),

Gene: Lucyedi_63 Start: 39587, Stop: 39426, Start Num: 23

Candidate Starts for Lucyedi_63:

(2, 39905), (5, 39731), (6, 39710), (Start: 23 @39587 has 3 MA's), (35, 39503), (37, 39497), (38, 39494), (41, 39455),

Gene: Maminiaina_60 Start: 39281, Stop: 39063, Start Num: 7

Candidate Starts for Maminiaina_60:

(Start: 7 @39281 has 21 MA's), (24, 39215), (Start: 27 @39197 has 1 MA's), (31, 39158), (33, 39140), (34, 39137), (39, 39116), (40, 39098),

Gene: MinecraftSteve_68 Start: 38933, Stop: 38754, Start Num: 16

Candidate Starts for MinecraftSteve_68:

(1, 39296), (Start: 16 @38933 has 22 MA's), (32, 38825),

Gene: Minispark_59 Start: 38998, Stop: 38819, Start Num: 17

Candidate Starts for Minispark_59:

(Start: 7 @39019 has 21 MA's), (17, 38998), (29, 38926), (33, 38896), (34, 38893), (39, 38872),

Gene: MyraDee_57 Start: 36199, Stop: 36038, Start Num: 21

Candidate Starts for MyraDee_57:

(18, 36220), (20, 36214), (Start: 21 @36199 has 1 MA's), (24, 36187), (33, 36112), (35, 36109),

Gene: Myxus_61 Start: 39404, Stop: 39192, Start Num: 7

Candidate Starts for Myxus_61:

(Start: 7 @39404 has 21 MA's), (9, 39389), (10, 39386), (32, 39275), (33, 39269), (39, 39245), (40, 39227),

Gene: Nebulosus_66 Start: 38693, Stop: 38514, Start Num: 16

Candidate Starts for Nebulosus_66:
(1, 39056), (Start: 16 @38693 has 22 MA's), (32, 38585),

Gene: Odin_59 Start: 38358, Stop: 38170, Start Num: 14
Candidate Starts for Odin_59:
(13, 38364), (Start: 14 @38358 has 4 MA's), (40, 38205),

Gene: Onglai_60 Start: 37745, Stop: 37533, Start Num: 7
Candidate Starts for Onglai_60:
(Start: 7 @37745 has 21 MA's), (9, 37730), (10, 37727), (32, 37616), (33, 37610), (39, 37586), (40, 37568),

Gene: Oofda_69 Start: 38896, Stop: 38717, Start Num: 16
Candidate Starts for Oofda_69:
(1, 39259), (3, 39106), (Start: 16 @38896 has 22 MA's), (28, 38824), (32, 38788),

Gene: PackMan_60 Start: 39279, Stop: 39061, Start Num: 7
Candidate Starts for PackMan_60:
(Start: 7 @39279 has 21 MA's), (24, 39213), (Start: 27 @39195 has 1 MA's), (31, 39156), (33, 39138), (34, 39135), (39, 39114), (40, 39096),

Gene: PainterBoy_63 Start: 39546, Stop: 39385, Start Num: 23
Candidate Starts for PainterBoy_63:
(2, 39864), (5, 39690), (6, 39669), (Start: 23 @39546 has 3 MA's), (35, 39462), (37, 39456), (38, 39453), (41, 39414),

Gene: Phaeder_61 Start: 39279, Stop: 39061, Start Num: 7
Candidate Starts for Phaeder_61:
(Start: 7 @39279 has 21 MA's), (24, 39213), (Start: 27 @39195 has 1 MA's), (31, 39156), (33, 39138), (34, 39135), (39, 39114), (40, 39096),

Gene: Phonnegut_62 Start: 39501, Stop: 39289, Start Num: 7
Candidate Starts for Phonnegut_62:
(Start: 7 @39501 has 21 MA's), (9, 39486), (10, 39483), (32, 39372), (33, 39366), (39, 39342), (40, 39324),

Gene: Pioneer_62 Start: 39501, Stop: 39289, Start Num: 7
Candidate Starts for Pioneer_62:
(Start: 7 @39501 has 21 MA's), (9, 39486), (10, 39483), (32, 39372), (33, 39366), (39, 39342), (40, 39324),

Gene: Rahalelujah_61 Start: 39034, Stop: 38834, Start Num: 7
Candidate Starts for Rahalelujah_61:
(Start: 7 @39034 has 21 MA's), (17, 39013), (29, 38941), (33, 38911), (34, 38908), (39, 38887),

Gene: Ravana_70 Start: 40006, Stop: 39842, Start Num: 16
Candidate Starts for Ravana_70:
(1, 40369), (Start: 16 @40006 has 22 MA's), (26, 39967), (32, 39913),

Gene: ReMo_66 Start: 38694, Stop: 38515, Start Num: 16
Candidate Starts for ReMo_66:
(1, 39057), (Start: 16 @38694 has 22 MA's), (32, 38586),

Gene: Remus_68 Start: 38685, Stop: 38521, Start Num: 16
Candidate Starts for Remus_68:
(1, 39048), (Start: 16 @38685 has 22 MA's), (26, 38646), (32, 38592),

Gene: Rosalind_66 Start: 38852, Stop: 38673, Start Num: 16
Candidate Starts for Rosalind_66:
(1, 39215), (3, 39062), (Start: 16 @38852 has 22 MA's), (32, 38744),

Gene: RyeScarlet_63 Start: 39476, Stop: 39264, Start Num: 7
Candidate Starts for RyeScarlet_63:
(Start: 7 @39476 has 21 MA's), (9, 39461), (10, 39458), (32, 39347), (33, 39341), (39, 39317), (40, 39299),

Gene: Sachima_57 Start: 39266, Stop: 39087, Start Num: 19
Candidate Starts for Sachima_57:
(Start: 7 @39302 has 21 MA's), (12, 39281), (19, 39266), (24, 39239), (Start: 27 @39221 has 1 MA's), (31, 39182), (33, 39164), (34, 39161), (39, 39140), (40, 39122), (43, 39092),

Gene: Scherzo_62 Start: 39690, Stop: 39478, Start Num: 7
Candidate Starts for Scherzo_62:
(Start: 7 @39690 has 21 MA's), (9, 39675), (10, 39672), (32, 39561), (33, 39555), (39, 39531), (40, 39513),

Gene: ShayRa_68 Start: 38881, Stop: 38702, Start Num: 16
Candidate Starts for ShayRa_68:
(1, 39244), (Start: 16 @38881 has 22 MA's), (28, 38809), (32, 38773),

Gene: Soups_68 Start: 39144, Stop: 38965, Start Num: 16
Candidate Starts for Soups_68:
(1, 39507), (Start: 16 @39144 has 22 MA's), (28, 39072), (32, 39036),

Gene: Strosahl_68 Start: 38685, Stop: 38521, Start Num: 16
Candidate Starts for Strosahl_68:
(1, 39048), (Start: 16 @38685 has 22 MA's), (26, 38646), (32, 38592),

Gene: Superchunk_59 Start: 37974, Stop: 37786, Start Num: 14
Candidate Starts for Superchunk_59:
(4, 38103), (13, 37980), (Start: 14 @37974 has 4 MA's), (24, 37938), (40, 37821), (41, 37815),

Gene: SwirlSquare_64 Start: 38842, Stop: 38708, Start Num: 27
Candidate Starts for SwirlSquare_64:
(13, 38905), (Start: 14 @38899 has 4 MA's), (Start: 27 @38842 has 1 MA's), (29, 38815), (40, 38743),

Gene: Switzerland_67 Start: 39020, Stop: 38841, Start Num: 16
Candidate Starts for Switzerland_67:
(1, 39383), (Start: 16 @39020 has 22 MA's), (28, 38948), (32, 38912),

Gene: Toaka_61 Start: 39301, Stop: 39083, Start Num: 8
Candidate Starts for Toaka_61:
(Start: 8 @39301 has 1 MA's), (29, 39190), (33, 39160), (39, 39136), (43, 39088),

Gene: Tubs_61 Start: 39279, Stop: 39061, Start Num: 7
Candidate Starts for Tubs_61:

(Start: 7 @39279 has 21 MA's), (24, 39213), (Start: 27 @39195 has 1 MA's), (31, 39156), (33, 39138), (34, 39135), (39, 39114), (40, 39096),

Gene: Ugenie5_58 Start: 39689, Stop: 39477, Start Num: 7

Candidate Starts for Ugenie5_58:

(Start: 7 @39689 has 21 MA's), (9, 39674), (10, 39671), (32, 39560), (33, 39554), (39, 39530), (40, 39512),

Gene: Waits_68 Start: 38917, Stop: 38738, Start Num: 16

Candidate Starts for Waits_68:

(1, 39280), (Start: 16 @38917 has 22 MA's), (32, 38809),

Gene: Warrior24_70 Start: 39351, Stop: 39172, Start Num: 16

Candidate Starts for Warrior24_70:

(1, 39714), (3, 39561), (Start: 16 @39351 has 22 MA's), (28, 39279), (32, 39243),

Gene: WorldCup_59 Start: 39007, Stop: 38828, Start Num: 17

Candidate Starts for WorldCup_59:

(Start: 7 @39028 has 21 MA's), (17, 39007), (29, 38935), (33, 38905), (34, 38902), (39, 38881),

Gene: Yecey3_62 Start: 39278, Stop: 39060, Start Num: 7

Candidate Starts for Yecey3_62:

(Start: 7 @39278 has 21 MA's), (19, 39239), (Start: 27 @39194 has 1 MA's), (30, 39164), (33, 39137), (34, 39134), (39, 39113), (40, 39095),