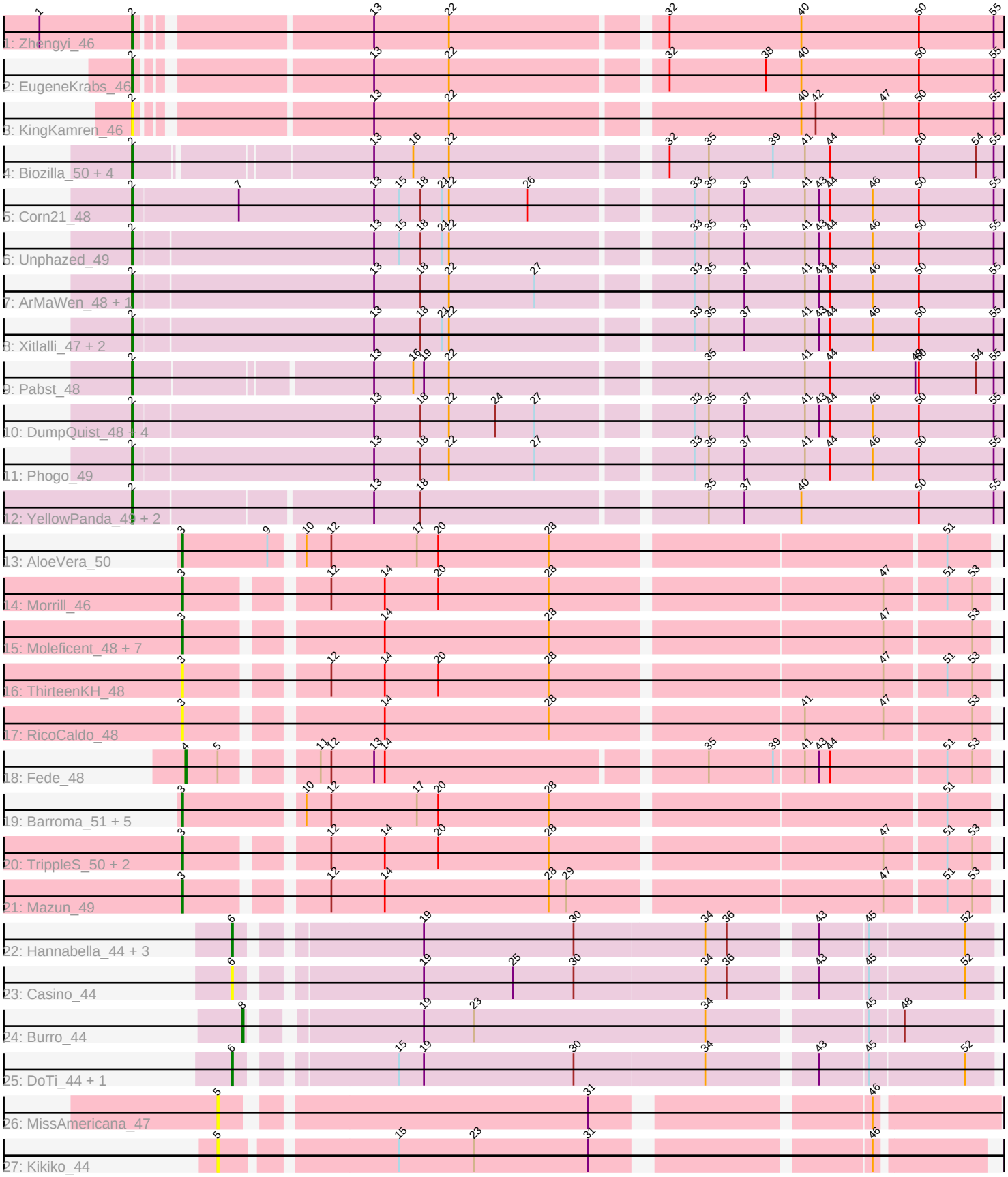
Pham 151986


1: Zhengyi_46
2: EugeneKrabs_46
3: KingKamren_46
4: Biozilla_50 + 4
5: Corn21_48
6: Unphazed_49
7: ArMaWen_48 + 1
8: Xitlalli_47 + 2
9: Pabst_48
10: DumpQuist_48 + 4
11: Phogo_49
12: YellowPanda_49 + 2
13: AloeVera_50
14: Morrill_46
15: Moleficent_48 + 7
16: ThirteenKH_48
17: RicoCaldo_48
18: Fede_48
19: Barroma_51 + 5
20: TrippleS_50 + 2
21: Mazun_49
22: Hannabella_44 + 3
23: Casino_44
24: Burro_44
25: DoTi_44 + 1
26: MissAmericana_47
27: Kikiko_44

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 151986 Report

This analysis was run 04/28/24 on database version 559.

Pham number 151986 has 58 members, 15 are drafts.

Phages represented in each track:
• Track 1 : Zhengyi_46
• Track 2 : EugeneKrabs_46
• Track 3 : KingKamren_46
• Track 4 : Biozilla_50, PineapplePluto_51, Oatly_50, HitchHiker_51, CrunchyBoi_51
• Track 5 : Corn21_48
• Track 6 : Unphazed_49
• Track 7 : ArMaWen_48, LilyLou_50
• Track 8 : Xitlalli_47, BlueRugrat_48, LesNorah_49
• Track 9 : Pabst_48
• Track 10 : DumpQuist_48, Alex44_49, Birdfeeder_47, Stormbreaker_49, Dashyla_50
• Track 11 : Phogo_49
• Track 12 : YellowPanda_49, Wesak_47, TinyTimothy_46
• Track 13 : AloeVera_50
• Track 14 : Morrill_46
• Track 15 : Moleficent_48, Astartes_48, PhriedRice_49, Pharky_48, Fullmetal_48, Phractured_48, Phedro_48, StagePhright_48
• Track 16 : ThirteenKH_48
• Track 17 : RicoCaldo_48
• Track 18 : Fede_48
• Track 19 : Barroma_51, Waterlily_52, Truong_49, JordanFarm_51, Akoni_49, Ashton_50
• Track 20 : TrippleS_50, Yafa_49, Atraxi_46
• Track 21 : Mazun_49
• Track 22 : Hannabella_44, Arete_44, Scruffy_44, Gshelby23_42
• Track 23 : Casino_44
• Track 24 : Burro_44
• Track 25 : DoTi_44, Araxxi_44
• Track 26 : MissAmericana_47
• Track 27 : Kikiko_44

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

The start number called the most often in the published annotations is 2, it was called in 21 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alex44_49, ArMaWen_48, Biozilla_50, Birdfeeder_47, BlueRugrat_48, Corn21_48, CrunchyBoi_51, Dashyla_50, DumpQuist_48, EugeneKrabs_46, HitchHiker_51, KingKamren_46, LesNorah_49, LilyLou_50, Oatly_50, Pabst_48, Phogo_49, PineapplePluto_51, Stormbreaker_49, TinyTimothy_46, Unphazed_49, Wesak_47, Xitlalli_47, YellowPanda_49, Zhengyi_46,

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

Genes that do not have the "Most Annotated" start:
• Akoni_49, AloeVera_50, Araxxi_44, Arete_44, Ashton_50, Astartes_48, Atraxi_46, Barroma_51, Burro_44, Casino_44, DoTi_44, Fede_48, Fullmetal_48, Gshelby23_42, Hannabella_44, JordanFarm_51, Kikiko_44, Mazun_49, MissAmericana_47, Moleficent_48, Morrill_46, Pharky_48, Phedro_48, Phractured_48, PhriedRice_49, RicoCaldo_48, Scruffy_44, StagePhright_48, ThirteenKH_48, TrippleS_50, Truong_49, Waterlily_52, Yafa_49,

Summary by start number:

Start 2:
• Found in 25 of 58 (43.1%) of genes in pham
• Manual Annotations of this start: 21 of 43
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alex44_49 (EK1), ArMaWen_48 (EK1), Biozilla_50 (EK1), Birdfeeder_47 (EK1), BlueRugrat_48 (EK1), Corn21_48 (EK1), CrunchyBoi_51 (EK1), Dashyla_50 (EK1), DumpQuist_48 (EK1), EugeneKrabs_46 (EK), HitchHiker_51 (EK1), KingKamren_46 (EK), LesNorah_49 (EK1), LilyLou_50 (EK1), Oatly_50 (EK1), Pabst_48 (EK1), Phogo_49 (EK1), PineapplePluto_51 (EK1), Stormbreaker_49 (EK1), TinyTimothy_46 (EK1), Unphazed_49 (EK1), Wesak_47 (EK1), Xitlalli_47 (EK1), YellowPanda_49 (EK1), Zhengyi_46 (EK),

Start 3:
• Found in 22 of 58 (37.9%) of genes in pham
• Manual Annotations of this start: 15 of 43
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Akoni_49 (EK2), AloeVera_50 (EK2), Ashton_50 (EK2), Astartes_48 (EK2), Atraxi_46 (EK2), Barroma_51 (EK2), Fullmetal_48 (EK2), JordanFarm_51 (EK2), Mazun_49 (EK2), Moleficent_48 (EK2), Morrill_46 (EK2), Pharky_48 (EK2), Phedro_48 (EK2), Phractured_48 (EK2), PhriedRice_49 (EK2), RicoCaldo_48 (EK2), StagePhright_48 (EK2), ThirteenKH_48 (EK2), TrippleS_50 (EK2), Truong_49 (EK2), Waterlily_52 (EK2), Yafa_49 (EK2),

Start 4:
• Found in 1 of 58 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 43
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Fede_48 (EK2),

Start 5:

• Found in 3 of 58 (5.2%) of genes in pham
• No Manual Annotations of this start.
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Kikiko_44 (EM2), MissAmericana_47 (EM2),

Start 6:
• Found in 7 of 58 (12.1%) of genes in pham
• Manual Annotations of this start: 5 of 43
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Araxxi_44 (EM1), Arete_44 (EM1), Casino_44 (EM1), DoTi_44 (EM1), Gshelby23_42 (EM1), Hannabella_44 (EM1), Scruffy_44 (EM1),

Start 8:
• Found in 1 of 58 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 43
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Burro_44 (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 2 was manually annotated 2 times for cluster EK.

Info for manual annotations of cluster EK1:
•Start number 2 was manually annotated 19 times for cluster EK1.

Info for manual annotations of cluster EK2:
•Start number 3 was manually annotated 15 times for cluster EK2.
•Start number 4 was manually annotated 1 time for cluster EK2.

Info for manual annotations of cluster EM1:
•Start number 6 was manually annotated 5 times for cluster EM1.
•Start number 8 was manually annotated 1 time for cluster EM1.

Gene Information:

Gene: Akoni_49 Start: 49443, Stop: 50090, Start Num: 3
Candidate Starts for Akoni_49:
(Start: 3 @49443 has 15 MA's), (10, 49536), (12, 49557), (17, 49629), (20, 49647), (28, 49740), (51, 50055),

Gene: Alex44_49 Start: 49480, Stop: 50190, Start Num: 2
Candidate Starts for Alex44_49:
(Start: 2 @49480 has 21 MA's), (13, 49678), (18, 49717), (22, 49741), (24, 49780), (27, 49813), (33, 49930), (35, 49942), (37, 49972), (41, 50023), (43, 50035), (44, 50044), (46, 50080), (50, 50119), (55, 50182),

Gene: AloeVera_50 Start: 49656, Stop: 50303, Start Num: 3
Candidate Starts for AloeVera_50:
(Start: 3 @49656 has 15 MA's), (9, 49728), (10, 49749), (12, 49770), (17, 49842), (20, 49860), (28, 49953), (51, 50268),

Gene: ArMaWen_48 Start: 49023, Stop: 49733, Start Num: 2
Candidate Starts for ArMaWen_48:
(Start: 2 @49023 has 21 MA's), (13, 49221), (18, 49260), (22, 49284), (27, 49356), (33, 49473), (35, 49485), (37, 49515), (41, 49566), (43, 49578), (44, 49587), (46, 49623), (50, 49662), (55, 49725),

Gene: Araxxi_44 Start: 49968, Stop: 50561, Start Num: 6
Candidate Starts for Araxxi_44:
(Start: 6 @49968 has 5 MA's), (15, 50082), (19, 50103), (30, 50229), (34, 50337), (43, 50421), (45, 50460), (52, 50538),

Gene: Arete_44 Start: 49691, Stop: 50284, Start Num: 6
Candidate Starts for Arete_44:
(Start: 6 @49691 has 5 MA's), (19, 49826), (30, 49952), (34, 50060), (36, 50078), (43, 50144), (45, 50183), (52, 50261),

Gene: Ashton_50 Start: 49655, Stop: 50302, Start Num: 3
Candidate Starts for Ashton_50:
(Start: 3 @49655 has 15 MA's), (10, 49748), (12, 49769), (17, 49841), (20, 49859), (28, 49952), (51, 50267),

Gene: Astartes_48 Start: 48993, Stop: 49628, Start Num: 3
Candidate Starts for Astartes_48:
(Start: 3 @48993 has 15 MA's), (14, 49140), (28, 49278), (47, 49545), (53, 49614),

Gene: Atraxi_46 Start: 48785, Stop: 49420, Start Num: 3
Candidate Starts for Atraxi_46:
(Start: 3 @48785 has 15 MA's), (12, 48887), (14, 48932), (20, 48977), (28, 49070), (47, 49337), (51, 49385), (53, 49406),

Gene: Barroma_51 Start: 49445, Stop: 50092, Start Num: 3
Candidate Starts for Barroma_51:
(Start: 3 @49445 has 15 MA's), (10, 49538), (12, 49559), (17, 49631), (20, 49649), (28, 49742), (51, 50057),

Gene: Biozilla_50 Start: 48938, Stop: 49636, Start Num: 2
Candidate Starts for Biozilla_50:
(Start: 2 @48938 has 21 MA's), (13, 49124), (16, 49157), (22, 49187), (32, 49355), (35, 49388), (39, 49442), (41, 49469), (44, 49490), (50, 49565), (54, 49613), (55, 49628),

Gene: Birdfeeder_47 Start: 49229, Stop: 49939, Start Num: 2
Candidate Starts for Birdfeeder_47:
(Start: 2 @49229 has 21 MA's), (13, 49427), (18, 49466), (22, 49490), (24, 49529), (27, 49562), (33, 49679), (35, 49691), (37, 49721), (41, 49772), (43, 49784), (44, 49793), (46, 49829), (50, 49868), (55, 49931),

Gene: BlueRugrat_48 Start: 49462, Stop: 50172, Start Num: 2
Candidate Starts for BlueRugrat_48:

(Start: 2 @49462 has 21 MA's), (13, 49660), (18, 49699), (21, 49717), (22, 49723), (33, 49912), (35, 49924), (37, 49954), (41, 50005), (43, 50017), (44, 50026), (46, 50062), (50, 50101), (55, 50164),

Gene: Burro_44 Start: 50494, Stop: 51078, Start Num: 8
Candidate Starts for Burro_44:
(Start: 8 @50494 has 1 MA's), (19, 50617), (23, 50659), (34, 50854), (45, 50977), (48, 51004),

Gene: Casino_44 Start: 49666, Stop: 50259, Start Num: 6
Candidate Starts for Casino_44:
(Start: 6 @49666 has 5 MA's), (19, 49801), (25, 49876), (30, 49927), (34, 50035), (36, 50053), (43, 50119), (45, 50158), (52, 50236),

Gene: Corn21_48 Start: 49540, Stop: 50253, Start Num: 2
Candidate Starts for Corn21_48:
(Start: 2 @49540 has 21 MA's), (7, 49627), (13, 49741), (15, 49762), (18, 49780), (21, 49798), (22, 49804), (26, 49870), (33, 49993), (35, 50005), (37, 50035), (41, 50086), (43, 50098), (44, 50107), (46, 50143), (50, 50182), (55, 50245),

Gene: CrunchyBoi_51 Start: 48792, Stop: 49490, Start Num: 2
Candidate Starts for CrunchyBoi_51:
(Start: 2 @48792 has 21 MA's), (13, 48978), (16, 49011), (22, 49041), (32, 49209), (35, 49242), (39, 49296), (41, 49323), (44, 49344), (50, 49419), (54, 49467), (55, 49482),

Gene: Dashyla_50 Start: 49154, Stop: 49864, Start Num: 2
Candidate Starts for Dashyla_50:
(Start: 2 @49154 has 21 MA's), (13, 49352), (18, 49391), (22, 49415), (24, 49454), (27, 49487), (33, 49604), (35, 49616), (37, 49646), (41, 49697), (43, 49709), (44, 49718), (46, 49754), (50, 49793), (55, 49856),

Gene: DoTi_44 Start: 50070, Stop: 50663, Start Num: 6
Candidate Starts for DoTi_44:
(Start: 6 @50070 has 5 MA's), (15, 50184), (19, 50205), (30, 50331), (34, 50439), (43, 50523), (45, 50562), (52, 50640),

Gene: DumpQuist_48 Start: 49008, Stop: 49718, Start Num: 2
Candidate Starts for DumpQuist_48:
(Start: 2 @49008 has 21 MA's), (13, 49206), (18, 49245), (22, 49269), (24, 49308), (27, 49341), (33, 49458), (35, 49470), (37, 49500), (41, 49551), (43, 49563), (44, 49572), (46, 49608), (50, 49647), (55, 49710),

Gene: EugeneKrabs_46 Start: 50012, Stop: 50701, Start Num: 2
Candidate Starts for EugeneKrabs_46:
(Start: 2 @50012 has 21 MA's), (13, 50189), (22, 50252), (32, 50420), (38, 50501), (40, 50531), (50, 50630), (55, 50693),

Gene: Fede_48 Start: 49917, Stop: 50543, Start Num: 4
Candidate Starts for Fede_48:
(Start: 4 @49917 has 1 MA's), (5, 49944), (11, 50007), (12, 50016), (13, 50052), (14, 50061), (35, 50316), (39, 50370), (41, 50394), (43, 50406), (44, 50415), (51, 50508), (53, 50529),

Gene: Fullmetal_48 Start: 49328, Stop: 49963, Start Num: 3
Candidate Starts for Fullmetal_48:
(Start: 3 @49328 has 15 MA's), (14, 49475), (28, 49613), (47, 49880), (53, 49949),

Gene: Gshelby23_42 Start: 49602, Stop: 50195, Start Num: 6
Candidate Starts for Gshelby23_42:
(Start: 6 @49602 has 5 MA's), (19, 49737), (30, 49863), (34, 49971), (36, 49989), (43, 50055), (45, 50094), (52, 50172),

Gene: Hannabella_44 Start: 49642, Stop: 50235, Start Num: 6
Candidate Starts for Hannabella_44:
(Start: 6 @49642 has 5 MA's), (19, 49777), (30, 49903), (34, 50011), (36, 50029), (43, 50095), (45, 50134), (52, 50212),

Gene: HitchHiker_51 Start: 48938, Stop: 49636, Start Num: 2
Candidate Starts for HitchHiker_51:
(Start: 2 @48938 has 21 MA's), (13, 49124), (16, 49157), (22, 49187), (32, 49355), (35, 49388), (39, 49442), (41, 49469), (44, 49490), (50, 49565), (54, 49613), (55, 49628),

Gene: JordanFarm_51 Start: 49656, Stop: 50303, Start Num: 3
Candidate Starts for JordanFarm_51:
(Start: 3 @49656 has 15 MA's), (10, 49749), (12, 49770), (17, 49842), (20, 49860), (28, 49953), (51, 50268),

Gene: Kikiko_44 Start: 49997, Stop: 50578, Start Num: 5
Candidate Starts for Kikiko_44:
(5, 49997), (15, 50129), (23, 50192), (31, 50288), (46, 50492),

Gene: KingKamren_46 Start: 49969, Stop: 50658, Start Num: 2
Candidate Starts for KingKamren_46:
(Start: 2 @49969 has 21 MA's), (13, 50146), (22, 50209), (40, 50488), (42, 50500), (47, 50557), (50, 50587), (55, 50650),

Gene: LesNorah_49 Start: 49859, Stop: 50569, Start Num: 2
Candidate Starts for LesNorah_49:
(Start: 2 @49859 has 21 MA's), (13, 50057), (18, 50096), (21, 50114), (22, 50120), (33, 50309), (35, 50321), (37, 50351), (41, 50402), (43, 50414), (44, 50423), (46, 50459), (50, 50498), (55, 50561),

Gene: LilyLou_50 Start: 49472, Stop: 50182, Start Num: 2
Candidate Starts for LilyLou_50:
(Start: 2 @49472 has 21 MA's), (13, 49670), (18, 49709), (22, 49733), (27, 49805), (33, 49922), (35, 49934), (37, 49964), (41, 50015), (43, 50027), (44, 50036), (46, 50072), (50, 50111), (55, 50174),

Gene: Mazun_49 Start: 49731, Stop: 50366, Start Num: 3
Candidate Starts for Mazun_49:
(Start: 3 @49731 has 15 MA's), (12, 49833), (14, 49878), (28, 50016), (29, 50031), (47, 50283), (51, 50331), (53, 50352),

Gene: MissAmericana_47 Start: 49936, Stop: 50523, Start Num: 5
Candidate Starts for MissAmericana_47:
(5, 49936), (31, 50221), (46, 50425),

Gene: Moleficent_48 Start: 49335, Stop: 49970, Start Num: 3
Candidate Starts for Moleficent_48:
(Start: 3 @49335 has 15 MA's), (14, 49482), (28, 49620), (47, 49887), (53, 49956),

Gene: Morrill_46 Start: 48766, Stop: 49401, Start Num: 3
Candidate Starts for Morrill_46:
(Start: 3 @48766 has 15 MA's), (12, 48868), (14, 48913), (20, 48958), (28, 49051), (47, 49318), (51, 49366), (53, 49387),

Gene: Oatly_50 Start: 48498, Stop: 49196, Start Num: 2
Candidate Starts for Oatly_50:
(Start: 2 @48498 has 21 MA's), (13, 48684), (16, 48717), (22, 48747), (32, 48915), (35, 48948), (39, 49002), (41, 49029), (44, 49050), (50, 49125), (54, 49173), (55, 49188),

Gene: Pabst_48 Start: 48561, Stop: 49262, Start Num: 2
Candidate Starts for Pabst_48:
(Start: 2 @48561 has 21 MA's), (13, 48750), (16, 48783), (19, 48792), (22, 48813), (35, 49014), (41, 49095), (44, 49116), (49, 49188), (50, 49191), (54, 49239), (55, 49254),

Gene: Pharky_48 Start: 49331, Stop: 49966, Start Num: 3
Candidate Starts for Pharky_48:
(Start: 3 @49331 has 15 MA's), (14, 49478), (28, 49616), (47, 49883), (53, 49952),

Gene: Phedro_48 Start: 49331, Stop: 49966, Start Num: 3
Candidate Starts for Phedro_48:
(Start: 3 @49331 has 15 MA's), (14, 49478), (28, 49616), (47, 49883), (53, 49952),

Gene: Phogo_49 Start: 49300, Stop: 50010, Start Num: 2
Candidate Starts for Phogo_49:
(Start: 2 @49300 has 21 MA's), (13, 49498), (18, 49537), (22, 49561), (27, 49633), (33, 49750), (35, 49762), (37, 49792), (41, 49843), (44, 49864), (46, 49900), (50, 49939), (55, 50002),

Gene: Phractured_48 Start: 49331, Stop: 49966, Start Num: 3
Candidate Starts for Phractured_48:
(Start: 3 @49331 has 15 MA's), (14, 49478), (28, 49616), (47, 49883), (53, 49952),

Gene: PhriedRice_49 Start: 49435, Stop: 50070, Start Num: 3
Candidate Starts for PhriedRice_49:
(Start: 3 @49435 has 15 MA's), (14, 49582), (28, 49720), (47, 49987), (53, 50056),

Gene: PineapplePluto_51 Start: 48860, Stop: 49558, Start Num: 2
Candidate Starts for PineapplePluto_51:
(Start: 2 @48860 has 21 MA's), (13, 49046), (16, 49079), (22, 49109), (32, 49277), (35, 49310), (39, 49364), (41, 49391), (44, 49412), (50, 49487), (54, 49535), (55, 49550),

Gene: RicoCaldo_48 Start: 49413, Stop: 50048, Start Num: 3
Candidate Starts for RicoCaldo_48:
(Start: 3 @49413 has 15 MA's), (14, 49560), (28, 49698), (41, 49899), (47, 49965), (53, 50034),

Gene: Scruffy_44 Start: 49927, Stop: 50520, Start Num: 6
Candidate Starts for Scruffy_44:
(Start: 6 @49927 has 5 MA's), (19, 50062), (30, 50188), (34, 50296), (36, 50314), (43, 50380), (45, 50419), (52, 50497),

Gene: StagePhright_48 Start: 49331, Stop: 49966, Start Num: 3
Candidate Starts for StagePhright_48:
(Start: 3 @49331 has 15 MA's), (14, 49478), (28, 49616), (47, 49883), (53, 49952),

Gene: Stormbreaker_49 Start: 49388, Stop: 50098, Start Num: 2
Candidate Starts for Stormbreaker_49:
(Start: 2 @49388 has 21 MA's), (13, 49586), (18, 49625), (22, 49649), (24, 49688), (27, 49721), (33, 49838), (35, 49850), (37, 49880), (41, 49931), (43, 49943), (44, 49952), (46, 49988), (50, 50027), (55, 50090),

Gene: ThirteenKH_48 Start: 48775, Stop: 49410, Start Num: 3
Candidate Starts for ThirteenKH_48:
(Start: 3 @48775 has 15 MA's), (12, 48877), (14, 48922), (20, 48967), (28, 49060), (47, 49327), (51, 49375), (53, 49396),

Gene: TinyTimothy_46 Start: 49001, Stop: 49705, Start Num: 2
Candidate Starts for TinyTimothy_46:
(Start: 2 @49001 has 21 MA's), (13, 49193), (18, 49232), (35, 49457), (37, 49487), (40, 49535), (50, 49634), (55, 49697),

Gene: TrippleS_50 Start: 48924, Stop: 49559, Start Num: 3
Candidate Starts for TrippleS_50:
(Start: 3 @48924 has 15 MA's), (12, 49026), (14, 49071), (20, 49116), (28, 49209), (47, 49476), (51, 49524), (53, 49545),

Gene: Truong_49 Start: 49445, Stop: 50092, Start Num: 3
Candidate Starts for Truong_49:
(Start: 3 @49445 has 15 MA's), (10, 49538), (12, 49559), (17, 49631), (20, 49649), (28, 49742), (51, 50057),

Gene: Unphazed_49 Start: 49257, Stop: 49967, Start Num: 2
Candidate Starts for Unphazed_49:
(Start: 2 @49257 has 21 MA's), (13, 49455), (15, 49476), (18, 49494), (21, 49512), (22, 49518), (33, 49707), (35, 49719), (37, 49749), (41, 49800), (43, 49812), (44, 49821), (46, 49857), (50, 49896), (55, 49959),

Gene: Waterlily_52 Start: 49696, Stop: 50343, Start Num: 3
Candidate Starts for Waterlily_52:
(Start: 3 @49696 has 15 MA's), (10, 49789), (12, 49810), (17, 49882), (20, 49900), (28, 49993), (51, 50308),

Gene: Wesak_47 Start: 48846, Stop: 49550, Start Num: 2
Candidate Starts for Wesak_47:
(Start: 2 @48846 has 21 MA's), (13, 49038), (18, 49077), (35, 49302), (37, 49332), (40, 49380), (50, 49479), (55, 49542),

Gene: Xitlalli_47 Start: 49267, Stop: 49977, Start Num: 2
Candidate Starts for Xitlalli_47:
(Start: 2 @49267 has 21 MA's), (13, 49465), (18, 49504), (21, 49522), (22, 49528), (33, 49717), (35, 49729), (37, 49759), (41, 49810), (43, 49822), (44, 49831), (46, 49867), (50, 49906), (55, 49969),

Gene: Yafa_49 Start: 48679, Stop: 49314, Start Num: 3
Candidate Starts for Yafa_49:
(Start: 3 @48679 has 15 MA's), (12, 48781), (14, 48826), (20, 48871), (28, 48964), (47, 49231), (51, 49279), (53, 49300),

Gene: YellowPanda_49 Start: 48727, Stop: 49431, Start Num: 2
Candidate Starts for YellowPanda_49:
(Start: 2 @48727 has 21 MA's), (13, 48919), (18, 48958), (35, 49183), (37, 49213), (40, 49261), (50, 49360), (55, 49423),

Gene: Zhengyi_46 Start: 50061, Stop: 50750, Start Num: 2
Candidate Starts for Zhengyi_46:
(1, 49983), (Start: 2 @50061 has 21 MA's), (13, 50238), (22, 50301), (32, 50469), (40, 50580), (50, 50679), (55, 50742),