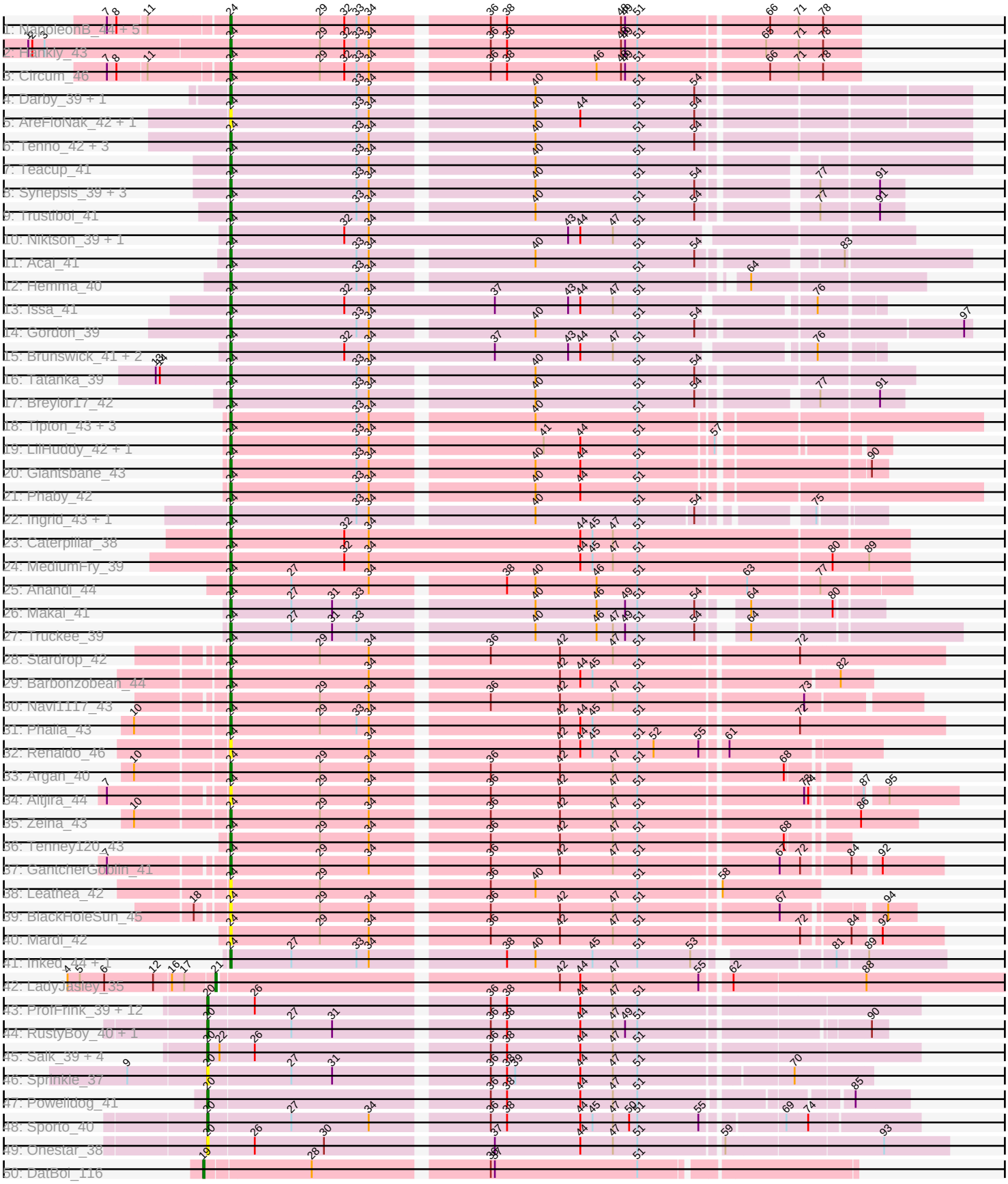
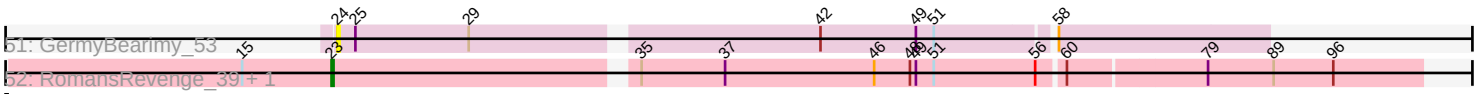
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51: GermyBearmy_53
52: RomansRevenge_39 + 1
24
25
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42
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46
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51
56
60
79
89
96

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 347479 Report

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

Pham number 347479 has 92 members, 16 are drafts.

Phages represented in each track:
- Track 1 : NapoleonB_44, YoshiYama_44, KeaneyLin_43, GoCrazy_43, Bowling_44, Dynamite_44
- Track 2 : Hankly_43
- Track 3 : Circum_46
- Track 4 : Darby_39, Nightmare_42
- Track 5 : AreFloNak_42, Nivinsha_42
- Track 6 : Tenno_42, CapnMurica_39, Dinallo_41, MiniBagel_41
- Track 7 : Teacup_41
- Track 8 : Synepsis_39, Westerlin_41, DevitoJr_40, ScienceWizSam_42
- Track 9 : Trustiboi_41
- Track 10 : Niktson_39, ElephantMan_39
- Track 11 : Acai_41
- Track 12 : Hemma_40
- Track 13 : Issa_41
- Track 14 : Gordon_39
- Track 15 : Brunswick_41, CastorTray_42, LucySwiss_40
- Track 16 : Tatanka_39
- Track 17 : Breylor17_42
- Track 18 : Tipton_43, Chlochlo_43, Bouchard_41, Tokki_44
- Track 19 : LilHuddy_42, Shepard_45
- Track 20 : Giantsbane_43
- Track 21 : Phaby_42
- Track 22 : Ingrid_43, Loretta_43
- Track 23 : Caterpillar_38
- Track 24 : MediumFry_39
- Track 25 : Anandi_44
- Track 26 : Makai_41
- Track 27 : Truckee_39
- Track 28 : Stardrop_42
- Track 29 : Barbonzobean_44
- Track 30 : Navi1117_43
- Track 31 : Phaila_43
- Track 32 : Renaldo_46
- Track 33 : Argan_40
- Track 34 : Altjira_44
- Track 35 : Zeina_43
- Track 36 : Tenney120_43

• Track 37 : GantcherGoblin_41
• Track 38 : Leathea_42
• Track 39 : BlackHoleSun_45
• Track 40 : Mardi_42
• Track 41 : Inked_44, Zippen_43
• Track 42 : LadyJasley_35
• Track 43 : ProfFrink_39, StarLord_39, Shiba_38, Boog_38, Egad_39, BronxBay_39, MrAaronian_39, Sloopyjoe_39, Raunak_38, Michelle_39, Djungelskog_39, HerbBucket_38, Spain_40
• Track 44 : RustyBoy_40, Natasha_40
• Track 45 : Salk_39, Stayer_39, DoctorPepper_38, Jeremy4pt0_38, Linda_39
• Track 46 : Sprinkle_37
• Track 47 : Powelldog_41
• Track 48 : Sporto_40
• Track 49 : Onestar_38
• Track 50 : DatBoi_116
• Track 51 : GermyBearimy_53
• Track 52 : RomansRevenge_39, Boise_38

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

The start number called the most often in the published annotations is 24, it was called in 53 of the 76 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acai_41, Altjira_44, Anandi_44, AreFloNak_42, Argan_40, Barbonzobean_44, BlackHoleSun_45, Bouchard_41, Bowling_44, Breylor17_42, Brunswick_41, CapnMurica_39, CastorTray_42, Caterpillar_38, Chlochlo_43, Circum_46, Darby_39, DevitoJr_40, Dinallo_41, Dynamite_44, ElephantMan_39, GantcherGoblin_41, GermyBearimy_53, Giantsbane_43, GoCrazy_43, Gordon_39, Hankly_43, Hemma_40, Ingrid_43, Inked_44, Issa_41, KeaneyLin_43, Leathea_42, LilHuddy_42, Loretta_43, LucySwiss_40, Makai_41, Mardi_42, MediumFry_39, MiniBagel_41, NapoleonB_44, Navi1117_43, Nightmare_42, Niktson_39, Nivinsha_42, Phaby_42, Phaila_43, Renaldo_46, ScienceWizSam_42, Shepard_45, Stardrop_42, Synepsis_39, Tatanka_39, Teacup_41, Tenney120_43, Tenno_42, Tipton_43, Tokki_44, Truckee_39, Trustiboi_41, Westerlin_41, YoshiYama_44, Zeina_43, Zippen_43,

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

Genes that do not have the "Most Annotated" start:
• Boise_38, Boog_38, BronxBay_39, DatBoi_116, Djungelskog_39, DoctorPepper_38, Egad_39, HerbBucket_38, Jeremy4pt0_38, LadyJasley_35, Linda_39, Michelle_39, MrAaronian_39, Natasha_40, Onestar_38, Powelldog_41, ProfFrink_39, Raunak_38, RomansRevenge_39, RustyBoy_40, Salk_39, Shiba_38, Sloopyjoe_39, Spain_40, Sporto_40, Sprinkle_37, StarLord_39, Stayer_39,

Summary by start number:

Start 19:
• Found in 1 of 92 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DatBoi_116 (DL),

Start 20:
• Found in 24 of 92 (26.1%) of genes in pham
• Manual Annotations of this start: 20 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Boog_38 (AW), BronxBay_39 (AW), Djungelskog_39 (AW), DoctorPepper_38 (AW), Egad_39 (AW), HerbBucket_38 (AW), Jeremy4pt0_38 (AW), Linda_39 (AW), Michelle_39 (AW), MrAaronian_39 (AW), Natasha_40 (AW), Onestar_38 (AW), Powelldog_41 (AW), ProfFrink_39 (AW), Raunak_38 (AW), RustyBoy_40 (AW), Salk_39 (AW), Shiba_38 (AW), Sloopyjoe_39 (AW), Spain_40 (AW), Sporto_40 (AW), Sprinkle_37 (AW), StarLord_39 (AW), Stayer_39 (AW),

Start 21:
• Found in 1 of 92 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: LadyJasley_35 (AV),

Start 23:
• Found in 2 of 92 (2.2%) of genes in pham
• Manual Annotations of this start: 1 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Boise_38 (FT), RomansRevenge_39 (FT),

Start 24:
• Found in 64 of 92 (69.6%) of genes in pham
• Manual Annotations of this start: 53 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acai_41 (AU1), Altjira_44 (AU6), Anandi_44 (AU4), AreFloNak_42 (AU1), Argan_40 (AU6), Barbonzobean_44 (AU6), BlackHoleSun_45 (AU6), Bouchard_41 (AU2), Bowling_44 (AM), Breylor17_42 (AU1), Brunswick_41 (AU1), CapnMurica_39 (AU1), CastorTray_42 (AU1), Caterpillar_38 (AU4), Chlochlo_43 (AU2), Circum_46 (AM), Darby_39 (AU1), DevitoJr_40 (AU1), Dinallo_41 (AU1), Dynamite_44 (AM), ElephantMan_39 (AU1), GantcherGoblin_41 (AU6), GermyBearimy_53 (FI), Giantsbane_43 (AU2), GoCrazy_43 (AM), Gordon_39 (AU1), Hankly_43 (AM), Hemma_40 (AU1), Ingrid_43 (AU3), Inked_44 (AU7), Issa_41 (AU1), KeaneyLin_43 (AM), Leathea_42 (AU6), LilHuddy_42 (AU2), Loretta_43 (AU3), LucySwiss_40 (AU1), Makai_41 (AU5), Mardi_42 (AU6), MediumFry_39 (AU4), MiniBagel_41 (AU1), NapoleonB_44 (AM), Navi1117_43 (AU6), Nightmare_42 (AU1), Niktson_39 (AU1), Nivinsha_42 (AU1), Phaby_42 (AU2), Phaila_43 (AU6), Renaldo_46 (AU6), ScienceWizSam_42 (AU1), Shepard_45 (AU2), Stardrop_42 (AU6), Synepsis_39 (AU1), Tatanka_39 (AU1), Teacup_41 (AU1), Tenney120_43 (AU6), Tenno_42 (AU1), Tipton_43 (AU2), Tokki_44 (AU2), Truckee_39 (AU5), Trustiboi_41 (AU1), Westerlin_41 (AU1), YoshiYama_44 (AM), Zeina_43 (AU6), Zippen_43 (AU7),

Summary by clusters:

There are 13 clusters represented in this pham: DL, FT, AU7, AV, AM, AU1, AU3, AU2, AU5, AU4, AW, AU6, FI,

Info for manual annotations of cluster AM:
•Start number 24 was manually annotated 7 times for cluster AM.

Info for manual annotations of cluster AU1:
•Start number 24 was manually annotated 21 times for cluster AU1.

Info for manual annotations of cluster AU2:
•Start number 24 was manually annotated 8 times for cluster AU2.

Info for manual annotations of cluster AU3:
•Start number 24 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU4:
•Start number 24 was manually annotated 3 times for cluster AU4.

Info for manual annotations of cluster AU5:
•Start number 24 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:
•Start number 24 was manually annotated 8 times for cluster AU6.

Info for manual annotations of cluster AU7:
•Start number 24 was manually annotated 2 times for cluster AU7.

Info for manual annotations of cluster AV:
•Start number 21 was manually annotated 1 time for cluster AV.

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

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

Info for manual annotations of cluster FT:
•Start number 23 was manually annotated 1 time for cluster FT.

Gene Information:

Gene: Acai_41 Start: 31913, Stop: 32422, Start Num: 24
Candidate Starts for Acai_41:
(Start: 24 @31913 has 53 MA's), (33, 32006), (34, 32015), (40, 32126), (51, 32201), (54, 32243), (83, 32333),

Gene: Altjira_44 Start: 31874, Stop: 32371, Start Num: 24
Candidate Starts for Altjira_44:

(7, 31796), (Start: 24 @31874 has 53 MA's), (29, 31940), (34, 31976), (36, 32054), (42, 32105), (47, 32144), (51, 32162), (73, 32276), (74, 32279), (87, 32309), (95, 32321),

Gene: Anandi_44 Start: 32411, Stop: 32890, Start Num: 24
Candidate Starts for Anandi_44:
(Start: 24 @32411 has 53 MA's), (27, 32456), (34, 32513), (38, 32603), (40, 32624), (46, 32669), (51, 32699), (63, 32777), (77, 32828),

Gene: AreFloNak_42 Start: 31859, Stop: 32374, Start Num: 24
Candidate Starts for AreFloNak_42:
(Start: 24 @31859 has 53 MA's), (33, 31952), (34, 31961), (40, 32072), (44, 32105), (51, 32147), (54, 32189),

Gene: Argan_40 Start: 30235, Stop: 30660, Start Num: 24
Candidate Starts for Argan_40:
(10, 30172), (Start: 24 @30235 has 53 MA's), (29, 30301), (34, 30337), (36, 30415), (42, 30466), (47, 30505), (51, 30523), (68, 30622),

Gene: Barbonzobean_44 Start: 32283, Stop: 32729, Start Num: 24
Candidate Starts for Barbonzobean_44:
(Start: 24 @32283 has 53 MA's), (34, 32385), (42, 32514), (44, 32529), (45, 32538), (51, 32571), (82, 32706),

Gene: BlackHoleSun_45 Start: 30850, Stop: 31317, Start Num: 24
Candidate Starts for BlackHoleSun_45:
(18, 30832), (Start: 24 @30850 has 53 MA's), (29, 30916), (34, 30952), (36, 31030), (42, 31081), (47, 31120), (51, 31138), (67, 31234), (94, 31297),

Gene: Boise_38 Start: 35285, Stop: 34758, Start Num: 23
Candidate Starts for Boise_38:
(15, 35330), (Start: 23 @35285 has 1 MA's), (35, 35141), (37, 35099), (46, 35024), (48, 35006), (49, 35003), (51, 34994), (56, 34943), (60, 34931), (79, 34865), (89, 34832), (96, 34802),

Gene: Boog_38 Start: 29150, Stop: 29647, Start Num: 20
Candidate Starts for Boog_38:
(Start: 20 @29150 has 20 MA's), (26, 29183), (36, 29345), (38, 29357), (44, 29411), (47, 29435), (51, 29453),

Gene: Bouchard_41 Start: 32020, Stop: 32466, Start Num: 24
Candidate Starts for Bouchard_41:
(Start: 24 @32020 has 53 MA's), (33, 32113), (34, 32122), (40, 32233), (51, 32308),

Gene: Bowling_44 Start: 30182, Stop: 30625, Start Num: 24
Candidate Starts for Bowling_44:
(7, 30101), (8, 30107), (11, 30128), (Start: 24 @30182 has 53 MA's), (29, 30248), (32, 30266), (33, 30275), (34, 30284), (36, 30362), (38, 30374), (48, 30458), (49, 30461), (51, 30470), (66, 30560), (71, 30581), (78, 30599),

Gene: Breylor17_42 Start: 32693, Stop: 33154, Start Num: 24
Candidate Starts for Breylor17_42:
(Start: 24 @32693 has 53 MA's), (33, 32786), (34, 32795), (40, 32906), (51, 32981), (54, 33023), (77, 33098), (91, 33137),

Gene: BronxBay_39 Start: 29447, Stop: 29944, Start Num: 20
Candidate Starts for BronxBay_39:
(Start: 20 @29447 has 20 MA's), (26, 29480), (36, 29642), (38, 29654), (44, 29708), (47, 29732), (51, 29750),

Gene: Brunswick_41 Start: 31519, Stop: 31977, Start Num: 24
Candidate Starts for Brunswick_41:
(Start: 24 @31519 has 53 MA's), (32, 31603), (34, 31621), (37, 31714), (43, 31768), (44, 31777), (47, 31801), (51, 31819), (76, 31933),

Gene: CapnMurica_39 Start: 32622, Stop: 33140, Start Num: 24
Candidate Starts for CapnMurica_39:
(Start: 24 @32622 has 53 MA's), (33, 32715), (34, 32724), (40, 32835), (51, 32910), (54, 32952),

Gene: CastorTray_42 Start: 32244, Stop: 32702, Start Num: 24
Candidate Starts for CastorTray_42:
(Start: 24 @32244 has 53 MA's), (32, 32328), (34, 32346), (37, 32439), (43, 32493), (44, 32502), (47, 32526), (51, 32544), (76, 32658),

Gene: Caterpillar_38 Start: 31053, Stop: 31547, Start Num: 24
Candidate Starts for Caterpillar_38:
(Start: 24 @31053 has 53 MA's), (32, 31137), (34, 31155), (44, 31311), (45, 31320), (47, 31335), (51, 31353),

Gene: Chlochlo_43 Start: 32054, Stop: 32506, Start Num: 24
Candidate Starts for Chlochlo_43:
(Start: 24 @32054 has 53 MA's), (33, 32147), (34, 32156), (40, 32267), (51, 32342),

Gene: Circum_46 Start: 30820, Stop: 31263, Start Num: 24
Candidate Starts for Circum_46:
(7, 30739), (8, 30745), (11, 30766), (Start: 24 @30820 has 53 MA's), (29, 30886), (32, 30904), (33, 30913), (34, 30922), (36, 31000), (38, 31012), (46, 31078), (48, 31096), (49, 31099), (51, 31108), (66, 31198), (71, 31219), (78, 31237),

Gene: Darby_39 Start: 31365, Stop: 31880, Start Num: 24
Candidate Starts for Darby_39:
(Start: 24 @31365 has 53 MA's), (33, 31458), (34, 31467), (40, 31578), (51, 31653), (54, 31695),

Gene: DatBoi_116 Start: 73558, Stop: 74007, Start Num: 19
Candidate Starts for DatBoi_116:
(Start: 19 @73558 has 1 MA's), (28, 73633), (36, 73753), (37, 73756), (51, 73861),

Gene: DevitoJr_40 Start: 31863, Stop: 32324, Start Num: 24
Candidate Starts for DevitoJr_40:
(Start: 24 @31863 has 53 MA's), (33, 31956), (34, 31965), (40, 32076), (51, 32151), (54, 32193), (77, 32268), (91, 32307),

Gene: Dinallo_41 Start: 32931, Stop: 33449, Start Num: 24
Candidate Starts for Dinallo_41:
(Start: 24 @32931 has 53 MA's), (33, 33024), (34, 33033), (40, 33144), (51, 33219), (54, 33261),

Gene: Djungelskog_39 Start: 29447, Stop: 29944, Start Num: 20
Candidate Starts for Djungelskog_39:

(Start: 20 @29447 has 20 MA's), (26, 29480), (36, 29642), (38, 29654), (44, 29708), (47, 29732), (51, 29750),

Gene: DoctorPepper_38 Start: 29149, Stop: 29646, Start Num: 20
Candidate Starts for DoctorPepper_38:
(Start: 20 @29149 has 20 MA's), (22, 29158), (26, 29182), (36, 29344), (38, 29356), (44, 29410), (47, 29434), (51, 29452),

Gene: Dynamite_44 Start: 30372, Stop: 30815, Start Num: 24
Candidate Starts for Dynamite_44:
(7, 30291), (8, 30297), (11, 30318), (Start: 24 @30372 has 53 MA's), (29, 30438), (32, 30456), (33, 30465), (34, 30474), (36, 30552), (38, 30564), (48, 30648), (49, 30651), (51, 30660), (66, 30750), (71, 30771), (78, 30789),

Gene: Egad_39 Start: 29448, Stop: 29945, Start Num: 20
Candidate Starts for Egad_39:
(Start: 20 @29448 has 20 MA's), (26, 29481), (36, 29643), (38, 29655), (44, 29709), (47, 29733), (51, 29751),

Gene: ElephantMan_39 Start: 32062, Stop: 32550, Start Num: 24
Candidate Starts for ElephantMan_39:
(Start: 24 @32062 has 53 MA's), (32, 32146), (34, 32164), (43, 32311), (44, 32320), (47, 32344), (51, 32362),

Gene: GantcherGoblin_41 Start: 30686, Stop: 31177, Start Num: 24
Candidate Starts for GantcherGoblin_41:
(7, 30608), (Start: 24 @30686 has 53 MA's), (29, 30752), (34, 30788), (36, 30866), (42, 30917), (47, 30956), (51, 30974), (67, 31070), (72, 31085), (84, 31115), (92, 31133),

Gene: GermyBearimy_53 Start: 33293, Stop: 33739, Start Num: 24
Candidate Starts for GermyBearimy_53:
(Start: 24 @33293 has 53 MA's), (25, 33302), (29, 33359), (42, 33524), (49, 33572), (51, 33581), (58, 33635),

Gene: Giantsbane_43 Start: 31240, Stop: 31692, Start Num: 24
Candidate Starts for Giantsbane_43:
(Start: 24 @31240 has 53 MA's), (33, 31333), (34, 31342), (40, 31453), (44, 31486), (51, 31528), (90, 31681),

Gene: GoCrazy_43 Start: 30298, Stop: 30741, Start Num: 24
Candidate Starts for GoCrazy_43:
(7, 30217), (8, 30223), (11, 30244), (Start: 24 @30298 has 53 MA's), (29, 30364), (32, 30382), (33, 30391), (34, 30400), (36, 30478), (38, 30490), (48, 30574), (49, 30577), (51, 30586), (66, 30676), (71, 30697), (78, 30715),

Gene: Gordon_39 Start: 32650, Stop: 33165, Start Num: 24
Candidate Starts for Gordon_39:
(Start: 24 @32650 has 53 MA's), (33, 32743), (34, 32752), (40, 32863), (51, 32938), (54, 32980), (97, 33160),

Gene: Hankly_43 Start: 29599, Stop: 30042, Start Num: 24
Candidate Starts for Hankly_43:

(1, 29452), (2, 29455), (3, 29464), (Start: 24 @29599 has 53 MA's), (29, 29665), (32, 29683), (33, 29692), (34, 29701), (36, 29779), (38, 29791), (48, 29875), (49, 29878), (51, 29887), (65, 29974), (71, 29998), (78, 30016),

Gene: Hemma_40 Start: 28711, Stop: 29187, Start Num: 24
Candidate Starts for Hemma_40:
(Start: 24 @28711 has 53 MA's), (33, 28804), (34, 28813), (51, 28999), (64, 29065),

Gene: HerbBucket_38 Start: 29149, Stop: 29646, Start Num: 20
Candidate Starts for HerbBucket_38:
(Start: 20 @29149 has 20 MA's), (26, 29182), (36, 29344), (38, 29356), (44, 29410), (47, 29434), (51, 29452),

Gene: Ingrid_43 Start: 31998, Stop: 32435, Start Num: 24
Candidate Starts for Ingrid_43:
(Start: 24 @31998 has 53 MA's), (33, 32091), (34, 32100), (40, 32211), (51, 32286), (54, 32325), (75, 32391),

Gene: Inked_44 Start: 32908, Stop: 33399, Start Num: 24
Candidate Starts for Inked_44:
(Start: 24 @32908 has 53 MA's), (27, 32953), (33, 33001), (34, 33010), (38, 33100), (40, 33121), (45, 33163), (51, 33196), (53, 33235), (81, 33322), (89, 33343),

Gene: Issa_41 Start: 31974, Stop: 32432, Start Num: 24
Candidate Starts for Issa_41:
(Start: 24 @31974 has 53 MA's), (32, 32058), (34, 32076), (37, 32169), (43, 32223), (44, 32232), (47, 32256), (51, 32274), (76, 32388),

Gene: Jeremy4pt0_38 Start: 29144, Stop: 29641, Start Num: 20
Candidate Starts for Jeremy4pt0_38:
(Start: 20 @29144 has 20 MA's), (22, 29153), (26, 29177), (36, 29339), (38, 29351), (44, 29405), (47, 29429), (51, 29447),

Gene: KeaneyLin_43 Start: 30298, Stop: 30741, Start Num: 24
Candidate Starts for KeaneyLin_43:
(7, 30217), (8, 30223), (11, 30244), (Start: 24 @30298 has 53 MA's), (29, 30364), (32, 30382), (33, 30391), (34, 30400), (36, 30478), (38, 30490), (48, 30574), (49, 30577), (51, 30586), (66, 30676), (71, 30697), (78, 30715),

Gene: LadyJasley_35 Start: 30143, Stop: 29562, Start Num: 21
Candidate Starts for LadyJasley_35:
(4, 30248), (5, 30239), (6, 30221), (12, 30185), (16, 30173), (17, 30164), (Start: 21 @30143 has 1 MA's), (42, 29906), (44, 29891), (47, 29867), (55, 29804), (62, 29786), (88, 29690),

Gene: Leathea_42 Start: 30450, Stop: 30863, Start Num: 24
Candidate Starts for Leathea_42:
(Start: 24 @30450 has 53 MA's), (29, 30516), (36, 30630), (40, 30663), (51, 30738), (58, 30792),

Gene: LilHuddy_42 Start: 32005, Stop: 32451, Start Num: 24
Candidate Starts for LilHuddy_42:
(Start: 24 @32005 has 53 MA's), (33, 32098), (34, 32107), (41, 32224), (44, 32251), (51, 32293), (57, 32344),

Gene: Linda_39 Start: 29442, Stop: 29939, Start Num: 20
Candidate Starts for Linda_39:
(Start: 20 @29442 has 20 MA's), (22, 29451), (26, 29475), (36, 29637), (38, 29649), (44, 29703), (47, 29727), (51, 29745),

Gene: Loretta_43 Start: 31998, Stop: 32435, Start Num: 24
Candidate Starts for Loretta_43:
(Start: 24 @31998 has 53 MA's), (33, 32091), (34, 32100), (40, 32211), (51, 32286), (54, 32325), (75, 32391),

Gene: LucySwiss_40 Start: 31434, Stop: 31892, Start Num: 24
Candidate Starts for LucySwiss_40:
(Start: 24 @31434 has 53 MA's), (32, 31518), (34, 31536), (37, 31629), (43, 31683), (44, 31692), (47, 31716), (51, 31734), (76, 31848),

Gene: Makai_41 Start: 32217, Stop: 32660, Start Num: 24
Candidate Starts for Makai_41:
(Start: 24 @32217 has 53 MA's), (27, 32262), (31, 32292), (33, 32310), (40, 32430), (46, 32475), (49, 32496), (51, 32505), (54, 32547), (64, 32571), (80, 32628),

Gene: Mardi_42 Start: 30773, Stop: 31264, Start Num: 24
Candidate Starts for Mardi_42:
(Start: 24 @30773 has 53 MA's), (29, 30839), (34, 30875), (36, 30953), (42, 31004), (47, 31043), (51, 31061), (72, 31172), (84, 31202), (92, 31220),

Gene: MediumFry_39 Start: 31366, Stop: 31863, Start Num: 24
Candidate Starts for MediumFry_39:
(Start: 24 @31366 has 53 MA's), (32, 31450), (34, 31468), (44, 31624), (45, 31633), (47, 31648), (51, 31666), (80, 31807), (89, 31834),

Gene: Michelle_39 Start: 29447, Stop: 29944, Start Num: 20
Candidate Starts for Michelle_39:
(Start: 20 @29447 has 20 MA's), (26, 29480), (36, 29642), (38, 29654), (44, 29708), (47, 29732), (51, 29750),

Gene: MiniBagel_41 Start: 32604, Stop: 33122, Start Num: 24
Candidate Starts for MiniBagel_41:
(Start: 24 @32604 has 53 MA's), (33, 32697), (34, 32706), (40, 32817), (51, 32892), (54, 32934),

Gene: MrAaronian_39 Start: 29447, Stop: 29944, Start Num: 20
Candidate Starts for MrAaronian_39:
(Start: 20 @29447 has 20 MA's), (26, 29480), (36, 29642), (38, 29654), (44, 29708), (47, 29732), (51, 29750),

Gene: NapoleonB_44 Start: 30372, Stop: 30815, Start Num: 24
Candidate Starts for NapoleonB_44:
(7, 30291), (8, 30297), (11, 30318), (Start: 24 @30372 has 53 MA's), (29, 30438), (32, 30456), (33, 30465), (34, 30474), (36, 30552), (38, 30564), (48, 30648), (49, 30651), (51, 30660), (66, 30750), (71, 30771), (78, 30789),

Gene: Natasha_40 Start: 28972, Stop: 29439, Start Num: 20
Candidate Starts for Natasha_40:

(Start: 20 @28972 has 20 MA's), (27, 29032), (31, 29062), (36, 29167), (38, 29179), (44, 29233), (47, 29257), (49, 29266), (51, 29275), (90, 29428),

Gene: Navi1117_43 Start: 31102, Stop: 31581, Start Num: 24
Candidate Starts for Navi1117_43:
(Start: 24 @31102 has 53 MA's), (29, 31168), (34, 31204), (36, 31282), (42, 31333), (47, 31372), (51, 31390), (73, 31504),

Gene: Nightmare_42 Start: 32534, Stop: 33052, Start Num: 24
Candidate Starts for Nightmare_42:
(Start: 24 @32534 has 53 MA's), (33, 32627), (34, 32636), (40, 32747), (51, 32822), (54, 32864),

Gene: Niktson_39 Start: 32062, Stop: 32550, Start Num: 24
Candidate Starts for Niktson_39:
(Start: 24 @32062 has 53 MA's), (32, 32146), (34, 32164), (43, 32311), (44, 32320), (47, 32344), (51, 32362),

Gene: Nivinsha_42 Start: 31859, Stop: 32374, Start Num: 24
Candidate Starts for Nivinsha_42:
(Start: 24 @31859 has 53 MA's), (33, 31952), (34, 31961), (40, 32072), (44, 32105), (51, 32147), (54, 32189),

Gene: Onestar_38 Start: 28908, Stop: 29426, Start Num: 20
Candidate Starts for Onestar_38:
(Start: 20 @28908 has 20 MA's), (26, 28941), (30, 28992), (37, 29106), (44, 29169), (47, 29193), (51, 29211), (59, 29268), (93, 29379),

Gene: Phaby_42 Start: 32029, Stop: 32550, Start Num: 24
Candidate Starts for Phaby_42:
(Start: 24 @32029 has 53 MA's), (33, 32122), (34, 32131), (40, 32242), (44, 32275), (51, 32317),

Gene: Phaila_43 Start: 30560, Stop: 31063, Start Num: 24
Candidate Starts for Phaila_43:
(10, 30497), (Start: 24 @30560 has 53 MA's), (29, 30626), (33, 30653), (34, 30662), (42, 30791), (44, 30806), (45, 30815), (51, 30848), (72, 30959),

Gene: Powelldog_41 Start: 29507, Stop: 29983, Start Num: 20
Candidate Starts for Powelldog_41:
(Start: 20 @29507 has 20 MA's), (36, 29702), (38, 29714), (44, 29768), (47, 29792), (51, 29810), (85, 29945),

Gene: ProfFrink_39 Start: 29447, Stop: 29944, Start Num: 20
Candidate Starts for ProfFrink_39:
(Start: 20 @29447 has 20 MA's), (26, 29480), (36, 29642), (38, 29654), (44, 29708), (47, 29732), (51, 29750),

Gene: Raunak_38 Start: 29144, Stop: 29641, Start Num: 20
Candidate Starts for Raunak_38:
(Start: 20 @29144 has 20 MA's), (26, 29177), (36, 29339), (38, 29351), (44, 29405), (47, 29429), (51, 29447),

Gene: Renaldo_46 Start: 32321, Stop: 32773, Start Num: 24
Candidate Starts for Renaldo_46:

(Start: 24 @32321 has 53 MA's), (34, 32423), (42, 32552), (44, 32567), (45, 32576), (51, 32609), (52, 32621), (55, 32654), (61, 32669),

Gene: RomansRevenge_39 Start: 35285, Stop: 34758, Start Num: 23
Candidate Starts for RomansRevenge_39:
(15, 35330), (Start: 23 @35285 has 1 MA's), (35, 35141), (37, 35099), (46, 35024), (48, 35006), (49, 35003), (51, 34994), (56, 34943), (60, 34931), (79, 34865), (89, 34832), (96, 34802),

Gene: RustyBoy_40 Start: 28953, Stop: 29420, Start Num: 20
Candidate Starts for RustyBoy_40:
(Start: 20 @28953 has 20 MA's), (27, 29013), (31, 29043), (36, 29148), (38, 29160), (44, 29214), (47, 29238), (49, 29247), (51, 29256), (90, 29409),

Gene: Salk_39 Start: 29442, Stop: 29939, Start Num: 20
Candidate Starts for Salk_39:
(Start: 20 @29442 has 20 MA's), (22, 29451), (26, 29475), (36, 29637), (38, 29649), (44, 29703), (47, 29727), (51, 29745),

Gene: ScienceWizSam_42 Start: 32182, Stop: 32643, Start Num: 24
Candidate Starts for ScienceWizSam_42:
(Start: 24 @32182 has 53 MA's), (33, 32275), (34, 32284), (40, 32395), (51, 32470), (54, 32512), (77, 32587), (91, 32626),

Gene: Shepard_45 Start: 32289, Stop: 32735, Start Num: 24
Candidate Starts for Shepard_45:
(Start: 24 @32289 has 53 MA's), (33, 32382), (34, 32391), (41, 32508), (44, 32535), (51, 32577), (57, 32628),

Gene: Shiba_38 Start: 29144, Stop: 29641, Start Num: 20
Candidate Starts for Shiba_38:
(Start: 20 @29144 has 20 MA's), (26, 29177), (36, 29339), (38, 29351), (44, 29405), (47, 29429), (51, 29447),

Gene: Sloopyjoe_39 Start: 29448, Stop: 29945, Start Num: 20
Candidate Starts for Sloopyjoe_39:
(Start: 20 @29448 has 20 MA's), (26, 29481), (36, 29643), (38, 29655), (44, 29709), (47, 29733), (51, 29751),

Gene: Spain_40 Start: 29447, Stop: 29944, Start Num: 20
Candidate Starts for Spain_40:
(Start: 20 @29447 has 20 MA's), (26, 29480), (36, 29642), (38, 29654), (44, 29708), (47, 29732), (51, 29750),

Gene: Sporto_40 Start: 30692, Stop: 31183, Start Num: 20
Candidate Starts for Sporto_40:
(Start: 20 @30692 has 20 MA's), (27, 30752), (34, 30809), (36, 30887), (38, 30899), (44, 30953), (45, 30962), (47, 30977), (50, 30989), (51, 30995), (55, 31040), (69, 31091), (74, 31106),

Gene: Sprinkle_37 Start: 29052, Stop: 29510, Start Num: 20
Candidate Starts for Sprinkle_37:
(9, 28995), (Start: 20 @29052 has 20 MA's), (27, 29112), (31, 29142), (36, 29247), (38, 29259), (39, 29265), (44, 29313), (47, 29337), (51, 29355), (70, 29457),

Gene: StarLord_39 Start: 29448, Stop: 29945, Start Num: 20
Candidate Starts for StarLord_39:
(Start: 20 @29448 has 20 MA's), (26, 29481), (36, 29643), (38, 29655), (44, 29709), (47, 29733), (51, 29751),

Gene: Stardrop_42 Start: 31119, Stop: 31622, Start Num: 24
Candidate Starts for Stardrop_42:
(Start: 24 @31119 has 53 MA's), (29, 31185), (34, 31221), (36, 31299), (42, 31350), (47, 31389), (51, 31407), (72, 31518),

Gene: Stayer_39 Start: 29442, Stop: 29939, Start Num: 20
Candidate Starts for Stayer_39:
(Start: 20 @29442 has 20 MA's), (22, 29451), (26, 29475), (36, 29637), (38, 29649), (44, 29703), (47, 29727), (51, 29745),

Gene: Synepsis_39 Start: 31848, Stop: 32309, Start Num: 24
Candidate Starts for Synepsis_39:
(Start: 24 @31848 has 53 MA's), (33, 31941), (34, 31950), (40, 32061), (51, 32136), (54, 32178), (77, 32253), (91, 32292),

Gene: Tatanka_39 Start: 32005, Stop: 32481, Start Num: 24
Candidate Starts for Tatanka_39:
(13, 31954), (14, 31957), (Start: 24 @32005 has 53 MA's), (33, 32098), (34, 32107), (40, 32218), (51, 32293), (54, 32335),

Gene: Teacup_41 Start: 31988, Stop: 32497, Start Num: 24
Candidate Starts for Teacup_41:
(Start: 24 @31988 has 53 MA's), (33, 32081), (34, 32090), (40, 32201), (51, 32276),

Gene: Tenney120_43 Start: 31029, Stop: 31454, Start Num: 24
Candidate Starts for Tenney120_43:
(Start: 24 @31029 has 53 MA's), (29, 31095), (34, 31131), (36, 31209), (42, 31260), (47, 31299), (51, 31317), (68, 31416),

Gene: Tenno_42 Start: 32612, Stop: 33130, Start Num: 24
Candidate Starts for Tenno_42:
(Start: 24 @32612 has 53 MA's), (33, 32705), (34, 32714), (40, 32825), (51, 32900), (54, 32942),

Gene: Tipton_43 Start: 32323, Stop: 32844, Start Num: 24
Candidate Starts for Tipton_43:
(Start: 24 @32323 has 53 MA's), (33, 32416), (34, 32425), (40, 32536), (51, 32611),

Gene: Tokki_44 Start: 31975, Stop: 32496, Start Num: 24
Candidate Starts for Tokki_44:
(Start: 24 @31975 has 53 MA's), (33, 32068), (34, 32077), (40, 32188), (51, 32263),

Gene: Truckee_39 Start: 31923, Stop: 32423, Start Num: 24
Candidate Starts for Truckee_39:
(Start: 24 @31923 has 53 MA's), (27, 31968), (31, 31998), (33, 32016), (40, 32136), (46, 32181), (47, 32193), (49, 32202), (51, 32211), (54, 32253), (64, 32277),

Gene: Trustiboi_41 Start: 32399, Stop: 32860, Start Num: 24
Candidate Starts for Trustiboi_41:

(Start: 24 @32399 has 53 MA's), (33, 32492), (34, 32501), (40, 32612), (51, 32687), (54, 32729), (77, 32804), (91, 32843),

Gene: Westerlin_41 Start: 33490, Stop: 33951, Start Num: 24
Candidate Starts for Westerlin_41:
(Start: 24 @33490 has 53 MA's), (33, 33583), (34, 33592), (40, 33703), (51, 33778), (54, 33820), (77, 33895), (91, 33934),

Gene: YoshiYama_44 Start: 30404, Stop: 30847, Start Num: 24
Candidate Starts for YoshiYama_44:
(7, 30323), (8, 30329), (11, 30350), (Start: 24 @30404 has 53 MA's), (29, 30470), (32, 30488), (33, 30497), (34, 30506), (36, 30584), (38, 30596), (48, 30680), (49, 30683), (51, 30692), (66, 30782), (71, 30803), (78, 30821),

Gene: Zeina_43 Start: 31010, Stop: 31486, Start Num: 24
Candidate Starts for Zeina_43:
(10, 30947), (Start: 24 @31010 has 53 MA's), (29, 31076), (34, 31112), (36, 31190), (42, 31241), (47, 31280), (51, 31298), (86, 31445),

Gene: Zippen_43 Start: 32785, Stop: 33276, Start Num: 24
Candidate Starts for Zippen_43:
(Start: 24 @32785 has 53 MA's), (27, 32830), (33, 32878), (34, 32887), (38, 32977), (40, 32998), (45, 33040), (51, 33073), (53, 33112), (81, 33199), (89, 33220),