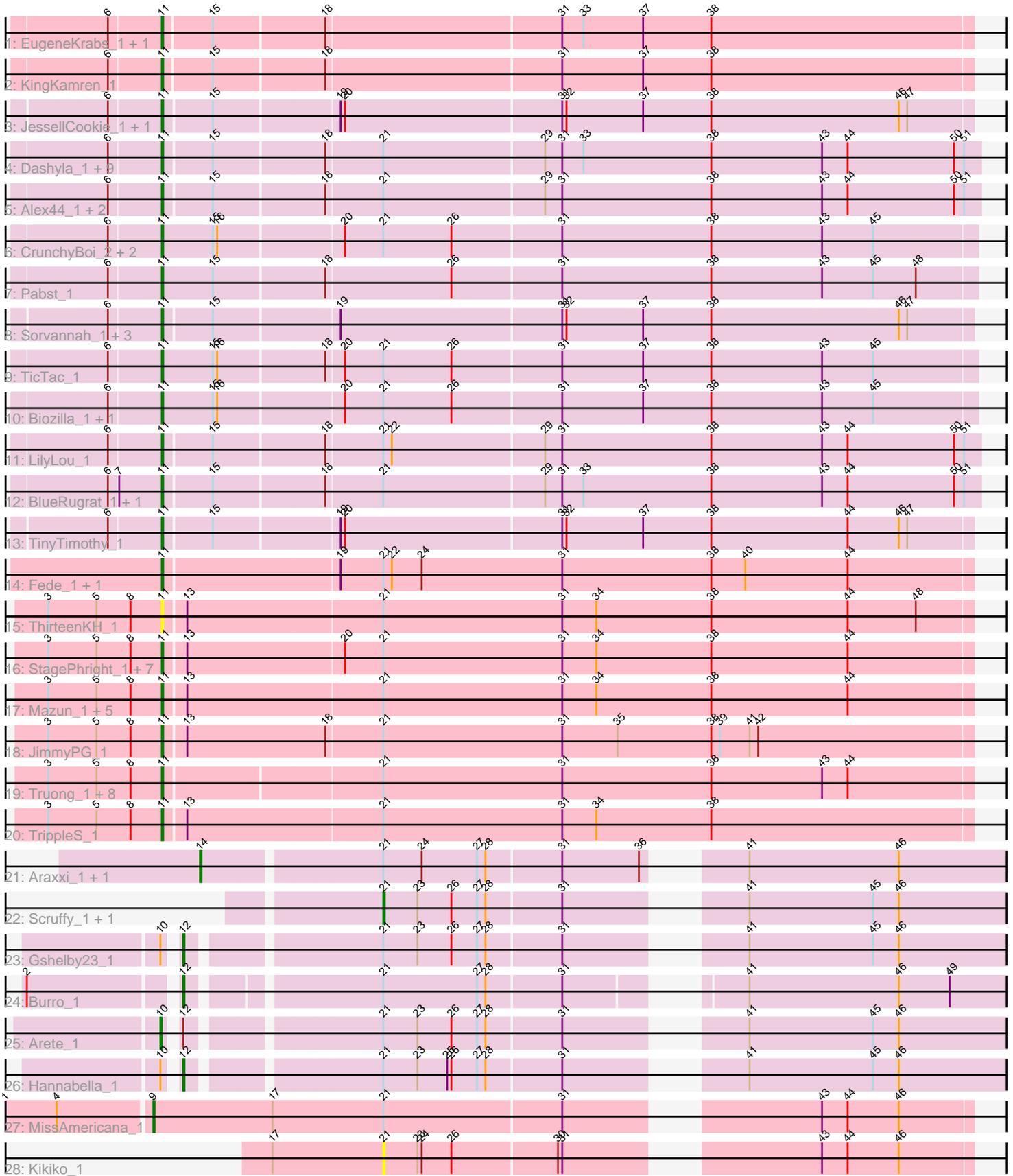# Pham 283772

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 283772 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283772 has 71 members, 12 are drafts.

Phages represented in each track:
• Track 1 : EugeneKrabs_1, Zhengyi_1
• Track 2 : KingKamren_1
• Track 3 : JessellCookie_1, MiamiPanther_1
• Track 4 : Dashyla_1, Corn21_1, Unphazed_1, Stormbreaker_1, DumpQuist_1, Xitlalli_1, Conditioner_1, Birdfeeder_1, TownLake_1, ArMaWen_1
• Track 5 : Alex44_1, Phogo_1, LesNorah_1
• Track 6 : CrunchyBoi_2, PineapplePluto_2, Oatly_1
• Track 7 : Pabst_1
• Track 8 : Sorvannah_1, YellowPanda_1, Salvatore2000_1, Wesak_1
• Track 9 : TicTac_1
• Track 10 : Biozilla_1, HitchHiker_2
• Track 11 : LilyLou_1
• Track 12 : BlueRugrat_1, SwissCheezer_1
• Track 13 : TinyTimothy_1
• Track 14 : Fede_1, Kosier_1
• Track 15 : ThirteenKH_1
• Track 16 : StagePhright_1, Astartes_1, Phedro_1, PhriedRice_1, Phractured_1, Pharky_1, Moleficent_1, Fullmetal_1
• Track 17 : Mazun_1, RicoCaldo_1, Keough_1, Atraxi_1, Morrill_1, Yafa_1
• Track 18 : JimmyPG_1
• Track 19 : Truong_1, JordanFarm_1, Barroma_1, AloeVera_1, Waterlily_1, Akoni_1, ShyRosie_1, Ashton_1, SoilSleuth_1
• Track 20 : TrippleS_1
• Track 21 : Araxxi_1, DoTi_1
• Track 22 : Scruffy_1, Casino_1
• Track 23 : Gshelby23_1
• Track 24 : Burro_1
• Track 25 : Arete_1
• Track 26 : Hannabella_1
• Track 27 : MissAmericana_1
• Track 28 : Kikiko_1

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

The start number called the most often in the published annotations is 11, it was called in 51 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Akoni_1, Alex44_1, AloeVera_1, ArMaWen_1, Ashton_1, Astartes_1, Atraxi_1, Barroma_1, Biozilla_1, Birdfeeder_1, BlueRugrat_1, Conditioner_1, Corn21_1, CrunchyBoi_2, Dashyla_1, DumpQuist_1, EugeneKrabs_1, Fede_1, Fullmetal_1, HitchHiker_2, JessellCookie_1, JimmyPG_1, JordanFarm_1, Keough_1, KingKamren_1, Kosier_1, LesNorah_1, LilyLou_1, Mazun_1, MiamiPanther_1, Moleficent_1, Morrill_1, Oatly_1, Pabst_1, Pharky_1, Phedro_1, Phogo_1, Phractured_1, PhriedRice_1, PineapplePluto_2, RicoCaldo_1, Salvatore2000_1, ShyRosie_1, SoilSleuth_1, Sorvannah_1, StagePhright_1, Stormbreaker_1, SwissCheezer_1, ThirteenKH_1, TicTac_1, TinyTimothy_1, TownLake_1, TrippleS_1, Truong_1, Unphazed_1, Waterlily_1, Wesak_1, Xitlalli_1, Yafa_1, YellowPanda_1, Zhengyi_1,

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

Genes that do not have the "Most Annotated" start:
• Araxxi_1, Arete_1, Burro_1, Casino_1, DoTi_1, Gshelby23_1, Hannabella_1, Kikiko_1, MissAmericana_1, Scruffy_1,

Summary by start number:

Start 9:
• Found in 1 of 71 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MissAmericana_1 (EM2),

Start 10:
• Found in 3 of 71 (4.2%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Arete_1 (EM1),

Start 11:
• Found in 61 of 71 (85.9%) of genes in pham
• Manual Annotations of this start: 51 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Akoni_1 (EK2), Alex44_1 (EK1), AloeVera_1 (EK2), ArMaWen_1 (EK1), Ashton_1 (EK2), Astartes_1 (EK2), Atraxi_1 (EK2), Barroma_1 (EK2), Biozilla_1 (EK1), Birdfeeder_1 (EK1), BlueRugrat_1 (EK1), Conditioner_1 (EK1), Corn21_1 (EK1), CrunchyBoi_2 (EK1), Dashyla_1 (EK1), DumpQuist_1 (EK1), EugeneKrabs_1 (EK), Fede_1 (EK2), Fullmetal_1 (EK2), HitchHiker_2 (EK1), JessellCookie_1 (EK1), JimmyPG_1 (EK2), JordanFarm_1 (EK2), Keough_1 (EK2), KingKamren_1 (EK), Kosier_1 (EK2), LesNorah_1 (EK1), LilyLou_1 (EK1), Mazun_1 (EK2), MiamiPanther_1 (EK1), Moleficent_1 (EK2), Morrill_1 (EK2), Oatly_1 (EK1), Pabst_1 (EK1), Pharky_1 (EK2), Phedro_1 (EK2), Phogo_1 (EK1), Phractured_1 (EK2), PhriedRice_1 (EK2), PineapplePluto_2 (EK1), RicoCaldo_1 (EK2), Salvatore2000_1 (EK1), ShyRosie_1 (EK2), SoilSleuth_1 (EK2), Sorvannah_1 (EK1), StagePhright_1 (EK2), Stormbreaker_1 (EK1), SwissCheezer_1

(EK1), ThirteenKH_1 (EK2), TicTac_1 (EK1), TinyTimothy_1 (EK1), TownLake_1 (EK1), TrippleS_1 (EK2), Truong_1 (EK2), Unphazed_1 (EK1), Waterlily_1 (EK2), Wesak_1 (EK1), Xitlalli_1 (EK1), Yafa_1 (EK2), YellowPanda_1 (EK1), Zhengyi_1 (EK),

Start 12:
• Found in 4 of 71 (5.6%) of genes in pham
• Manual Annotations of this start: 3 of 59
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Burro_1 (EM1), Gshelby23_1 (EM1), Hannabella_1 (EM1),

Start 14:
• Found in 2 of 71 (2.8%) of genes in pham
• Manual Annotations of this start: 2 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Araxxi_1 (EM1), DoTi_1 (EM1),

Start 21:
• Found in 60 of 71 (84.5%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 5.0% of time when present
• Phage (with cluster) where this start called: Casino_1 (EM1), Kikiko_1 (EM2), Scruffy_1 (EM1),

Summary by clusters:

There are 5 clusters represented in this pham: EK, EM1, EK2, EK1, EM2,

Info for manual annotations of cluster EK:
•Start number 11 was manually annotated 3 times for cluster EK.

Info for manual annotations of cluster EK1:
•Start number 11 was manually annotated 25 times for cluster EK1.

Info for manual annotations of cluster EK2:
•Start number 11 was manually annotated 23 times for cluster EK2.

Info for manual annotations of cluster EM1:
•Start number 10 was manually annotated 1 time for cluster EM1.
•Start number 12 was manually annotated 3 times for cluster EM1.
•Start number 14 was manually annotated 2 times for cluster EM1.
•Start number 21 was manually annotated 1 time for cluster EM1.

Info for manual annotations of cluster EM2:
•Start number 9 was manually annotated 1 time for cluster EM2.

Gene Information:

Gene: Akoni_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for Akoni_1:

(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: Alex44_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Alex44_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: AloeVera_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for AloeVera_1:
(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: ArMaWen_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for ArMaWen_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: Araxxi_1 Start: 516, Stop: 1, Start Num: 14
Candidate Starts for Araxxi_1:
(Start: 14 @516 has 2 MA's), (Start: 21 @399 has 1 MA's), (24, 372), (27, 333), (28, 327), (31, 276), (36, 222), (41, 183), (46, 78),

Gene: Arete_1 Start: 525, Stop: 1, Start Num: 10
Candidate Starts for Arete_1:
(Start: 10 @525 has 1 MA's), (Start: 12 @519 has 3 MA's), (Start: 21 @399 has 1 MA's), (23, 375), (26, 351), (27, 333), (28, 327), (31, 276), (41, 183), (45, 96), (46, 78),

Gene: Ashton_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for Ashton_1:
(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: Astartes_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Astartes_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (20, 441), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Atraxi_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Atraxi_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Barroma_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for Barroma_1:
(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: Biozilla_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Biozilla_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 528), (16, 525), (20, 441), (Start: 21 @414 has 1 MA's), (26, 366), (31, 291), (37, 234), (38, 186), (43, 108), (45, 72),

Gene: Birdfeeder_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Birdfeeder_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306),
(31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: BlueRugrat_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for BlueRugrat_1:
(6, 600), (7, 594), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29,
306), (31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: Burro_1 Start: 510, Stop: 1, Start Num: 12
Candidate Starts for Burro_1:
(2, 606), (Start: 12 @510 has 3 MA's), (Start: 21 @393 has 1 MA's), (27, 327), (28, 321), (31, 270), (41,
183), (46, 78), (49, 42),

Gene: Casino_1 Start: 399, Stop: 1, Start Num: 21
Candidate Starts for Casino_1:
(Start: 21 @399 has 1 MA's), (23, 375), (26, 351), (27, 333), (28, 327), (31, 276), (41, 183), (45, 96),
(46, 78),

Gene: Conditioner_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Conditioner_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306),
(31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: Corn21_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Corn21_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306),
(31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: CrunchyBoi_2 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for CrunchyBoi_2:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 528), (16, 525), (20, 441), (Start: 21 @414 has 1 MA's),
(26, 366), (31, 291), (38, 186), (43, 108), (45, 72),

Gene: Dashyla_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Dashyla_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306),
(31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: DoTi_1 Start: 516, Stop: 1, Start Num: 14
Candidate Starts for DoTi_1:
(Start: 14 @516 has 2 MA's), (Start: 21 @399 has 1 MA's), (24, 372), (27, 333), (28, 327), (31, 276),
(36, 222), (41, 183), (46, 78),

Gene: DumpQuist_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for DumpQuist_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306),
(31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: EugeneKrabs_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for EugeneKrabs_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (18, 450), (31, 288), (33, 273), (37, 231), (38, 183),

Gene: Fede_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Fede_1:
(Start: 11 @564 has 51 MA's), (19, 444), (Start: 21 @414 has 1 MA's), (22, 408), (24, 387), (31, 288), (38, 183), (40, 159), (44, 87),

Gene: Fullmetal_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Fullmetal_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (20, 441), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Gshelby23_1 Start: 519, Stop: 1, Start Num: 12
Candidate Starts for Gshelby23_1:
(Start: 10 @525 has 1 MA's), (Start: 12 @519 has 3 MA's), (Start: 21 @399 has 1 MA's), (23, 375), (26, 351), (27, 333), (28, 327), (31, 276), (41, 183), (45, 96), (46, 78),

Gene: Hannabella_1 Start: 519, Stop: 1, Start Num: 12
Candidate Starts for Hannabella_1:
(Start: 10 @525 has 1 MA's), (Start: 12 @519 has 3 MA's), (Start: 21 @399 has 1 MA's), (23, 375), (25, 354), (26, 351), (27, 333), (28, 327), (31, 276), (41, 183), (45, 96), (46, 78),

Gene: HitchHiker_2 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for HitchHiker_2:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 528), (16, 525), (20, 441), (Start: 21 @414 has 1 MA's), (26, 366), (31, 291), (37, 234), (38, 186), (43, 108), (45, 72),

Gene: JessellCookie_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for JessellCookie_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (19, 441), (20, 438), (31, 288), (32, 285), (37, 231), (38, 183), (46, 51), (47, 45),

Gene: JimmyPG_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for JimmyPG_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (18, 453), (Start: 21 @414 has 1 MA's), (31, 288), (35, 249), (38, 183), (39, 177), (41, 156), (42, 150),

Gene: JordanFarm_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for JordanFarm_1:
(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: Keough_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Keough_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Kikiko_1 Start: 372, Stop: 1, Start Num: 21
Candidate Starts for Kikiko_1:
(17, 450), (Start: 21 @372 has 1 MA's), (23, 348), (24, 345), (26, 324), (30, 252), (31, 249), (43, 105), (44, 87), (46, 51),

Gene: KingKamren_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for KingKamren_1:

(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (18, 450), (31, 288), (37, 231), (38, 183),

Gene: Kosier_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Kosier_1:
(Start: 11 @564 has 51 MA's), (19, 444), (Start: 21 @414 has 1 MA's), (22, 408), (24, 387), (31, 288), (38, 183), (40, 159), (44, 87),

Gene: LesNorah_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for LesNorah_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: LilyLou_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for LilyLou_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (22, 411), (29, 306), (31, 294), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: Mazun_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Mazun_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: MiamiPanther_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for MiamiPanther_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (19, 441), (20, 438), (31, 288), (32, 285), (37, 231), (38, 183), (46, 51), (47, 45),

Gene: MissAmericana_1 Start: 534, Stop: 1, Start Num: 9
Candidate Starts for MissAmericana_1:
(1, 633), (4, 597), (Start: 9 @534 has 1 MA's), (17, 450), (Start: 21 @372 has 1 MA's), (31, 249), (43, 105), (44, 87), (46, 51),

Gene: Moleficent_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Moleficent_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (20, 441), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Morrill_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Morrill_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Oatly_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Oatly_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 528), (16, 525), (20, 441), (Start: 21 @414 has 1 MA's), (26, 366), (31, 291), (38, 186), (43, 108), (45, 72),

Gene: Pabst_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Pabst_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 528), (18, 453), (26, 366), (31, 291), (38, 186), (43, 108), (45, 72), (48, 42),

Gene: Pharky_1 Start: 564, Stop: 1, Start Num: 11

Candidate Starts for Pharky_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (20, 441), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Phedro_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Phedro_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (20, 441), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Phogo_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Phogo_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: Phractured_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Phractured_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (20, 441), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: PhriedRice_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for PhriedRice_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (20, 441), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: PineapplePluto_2 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for PineapplePluto_2:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 528), (16, 525), (20, 441), (Start: 21 @414 has 1 MA's), (26, 366), (31, 291), (38, 186), (43, 108), (45, 72),

Gene: RicoCaldo_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for RicoCaldo_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Salvatore2000_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for Salvatore2000_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (19, 441), (31, 288), (32, 285), (37, 231), (38, 183), (46, 51), (47, 45),

Gene: Scruffy_1 Start: 399, Stop: 1, Start Num: 21
Candidate Starts for Scruffy_1:
(Start: 21 @399 has 1 MA's), (23, 375), (26, 351), (27, 333), (28, 327), (31, 276), (41, 183), (45, 96), (46, 78),

Gene: ShyRosie_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for ShyRosie_1:
(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: SoilSleuth_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for SoilSleuth_1:
(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: Sorvannah_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for Sorvannah_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (19, 441), (31, 288), (32, 285), (37, 231), (38, 183), (46, 51), (47, 45),

Gene: StagePhright_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for StagePhright_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (20, 441), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: Stormbreaker_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Stormbreaker_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: SwissCheezer_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for SwissCheezer_1:
(6, 600), (7, 594), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: ThirteenKH_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for ThirteenKH_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87), (48, 39),

Gene: TicTac_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for TicTac_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 528), (16, 525), (18, 453), (20, 441), (Start: 21 @414 has 1 MA's), (26, 366), (31, 291), (37, 234), (38, 186), (43, 108), (45, 72),

Gene: TinyTimothy_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for TinyTimothy_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (19, 441), (20, 438), (31, 288), (32, 285), (37, 231), (38, 183), (44, 87), (46, 51), (47, 45),

Gene: TownLake_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for TownLake_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: TrippleS_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for TrippleS_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183),

Gene: Truong_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for Truong_1:
(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: Unphazed_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Unphazed_1:

(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: Waterlily_1 Start: 561, Stop: 1, Start Num: 11
Candidate Starts for Waterlily_1:
(3, 639), (5, 606), (8, 582), (Start: 11 @561 has 51 MA's), (Start: 21 @414 has 1 MA's), (31, 288), (38, 183), (43, 105), (44, 87),

Gene: Wesak_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for Wesak_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (19, 441), (31, 288), (32, 285), (37, 231), (38, 183), (46, 51), (47, 45),

Gene: Xitlalli_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Xitlalli_1:
(6, 600), (Start: 11 @564 has 51 MA's), (15, 531), (18, 456), (Start: 21 @417 has 1 MA's), (29, 306), (31, 294), (33, 279), (38, 189), (43, 111), (44, 93), (50, 18), (51, 12),

Gene: Yafa_1 Start: 564, Stop: 1, Start Num: 11
Candidate Starts for Yafa_1:
(3, 642), (5, 609), (8, 585), (Start: 11 @564 has 51 MA's), (13, 549), (Start: 21 @414 has 1 MA's), (31, 288), (34, 264), (38, 183), (44, 87),

Gene: YellowPanda_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for YellowPanda_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (19, 441), (31, 288), (32, 285), (37, 231), (38, 183), (46, 51), (47, 45),

Gene: Zhengyi_1 Start: 558, Stop: 1, Start Num: 11
Candidate Starts for Zhengyi_1:
(6, 594), (Start: 11 @558 has 51 MA's), (15, 525), (18, 450), (31, 288), (33, 273), (37, 231), (38, 183),