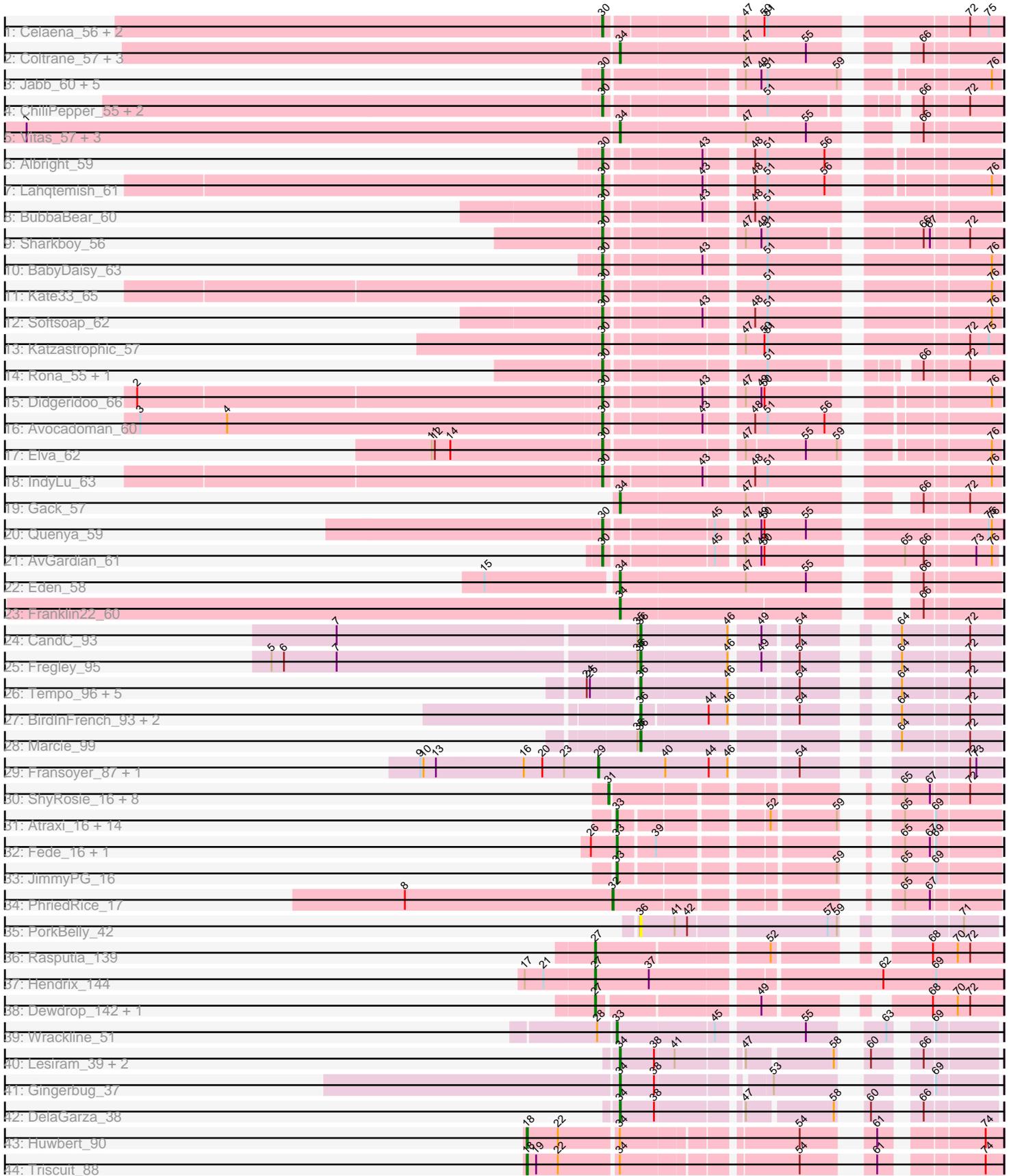


Pham 291031



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 291031 Report

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

Pham number 291031 has 94 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Celaena_56, Bachaco_56, FlameThrower_55
- Track 2 : Coltrane_57, Brahms_57, Armstrong_57, Clayda5_59
- Track 3 : Jabb_60, MsUbiquitous_60, Eula_60, CupcakePrincess_60, QMacho_62, AylexOG_62
- Track 4 : ChiliPepper_55, Dismas_56, Kamdara_55
- Track 5 : Vitas_57, Bernstein_57, Skylord_57, Rollins_57
- Track 6 : Albright_59
- Track 7 : Lahqtemish_61
- Track 8 : BubbaBear_60
- Track 9 : Sharkboy_56
- Track 10 : BabyDaisy_63
- Track 11 : Kate33_65
- Track 12 : Softsoap_62
- Track 13 : Katzastrophic_57
- Track 14 : Rona_55, Kieran_55
- Track 15 : Didgeridoo_66
- Track 16 : Avocadoman_60
- Track 17 : Elva_62
- Track 18 : IndyLu_63
- Track 19 : Gack_57
- Track 20 : Quenya_59
- Track 21 : AvGardian_61
- Track 22 : Eden_58
- Track 23 : Franklin22_60
- Track 24 : CandC_93
- Track 25 : Fregley_95
- Track 26 : Tempo_96, Kelcole_94, KillerQueen_97, Romm_97, RobinRose_97, OneinaGillian_92
- Track 27 : BirdInFrench_93, Wilca_93, Pepe25_91
- Track 28 : Marcie_99
- Track 29 : Fransoyer_87, SadLad_89
- Track 30 : ShyRosie_16, AloeVera_16, Ashton_16, Truong_16, JordanFarm_16, Barroma_16, Waterlily_16, SoilSleuth_16, Akoni_16
- Track 31 : Atraxi_16, Keough_16, TrippleS_16, Morrill_16, ThirteenKH_16, Yafa_16, Pharky_17, RicoCaldo_17, Phractured_17, Fullmetal_17, StagePhright_17, Phedro_17, Mazun_17, Astartes_17, Moleficent_17
- Track 32 : Fede_16, Kosier_16

- Track 33 : JimmyPG_16
- Track 34 : PhriedRice_17
- Track 35 : PorkBelly_42
- Track 36 : Rasputia_139
- Track 37 : Hendrix_144
- Track 38 : Dewdrop_142, Leaf_142
- Track 39 : Wrackline_51
- Track 40 : Lesiram_39, Teng_40, Sweetums_38
- Track 41 : Gingerbug_37
- Track 42 : DelaGarza_38
- Track 43 : Huwbert_90
- Track 44 : Triscuit_88

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

The start number called the most often in the published annotations is 30, it was called in 26 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Albright_59, AvGardian_61, Avocadoman_60, AylexOG_62, BabyDaisy_63, Bachaco_56, BubbaBear_60, Celaena_56, ChiliPepper_55, CupcakePrincess_60, Didgeridoo_66, Dismas_56, Elva_62, Eula_60, FlameThrower_55, IndyLu_63, Jabb_60, Kamdara_55, Kate33_65, Katzastrophic_57, Kieran_55, Lahqtemish_61, MsUbiquitous_60, QMacho_62, Quenya_59, Rona_55, Sharkboy_56, Softsoap_62,

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

-

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

- Akoni_16, AloeVera_16, Armstrong_57, Ashton_16, Astartes_17, Atraxi_16, Barroma_16, Bernstein_57, BirdInFrench_93, Brahms_57, CandC_93, Clayda5_59, Coltrane_57, DelaGarza_38, Dewdrop_142, Eden_58, Fede_16, Franklin22_60, Fransoyer_87, Fregley_95, Fullmetal_17, Gack_57, Gingerbug_37, Hendrix_144, Huwbert_90, JimmyPG_16, JordanFarm_16, Kelcole_94, Keough_16, KillerQueen_97, Kosier_16, Leaf_142, Lesiram_39, Marcie_99, Mazun_17, Moleficient_17, Morrill_16, OneinaGillian_92, Pepe25_91, Pharky_17, Phedro_17, Phracted_17, PhriedRice_17, PorkBelly_42, Rasputia_139, RicoCaldo_17, RobinRose_97, Rollins_57, Romm_97, SadLad_89, ShyRosie_16, Skylord_57, SoilSleuth_16, StagePhright_17, Sweetums_38, Tempo_96, Teng_40, ThirteenKH_16, TrippleS_16, Triscuit_88, Truong_16, Vitas_57, Waterlily_16, Wilca_93, Wrackline_51, Yafa_16,

Summary by start number:

Start 18:

- Found in 2 of 94 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Huwbert_90 (GG), Triscuit_88 (GG),

Start 27:

- Found in 4 of 94 (4.3%) of genes in pham
- Manual Annotations of this start: 4 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dewdrop_142 (GC), Hendrix_144 (GC), Leaf_142 (GC), Rasputia_139 (GC),

Start 29:

- Found in 2 of 94 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fransoyer_87 (EG), SadLad_89 (EG),

Start 30:

- Found in 28 of 94 (29.8%) of genes in pham
- Manual Annotations of this start: 26 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Albright_59 (EB), AvGardian_61 (EB), Avocadoman_60 (EB), AylexOG_62 (EB), BabyDaisy_63 (EB), Bachaco_56 (EB), BubbaBear_60 (EB), Celaena_56 (EB), ChiliPepper_55 (EB), CupcakePrincess_60 (EB), Didgeridoo_66 (EB), Dismas_56 (EB), Elva_62 (EB), Eula_60 (EB), FlameThrower_55 (EB), IndyLu_63 (EB), Jabb_60 (EB), Kamdara_55 (EB), Kate33_65 (EB), Katzastrophic_57 (EB), Kieran_55 (EB), Lahqtemish_61 (EB), MsUbiquitous_60 (EB), QMacho_62 (EB), Quenya_59 (EB), Rona_55 (EB), Sharkboy_56 (EB), Softsoap_62 (EB),

Start 31:

- Found in 9 of 94 (9.6%) of genes in pham
- Manual Annotations of this start: 7 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akoni_16 (EK2), AloeVera_16 (EK2), Ashton_16 (EK2), Barroma_16 (EK2), JordanFarm_16 (EK2), ShyRosie_16 (EK2), SoilSleuth_16 (EK2), Truong_16 (EK2), Waterlily_16 (EK2),

Start 32:

- Found in 1 of 94 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PhriedRice_17 (EK2),

Start 33:

- Found in 19 of 94 (20.2%) of genes in pham
- Manual Annotations of this start: 16 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Astartes_17 (EK2), Atraxi_16 (EK2), Fede_16 (EK2), Fullmetal_17 (EK2), JimmyPG_16 (EK2), Keough_16 (EK2), Kosier_16 (EK2), Mazun_17 (EK2), Moleficent_17 (EK2), Morrill_16 (EK2), Pharky_17 (EK2), Phedro_17 (EK2), Phracted_17 (EK2), RicoCaldo_17 (EK2), StagePhright_17 (EK2), ThirteenKH_16 (EK2), TrippleS_16 (EK2), Wrackline_51 (GF), Yafa_16 (EK2),

Start 34:

- Found in 18 of 94 (19.1%) of genes in pham

- Manual Annotations of this start: 14 of 83
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Armstrong_57 (EB), Bernstein_57 (EB), Brahms_57 (EB), Clayda5_59 (EB), Coltrane_57 (EB), DelaGarza_38 (GF), Eden_58 (EB), Franklin22_60 (EB), Gack_57 (EB), Gingerbug_37 (GF), Lesiram_39 (GF), Rollins_57 (EB), Skylord_57 (EB), Sweetums_38 (GF), Teng_40 (GF), Vitas_57 (EB),

Start 36:

- Found in 13 of 94 (13.8%) of genes in pham
- Manual Annotations of this start: 11 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdInFrench_93 (EG), CandC_93 (EG), Fregley_95 (EG), Kelcole_94 (EG), KillerQueen_97 (EG), Marcie_99 (EG), OneinaGillian_92 (EG), Pepe25_91 (EG), PorkBelly_42 (FJ), RobinRose_97 (EG), Romm_97 (EG), Tempo_96 (EG), Wilca_93 (EG),

Summary by clusters:

There are 7 clusters represented in this pham: EG, EB, GG, GF, GC, FJ, EK2,

Info for manual annotations of cluster EB:

- Start number 30 was manually annotated 26 times for cluster EB.
- Start number 34 was manually annotated 11 times for cluster EB.

Info for manual annotations of cluster EG:

- Start number 29 was manually annotated 2 times for cluster EG.
- Start number 36 was manually annotated 11 times for cluster EG.

Info for manual annotations of cluster EK2:

- Start number 31 was manually annotated 7 times for cluster EK2.
- Start number 32 was manually annotated 1 time for cluster EK2.
- Start number 33 was manually annotated 15 times for cluster EK2.

Info for manual annotations of cluster GC:

- Start number 27 was manually annotated 4 times for cluster GC.

Info for manual annotations of cluster GF:

- Start number 33 was manually annotated 1 time for cluster GF.
- Start number 34 was manually annotated 3 times for cluster GF.

Info for manual annotations of cluster GG:

- Start number 18 was manually annotated 2 times for cluster GG.

Gene Information:

Gene: Akoni_16 Start: 11287, Stop: 10994, Start Num: 31

Candidate Starts for Akoni_16:

(Start: 31 @11287 has 7 MA's), (65, 11080), (67, 11056), (72, 11023),

Gene: Albright_59 Start: 38042, Stop: 38365, Start Num: 30

Candidate Starts for Albright_59:

(Start: 30 @38042 has 26 MA's), (43, 38129), (48, 38168), (51, 38180), (56, 38234),

Gene: AloeVera_16 Start: 11287, Stop: 10994, Start Num: 31

Candidate Starts for AloeVera_16:

(Start: 31 @11287 has 7 MA's), (65, 11080), (67, 11056), (72, 11023),

Gene: Armstrong_57 Start: 35575, Stop: 35892, Start Num: 34

Candidate Starts for Armstrong_57:

(Start: 34 @35575 has 14 MA's), (47, 35695), (55, 35752), (66, 35824),

Gene: Ashton_16 Start: 11291, Stop: 10998, Start Num: 31

Candidate Starts for Ashton_16:

(Start: 31 @11291 has 7 MA's), (65, 11084), (67, 11060), (72, 11027),

Gene: Astartes_17 Start: 11549, Stop: 11265, Start Num: 33

Candidate Starts for Astartes_17:

(Start: 33 @11549 has 16 MA's), (52, 11426), (59, 11369), (65, 11351), (69, 11324),

Gene: Atraxi_16 Start: 11306, Stop: 11022, Start Num: 33

Candidate Starts for Atraxi_16:

(Start: 33 @11306 has 16 MA's), (52, 11183), (59, 11126), (65, 11108), (69, 11081),

Gene: AvGardian_61 Start: 39011, Stop: 39343, Start Num: 30

Candidate Starts for AvGardian_61:

(Start: 30 @39011 has 26 MA's), (45, 39107), (47, 39128), (49, 39143), (50, 39146), (65, 39260), (66, 39278), (73, 39323), (76, 39338),

Gene: Avocadoman_60 Start: 38243, Stop: 38566, Start Num: 30

Candidate Starts for Avocadoman_60:

(3, 37802), (4, 37886), (Start: 30 @38243 has 26 MA's), (43, 38330), (48, 38369), (51, 38381), (56, 38435),

Gene: AylexOG_62 Start: 38878, Stop: 39204, Start Num: 30

Candidate Starts for AylexOG_62:

(Start: 30 @38878 has 26 MA's), (47, 38998), (49, 39013), (51, 39019), (59, 39085), (76, 39196),

Gene: BabyDaisy_63 Start: 39765, Stop: 40097, Start Num: 30

Candidate Starts for BabyDaisy_63:

(Start: 30 @39765 has 26 MA's), (43, 39852), (51, 39903), (76, 40089),

Gene: Bachaco_56 Start: 38775, Stop: 39110, Start Num: 30

Candidate Starts for Bachaco_56:

(Start: 30 @38775 has 26 MA's), (47, 38892), (50, 38910), (51, 38913), (72, 39078), (75, 39096),

Gene: Barroma_16 Start: 11287, Stop: 10994, Start Num: 31

Candidate Starts for Barroma_16:

(Start: 31 @11287 has 7 MA's), (65, 11080), (67, 11056), (72, 11023),

Gene: Bernstein_57 Start: 35573, Stop: 35890, Start Num: 34

Candidate Starts for Bernstein_57:

(1, 35003), (Start: 34 @35573 has 14 MA's), (47, 35693), (55, 35750), (66, 35822),

Gene: BirdInFrench_93 Start: 56287, Stop: 56012, Start Num: 36
Candidate Starts for BirdInFrench_93:
(Start: 36 @56287 has 11 MA's), (44, 56227), (46, 56209), (54, 56158), (64, 56101), (72, 56041),

Gene: Brahms_57 Start: 35475, Stop: 35792, Start Num: 34
Candidate Starts for Brahms_57:
(Start: 34 @35475 has 14 MA's), (47, 35595), (55, 35652), (66, 35724),

Gene: BubbaBear_60 Start: 39018, Stop: 39350, Start Num: 30
Candidate Starts for BubbaBear_60:
(Start: 30 @39018 has 26 MA's), (43, 39105), (48, 39144), (51, 39156),

Gene: CandC_93 Start: 56401, Stop: 56120, Start Num: 36
Candidate Starts for CandC_93:
(7, 56686), (35, 56404), (Start: 36 @56401 has 11 MA's), (46, 56320), (49, 56296), (54, 56266), (64, 56209), (72, 56149),

Gene: Celaena_56 Start: 38537, Stop: 38872, Start Num: 30
Candidate Starts for Celaena_56:
(Start: 30 @38537 has 26 MA's), (47, 38654), (50, 38672), (51, 38675), (72, 38840), (75, 38858),

Gene: ChiliPepper_55 Start: 37847, Stop: 38161, Start Num: 30
Candidate Starts for ChiliPepper_55:
(Start: 30 @37847 has 26 MA's), (51, 37985), (66, 38090), (72, 38129),

Gene: Clayda5_59 Start: 35540, Stop: 35857, Start Num: 34
Candidate Starts for Clayda5_59:
(Start: 34 @35540 has 14 MA's), (47, 35660), (55, 35717), (66, 35789),

Gene: Coltrane_57 Start: 35475, Stop: 35792, Start Num: 34
Candidate Starts for Coltrane_57:
(Start: 34 @35475 has 14 MA's), (47, 35595), (55, 35652), (66, 35724),

Gene: CupcakePrincess_60 Start: 38349, Stop: 38675, Start Num: 30
Candidate Starts for CupcakePrincess_60:
(Start: 30 @38349 has 26 MA's), (47, 38469), (49, 38484), (51, 38490), (59, 38556), (76, 38667),

Gene: DelaGarza_38 Start: 24570, Stop: 24280, Start Num: 34
Candidate Starts for DelaGarza_38:
(Start: 34 @24570 has 14 MA's), (38, 24537), (47, 24465), (58, 24387), (60, 24378), (66, 24345),

Gene: Dewdrop_142 Start: 85102, Stop: 85425, Start Num: 27
Candidate Starts for Dewdrop_142:
(Start: 27 @85102 has 4 MA's), (49, 85240), (68, 85357), (70, 85381), (72, 85393),

Gene: Didgeridoo_66 Start: 39884, Stop: 40207, Start Num: 30
Candidate Starts for Didgeridoo_66:
(2, 39446), (Start: 30 @39884 has 26 MA's), (43, 39971), (47, 40001), (49, 40016), (50, 40019), (76, 40199),

Gene: Dismas_56 Start: 37768, Stop: 38082, Start Num: 30
Candidate Starts for Dismas_56:
(Start: 30 @37768 has 26 MA's), (51, 37906), (66, 38011), (72, 38050),

Gene: Eden_58 Start: 36683, Stop: 37000, Start Num: 34

Candidate Starts for Eden_58:

(15, 36560), (Start: 34 @36683 has 14 MA's), (47, 36803), (55, 36860), (66, 36932),

Gene: Elva_62 Start: 39454, Stop: 39777, Start Num: 30

Candidate Starts for Elva_62:

(11, 39292), (12, 39295), (14, 39310), (Start: 30 @39454 has 26 MA's), (47, 39574), (55, 39628), (59, 39658), (76, 39769),

Gene: Eula_60 Start: 38335, Stop: 38661, Start Num: 30

Candidate Starts for Eula_60:

(Start: 30 @38335 has 26 MA's), (47, 38455), (49, 38470), (51, 38476), (59, 38542), (76, 38653),

Gene: Fede_16 Start: 11540, Stop: 11253, Start Num: 33

Candidate Starts for Fede_16:

(26, 11558), (Start: 33 @11540 has 16 MA's), (39, 11507), (65, 11339), (67, 11315), (69, 11312),

Gene: FlameThrower_55 Start: 37574, Stop: 37909, Start Num: 30

Candidate Starts for FlameThrower_55:

(Start: 30 @37574 has 26 MA's), (47, 37691), (50, 37709), (51, 37712), (72, 37877), (75, 37895),

Gene: Franklin22_60 Start: 36334, Stop: 36648, Start Num: 34

Candidate Starts for Franklin22_60:

(Start: 34 @36334 has 14 MA's), (66, 36580),

Gene: Fransoyer_87 Start: 55594, Stop: 55271, Start Num: 29

Candidate Starts for Fransoyer_87:

(9, 55765), (10, 55762), (13, 55750), (16, 55666), (20, 55648), (23, 55627), (Start: 29 @55594 has 2 MA's), (40, 55531), (44, 55489), (46, 55471), (54, 55417), (72, 55300), (73, 55294),

Gene: Fregley_95 Start: 56447, Stop: 56166, Start Num: 36

Candidate Starts for Fregley_95:

(5, 56795), (6, 56783), (7, 56732), (35, 56450), (Start: 36 @56447 has 11 MA's), (46, 56366), (49, 56342), (54, 56312), (64, 56255), (72, 56195),

Gene: Fullmetal_17 Start: 11547, Stop: 11263, Start Num: 33

Candidate Starts for Fullmetal_17:

(Start: 33 @11547 has 16 MA's), (52, 11424), (59, 11367), (65, 11349), (69, 11322),

Gene: Gack_57 Start: 36282, Stop: 36596, Start Num: 34

Candidate Starts for Gack_57:

(Start: 34 @36282 has 14 MA's), (47, 36402), (66, 36528), (72, 36567),

Gene: Gingerbug_37 Start: 25076, Stop: 24786, Start Num: 34

Candidate Starts for Gingerbug_37:

(Start: 34 @25076 has 14 MA's), (38, 25043), (53, 24950), (69, 24842),

Gene: Hendrix_144 Start: 89102, Stop: 89473, Start Num: 27

Candidate Starts for Hendrix_144:

(17, 89036), (21, 89054), (Start: 27 @89102 has 4 MA's), (37, 89153), (62, 89357), (69, 89408),

Gene: Huwbert_90 Start: 53979, Stop: 53599, Start Num: 18

Candidate Starts for Huwbert_90:

(Start: 18 @53979 has 2 MA's), (22, 53949), (Start: 34 @53895 has 14 MA's), (54, 53745), (61, 53697), (74, 53616),

Gene: IndyLu_63 Start: 39496, Stop: 39828, Start Num: 30

Candidate Starts for IndyLu_63:

(Start: 30 @39496 has 26 MA's), (43, 39583), (48, 39622), (51, 39634), (76, 39820),

Gene: Jabb_60 Start: 38349, Stop: 38675, Start Num: 30

Candidate Starts for Jabb_60:

(Start: 30 @38349 has 26 MA's), (47, 38469), (49, 38484), (51, 38490), (59, 38556), (76, 38667),

Gene: JimmyPG_16 Start: 11503, Stop: 11219, Start Num: 33

Candidate Starts for JimmyPG_16:

(Start: 33 @11503 has 16 MA's), (59, 11323), (65, 11305), (69, 11278),

Gene: JordanFarm_16 Start: 11287, Stop: 10994, Start Num: 31

Candidate Starts for JordanFarm_16:

(Start: 31 @11287 has 7 MA's), (65, 11080), (67, 11056), (72, 11023),

Gene: Kamdara_55 Start: 37806, Stop: 38120, Start Num: 30

Candidate Starts for Kamdara_55:

(Start: 30 @37806 has 26 MA's), (51, 37944), (66, 38049), (72, 38088),

Gene: Kate33_65 Start: 39232, Stop: 39564, Start Num: 30

Candidate Starts for Kate33_65:

(Start: 30 @39232 has 26 MA's), (51, 39370), (76, 39556),

Gene: Katzastrophic_57 Start: 38084, Stop: 38419, Start Num: 30

Candidate Starts for Katzastrophic_57:

(Start: 30 @38084 has 26 MA's), (47, 38201), (50, 38219), (51, 38222), (72, 38387), (75, 38405),

Gene: Kelcole_94 Start: 56959, Stop: 56681, Start Num: 36

Candidate Starts for Kelcole_94:

(24, 57004), (25, 57001), (Start: 36 @56959 has 11 MA's), (46, 56878), (54, 56827), (64, 56770), (72, 56710),

Gene: Keough_16 Start: 11275, Stop: 10991, Start Num: 33

Candidate Starts for Keough_16:

(Start: 33 @11275 has 16 MA's), (52, 11152), (59, 11095), (65, 11077), (69, 11050),

Gene: Kieran_55 Start: 37809, Stop: 38123, Start Num: 30

Candidate Starts for Kieran_55:

(Start: 30 @37809 has 26 MA's), (51, 37947), (66, 38052), (72, 38091),

Gene: KillerQueen_97 Start: 56878, Stop: 56600, Start Num: 36

Candidate Starts for KillerQueen_97:

(24, 56923), (25, 56920), (Start: 36 @56878 has 11 MA's), (46, 56797), (54, 56746), (64, 56689), (72, 56629),

Gene: Kosier_16 Start: 11540, Stop: 11253, Start Num: 33

Candidate Starts for Kosier_16:

(26, 11558), (Start: 33 @11540 has 16 MA's), (39, 11507), (65, 11339), (67, 11315), (69, 11312),

Gene: Lahqtemish_61 Start: 39515, Stop: 39841, Start Num: 30

Candidate Starts for Lahqtemish_61:

(Start: 30 @39515 has 26 MA's), (43, 39605), (48, 39644), (51, 39656), (56, 39710), (76, 39833),

Gene: Leaf_142 Start: 85033, Stop: 85356, Start Num: 27

Candidate Starts for Leaf_142:

(Start: 27 @85033 has 4 MA's), (49, 85171), (68, 85288), (70, 85312), (72, 85324),

Gene: Lesiram_39 Start: 24542, Stop: 24252, Start Num: 34

Candidate Starts for Lesiram_39:

(Start: 34 @24542 has 14 MA's), (38, 24509), (41, 24491), (47, 24437), (58, 24359), (60, 24350), (66, 24317),

Gene: Marcie_99 Start: 57159, Stop: 56878, Start Num: 36

Candidate Starts for Marcie_99:

(35, 57162), (Start: 36 @57159 has 11 MA's), (64, 56967), (72, 56907),

Gene: Mazun_17 Start: 11548, Stop: 11264, Start Num: 33

Candidate Starts for Mazun_17:

(Start: 33 @11548 has 16 MA's), (52, 11425), (59, 11368), (65, 11350), (69, 11323),

Gene: Moleficient_17 Start: 11543, Stop: 11259, Start Num: 33

Candidate Starts for Moleficient_17:

(Start: 33 @11543 has 16 MA's), (52, 11420), (59, 11363), (65, 11345), (69, 11318),

Gene: Morrill_16 Start: 11285, Stop: 11001, Start Num: 33

Candidate Starts for Morrill_16:

(Start: 33 @11285 has 16 MA's), (52, 11162), (59, 11105), (65, 11087), (69, 11060),

Gene: MsUbiquitous_60 Start: 38349, Stop: 38675, Start Num: 30

Candidate Starts for MsUbiquitous_60:

(Start: 30 @38349 has 26 MA's), (47, 38469), (49, 38484), (51, 38490), (59, 38556), (76, 38667),

Gene: OneinaGillian_92 Start: 55864, Stop: 55589, Start Num: 36

Candidate Starts for OneinaGillian_92:

(24, 55909), (25, 55906), (Start: 36 @55864 has 11 MA's), (46, 55786), (54, 55735), (64, 55678), (72, 55618),

Gene: Pepe25_91 Start: 55206, Stop: 54931, Start Num: 36

Candidate Starts for Pepe25_91:

(Start: 36 @55206 has 11 MA's), (44, 55146), (46, 55128), (54, 55077), (64, 55020), (72, 54960),

Gene: Pharky_17 Start: 11507, Stop: 11223, Start Num: 33

Candidate Starts for Pharky_17:

(Start: 33 @11507 has 16 MA's), (52, 11384), (59, 11327), (65, 11309), (69, 11282),

Gene: Phedro_17 Start: 11507, Stop: 11223, Start Num: 33

Candidate Starts for Phedro_17:

(Start: 33 @11507 has 16 MA's), (52, 11384), (59, 11327), (65, 11309), (69, 11282),

Gene: Phractured_17 Start: 11507, Stop: 11223, Start Num: 33

Candidate Starts for Phractured_17:

(Start: 33 @11507 has 16 MA's), (52, 11384), (59, 11327), (65, 11309), (69, 11282),

Gene: PhriedRice_17 Start: 11517, Stop: 11224, Start Num: 32

Candidate Starts for PhriedRice_17:

(8, 11718), (Start: 32 @11517 has 1 MA's), (65, 11310), (67, 11286),

Gene: PorkBelly_42 Start: 30342, Stop: 30058, Start Num: 36

Candidate Starts for PorkBelly_42:

(Start: 36 @30342 has 11 MA's), (41, 30309), (42, 30297), (57, 30174), (59, 30165), (71, 30090),

Gene: QMacho_62 Start: 38995, Stop: 39321, Start Num: 30

Candidate Starts for QMacho_62:

(Start: 30 @38995 has 26 MA's), (47, 39115), (49, 39130), (51, 39136), (59, 39202), (76, 39313),

Gene: Quenya_59 Start: 38216, Stop: 38551, Start Num: 30

Candidate Starts for Quenya_59:

(Start: 30 @38216 has 26 MA's), (45, 38312), (47, 38333), (49, 38348), (50, 38351), (55, 38390), (75, 38537), (76, 38540),

Gene: Rasputia_139 Start: 86480, Stop: 86809, Start Num: 27

Candidate Starts for Rasputia_139:

(Start: 27 @86480 has 4 MA's), (52, 86633), (68, 86741), (70, 86765), (72, 86777),

Gene: RicoCaldo_17 Start: 11539, Stop: 11255, Start Num: 33

Candidate Starts for RicoCaldo_17:

(Start: 33 @11539 has 16 MA's), (52, 11416), (59, 11359), (65, 11341), (69, 11314),

Gene: RobinRose_97 Start: 57031, Stop: 56753, Start Num: 36

Candidate Starts for RobinRose_97:

(24, 57076), (25, 57073), (Start: 36 @57031 has 11 MA's), (46, 56950), (54, 56899), (64, 56842), (72, 56782),

Gene: Rollins_57 Start: 35573, Stop: 35890, Start Num: 34

Candidate Starts for Rollins_57:

(1, 35003), (Start: 34 @35573 has 14 MA's), (47, 35693), (55, 35750), (66, 35822),

Gene: Romm_97 Start: 57028, Stop: 56750, Start Num: 36

Candidate Starts for Romm_97:

(24, 57073), (25, 57070), (Start: 36 @57028 has 11 MA's), (46, 56947), (54, 56896), (64, 56839), (72, 56779),

Gene: Rona_55 Start: 37759, Stop: 38073, Start Num: 30

Candidate Starts for Rona_55:

(Start: 30 @37759 has 26 MA's), (51, 37897), (66, 38002), (72, 38041),

Gene: SadLad_89 Start: 56322, Stop: 55999, Start Num: 29

Candidate Starts for SadLad_89:

(9, 56493), (10, 56490), (13, 56478), (16, 56394), (20, 56376), (23, 56355), (Start: 29 @56322 has 2 MA's), (40, 56259), (44, 56217), (46, 56199), (54, 56145), (72, 56028), (73, 56022),

Gene: Sharkboy_56 Start: 37858, Stop: 38187, Start Num: 30

Candidate Starts for Sharkboy_56:

(Start: 30 @37858 has 26 MA's), (47, 37975), (49, 37990), (51, 37996), (66, 38116), (67, 38122), (72, 38155),

Gene: ShyRosie_16 Start: 11287, Stop: 10994, Start Num: 31

Candidate Starts for ShyRosie_16:

(Start: 31 @11287 has 7 MA's), (65, 11080), (67, 11056), (72, 11023),

Gene: Skylord_57 Start: 35514, Stop: 35831, Start Num: 34

Candidate Starts for Skylord_57:

(1, 34944), (Start: 34 @35514 has 14 MA's), (47, 35634), (55, 35691), (66, 35763),

Gene: Softsoap_62 Start: 39051, Stop: 39383, Start Num: 30

Candidate Starts for Softsoap_62:

(Start: 30 @39051 has 26 MA's), (43, 39138), (48, 39177), (51, 39189), (76, 39375),

Gene: SoilSleuth_16 Start: 11287, Stop: 10994, Start Num: 31

Candidate Starts for SoilSleuth_16:

(Start: 31 @11287 has 7 MA's), (65, 11080), (67, 11056), (72, 11023),

Gene: StagePhright_17 Start: 11507, Stop: 11223, Start Num: 33

Candidate Starts for StagePhright_17:

(Start: 33 @11507 has 16 MA's), (52, 11384), (59, 11327), (65, 11309), (69, 11282),

Gene: Sweetums_38 Start: 24663, Stop: 24373, Start Num: 34

Candidate Starts for Sweetums_38:

(Start: 34 @24663 has 14 MA's), (38, 24630), (41, 24612), (47, 24558), (58, 24480), (60, 24471), (66, 24438),

Gene: Tempo_96 Start: 57068, Stop: 56790, Start Num: 36

Candidate Starts for Tempo_96:

(24, 57113), (25, 57110), (Start: 36 @57068 has 11 MA's), (46, 56987), (54, 56936), (64, 56879), (72, 56819),

Gene: Teng_40 Start: 24578, Stop: 24288, Start Num: 34

Candidate Starts for Teng_40:

(Start: 34 @24578 has 14 MA's), (38, 24545), (41, 24527), (47, 24473), (58, 24395), (60, 24386), (66, 24353),

Gene: ThirteenKH_16 Start: 11284, Stop: 11000, Start Num: 33

Candidate Starts for ThirteenKH_16:

(Start: 33 @11284 has 16 MA's), (52, 11161), (59, 11104), (65, 11086), (69, 11059),

Gene: TrippleS_16 Start: 11291, Stop: 11007, Start Num: 33

Candidate Starts for TrippleS_16:

(Start: 33 @11291 has 16 MA's), (52, 11168), (59, 11111), (65, 11093), (69, 11066),

Gene: Triscuit_88 Start: 53720, Stop: 53340, Start Num: 18

Candidate Starts for Triscuit_88:

(Start: 18 @53720 has 2 MA's), (19, 53711), (22, 53690), (Start: 34 @53636 has 14 MA's), (54, 53486), (61, 53438), (74, 53357),

Gene: Truong_16 Start: 11287, Stop: 10994, Start Num: 31

Candidate Starts for Truong_16:

(Start: 31 @11287 has 7 MA's), (65, 11080), (67, 11056), (72, 11023),

Gene: Vitas_57 Start: 35546, Stop: 35863, Start Num: 34

Candidate Starts for Vitas_57:

(1, 34976), (Start: 34 @35546 has 14 MA's), (47, 35666), (55, 35723), (66, 35795),

Gene: Waterlily_16 Start: 11287, Stop: 10994, Start Num: 31

Candidate Starts for Waterlily_16:

(Start: 31 @11287 has 7 MA's), (65, 11080), (67, 11056), (72, 11023),

Gene: Wilca_93 Start: 56287, Stop: 56012, Start Num: 36

Candidate Starts for Wilca_93:

(Start: 36 @56287 has 11 MA's), (44, 56227), (46, 56209), (54, 56158), (64, 56101), (72, 56041),

Gene: Wrackline_51 Start: 28147, Stop: 27845, Start Num: 33

Candidate Starts for Wrackline_51:

(28, 28162), (Start: 33 @28147 has 16 MA's), (45, 28057), (55, 27979), (63, 27928), (69, 27901),

Gene: Yafa_16 Start: 11307, Stop: 11023, Start Num: 33

Candidate Starts for Yafa_16:

(Start: 33 @11307 has 16 MA's), (52, 11184), (59, 11127), (65, 11109), (69, 11082),