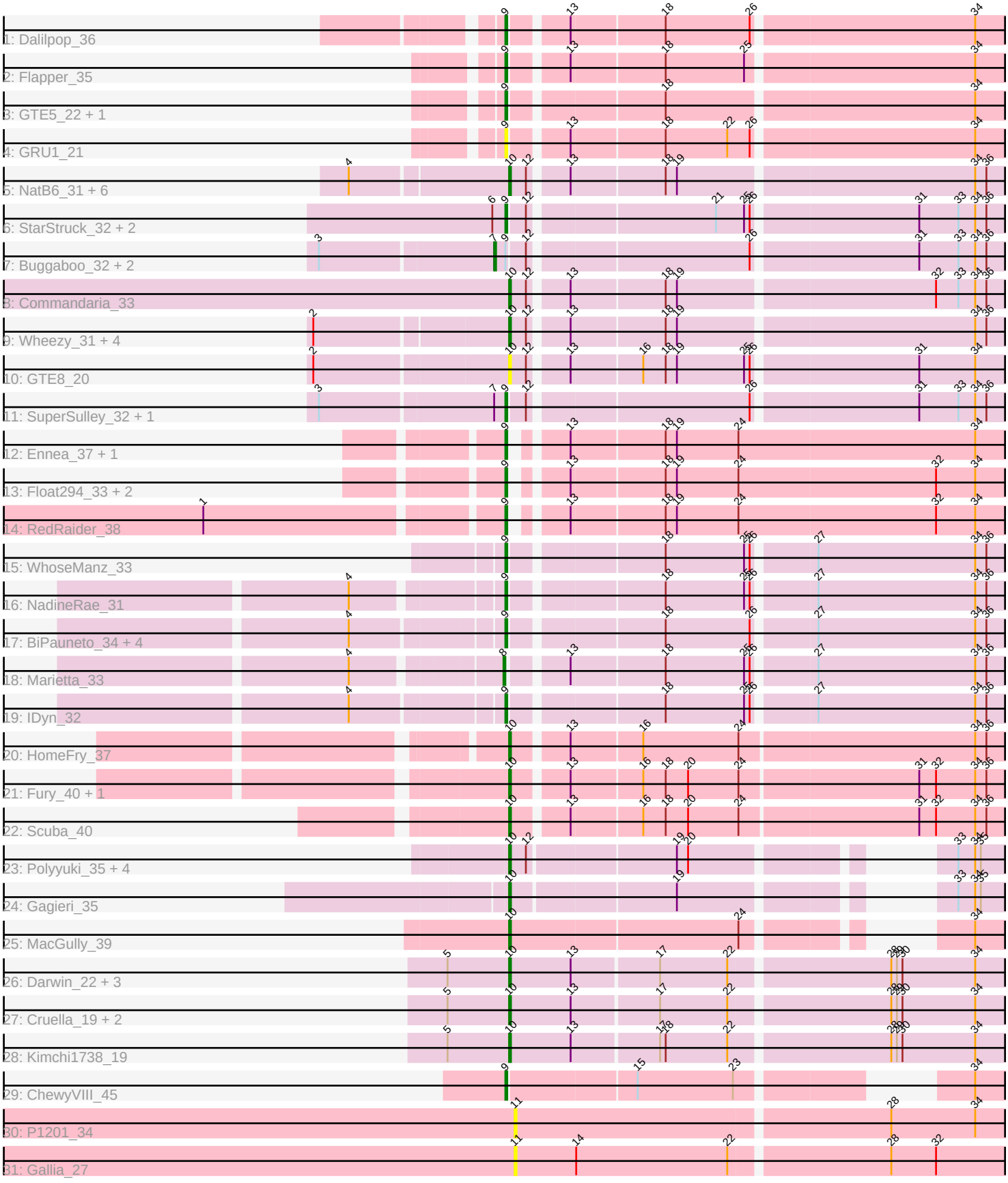
Zoomed Pham 338282



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 338282 Report

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

Pham number 338282 has 64 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Dalilpop_36
• Track 2 : Flapper_35
• Track 3 : GTE5_22, Turuncu_35
• Track 4 : GRU1_21
• Track 5 : NatB6_31, Kurt_31, Jifall16_30, Tracker_31, Phomeo_30, Foxboro_32, Emianna_31
• Track 6 : StarStruck_32, Outis_32, MerCougar_32
• Track 7 : Buggaboo_32, Kabluna_34, NosilaM_34
• Track 8 : Commandaria_33
• Track 9 : Wheezy_31, KidneyBean_31, GrootJr_33, Arti_31, NovumRegina_31
• Track 10 : GTE8_20
• Track 11 : SuperSulley_32, Bonum_34
• Track 12 : Ennea_37, Lollipop1437_36
• Track 13 : Float294_33, Patio_34, Skysand_33
• Track 14 : RedRaider_38
• Track 15 : WhoseManz_33
• Track 16 : NadineRae_31
• Track 17 : BiPauneto_34, HubbaBubba_29, Pemberton_34, Sukkupi_33, Yndexa_33
• Track 18 : Marietta_33
• Track 19 : IDyn_32
• Track 20 : HomeFry_37
• Track 21 : Fury_40, Pleakley_40
• Track 22 : Scuba_40
• Track 23 : Polyyuki_35, Apiary_35, Maselop_35, CoffeeBean_35, Braxoaddie_35
• Track 24 : Gagieri_35
• Track 25 : MacGully_39
• Track 26 : Darwin_22, Zion_19, PeteyPab_18, PotatoChip_19
• Track 27 : Cruella_19, Stickynote_21, C3PO_19
• Track 28 : Kimchi1738_19
• Track 29 : ChewyVIII_45
• Track 30 : P1201_34
• Track 31 : Gallia_27

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

The start number called the most often in the published annotations is 10, it was called in 32 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Apiary_35, Arti_31, Braxoaddie_35, C3PO_19, CoffeeBean_35, Commandaria_33, Cruella_19, Darwin_22, Emianna_31, Foxboro_32, Fury_40, GTE8_20, Gagieri_35, GrootJr_33, HomeFry_37, Jifall16_30, KidneyBean_31, Kimchi1738_19, Kurt_31, MacGully_39, Maselop_35, NatB6_31, NovumRegina_31, PeteyPab_18, Phomeo_30, Pleakley_40, Polyyuki_35, PotatoChip_19, Scuba_40, Stickynote_21, Tracker_31, Wheezy_31, Zion_19,

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

Genes that do not have the "Most Annotated" start:
• BiPauneto_34, Bonum_34, Buggaboo_32, ChewyVIII_45, Dalilpop_36, Ennea_37, Flapper_35, Float294_33, GRU1_21, GTE5_22, Gallia_27, HubbaBubba_29, IDyn_32, Kabluna_34, Lollipop1437_36, Marietta_33, MerCougar_32, NadineRae_31, NosilaM_34, Outis_32, P1201_34, Patio_34, Pemberton_34, RedRaider_38, Skysand_33, StarStruck_32, Sukkupi_33, SuperSulley_32, Turuncu_35, WhoseManz_33, Yndexa_33,

Summary by start number:

Start 7:
• Found in 5 of 64 (7.8%) of genes in pham
• Manual Annotations of this start: 3 of 59
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Buggaboo_32 (CR2), Kabluna_34 (CR2), NosilaM_34 (CR2),

Start 8:
• Found in 1 of 64 (1.6%) 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: Marietta_33 (CR4),

Start 9:
• Found in 28 of 64 (43.8%) of genes in pham
• Manual Annotations of this start: 23 of 59
• Called 89.3% of time when present
• Phage (with cluster) where this start called: BiPauneto_34 (CR4), Bonum_34 (CR2), ChewyVIII_45 (singleton), Dalilpop_36 (CR1), Ennea_37 (CR3), Flapper_35 (CR1), Float294_33 (CR3), GRU1_21 (CR1), GTE5_22 (CR1), HubbaBubba_29 (CR4), IDyn_32 (CR4), Lollipop1437_36 (CR3), MerCougar_32 (CR2), NadineRae_31 (CR4), Outis_32 (CR2), Patio_34 (CR3), Pemberton_34 (CR4), RedRaider_38 (CR3), Skysand_33 (CR3), StarStruck_32 (CR2), Sukkupi_33 (CR4), SuperSulley_32 (CR2), Turuncu_35 (CR1), WhoseManz_33 (CR4), Yndexa_33 (CR4),

Start 10:
• Found in 33 of 64 (51.6%) of genes in pham
• Manual Annotations of this start: 32 of 59

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Apiary_35 (CR6), Arti_31 (CR2), Braxoaddie_35 (CR6), C3PO_19 (EN), CoffeeBean_35 (CR6), Commandaria_33 (CR2), Cruella_19 (EN), Darwin_22 (EN), Emianna_31 (CR2), Foxboro_32 (CR2), Fury_40 (CR5), GTE8_20 (CR2), Gagieri_35 (CR6), GrootJr_33 (CR2), HomeFry_37 (CR5), Jifall16_30 (CR2), KidneyBean_31 (CR2), Kimchi1738_19 (EN), Kurt_31 (CR2), MacGully_39 (CR7), Maselop_35 (CR6), NatB6_31 (CR2), NovumRegina_31 (CR2), PeteyPab_18 (EN), Phomeo_30 (CR2), Pleakley_40 (CR5), Polyyuki_35 (CR6), PotatoChip_19 (EN), Scuba_40 (CR5), Stickynote_21 (EN), Tracker_31 (CR2), Wheezy_31 (CR2), Zion_19 (EN),

Start 11:
• Found in 2 of 64 (3.1%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gallia_27 (singleton), P1201_34 (singleton),

Summary by clusters:

There are 9 clusters represented in this pham: CR2, CR3, singleton, EN, CR6, CR7, CR4, CR5, CR1,

Info for manual annotations of cluster CR1:
•Start number 9 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:
•Start number 7 was manually annotated 3 times for cluster CR2.
•Start number 9 was manually annotated 5 times for cluster CR2.
•Start number 10 was manually annotated 13 times for cluster CR2.

Info for manual annotations of cluster CR3:
•Start number 9 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:
•Start number 8 was manually annotated 1 time for cluster CR4.
•Start number 9 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:
•Start number 10 was manually annotated 4 times for cluster CR5.

Info for manual annotations of cluster CR6:
•Start number 10 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:
•Start number 10 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster EN:
•Start number 10 was manually annotated 8 times for cluster EN.

Gene Information:

Gene: Apiary_35 Start: 21563, Stop: 21976, Start Num: 10
Candidate Starts for Apiary_35:
(Start: 10 @21563 has 32 MA's), (12, 21572), (19, 21647), (20, 21653), (33, 21746), (34, 21755), (35, 21758), (37, 21821), (38, 21830), (45, 21902), (47, 21926),

Gene: Arti_31 Start: 19636, Stop: 20091, Start Num: 10
Candidate Starts for Arti_31:
(2, 19537), (Start: 10 @19636 has 32 MA's), (12, 19645), (13, 19663), (18, 19711), (19, 19717), (34, 19870), (36, 19876), (37, 19936), (38, 19945), (47, 20041),

Gene: BiPauneto_34 Start: 19491, Stop: 19946, Start Num: 9
Candidate Starts for BiPauneto_34:
(4, 19416), (Start: 9 @19491 has 23 MA's), (18, 19566), (26, 19611), (27, 19641), (34, 19725), (36, 19731), (38, 19800),

Gene: Bonum_34 Start: 19967, Stop: 20422, Start Num: 9
Candidate Starts for Bonum_34:
(3, 19871), (Start: 7 @19961 has 3 MA's), (Start: 9 @19967 has 23 MA's), (12, 19976), (26, 20087), (31, 20171), (33, 20192), (34, 20201), (36, 20207), (37, 20267), (38, 20276), (42, 20333), (50, 20378),

Gene: Braxoaddie_35 Start: 21552, Stop: 21965, Start Num: 10
Candidate Starts for Braxoaddie_35:
(Start: 10 @21552 has 32 MA's), (12, 21561), (19, 21636), (20, 21642), (33, 21735), (34, 21744), (35, 21747), (37, 21810), (38, 21819), (45, 21891), (47, 21915),

Gene: Buggaboo_32 Start: 20446, Stop: 20907, Start Num: 7
Candidate Starts for Buggaboo_32:
(3, 20356), (Start: 7 @20446 has 3 MA's), (Start: 9 @20452 has 23 MA's), (12, 20461), (26, 20572), (31, 20656), (33, 20677), (34, 20686), (36, 20692), (37, 20752), (38, 20761), (42, 20818), (50, 20863),

Gene: C3PO_19 Start: 14075, Stop: 14548, Start Num: 10
Candidate Starts for C3PO_19:
(5, 14042), (Start: 10 @14075 has 32 MA's), (13, 14108), (17, 14153), (22, 14189), (28, 14270), (29, 14273), (30, 14276), (34, 14315), (46, 14459), (48, 14471), (51, 14477), (53, 14495),

Gene: ChewyVIII_45 Start: 27135, Stop: 27593, Start Num: 9
Candidate Starts for ChewyVIII_45:
(Start: 9 @27135 has 23 MA's), (15, 27201), (23, 27252), (34, 27336), (38, 27411), (45, 27483), (54, 27534),

Gene: CoffeeBean_35 Start: 21507, Stop: 21920, Start Num: 10
Candidate Starts for CoffeeBean_35:
(Start: 10 @21507 has 32 MA's), (12, 21516), (19, 21591), (20, 21597), (33, 21690), (34, 21699), (35, 21702), (37, 21765), (38, 21774), (45, 21846), (47, 21870),

Gene: Commandaria_33 Start: 20957, Stop: 21412, Start Num: 10
Candidate Starts for Commandaria_33:
(Start: 10 @20957 has 32 MA's), (12, 20966), (13, 20984), (18, 21032), (19, 21038), (32, 21170), (33, 21182), (34, 21191), (36, 21197), (37, 21257), (43, 21326),

Gene: Cruella_19 Start: 14075, Stop: 14548, Start Num: 10
Candidate Starts for Cruella_19:

(5, 14042), (Start: 10 @14075 has 32 MA's), (13, 14108), (17, 14153), (22, 14189), (28, 14270), (29, 14273), (30, 14276), (34, 14315), (46, 14459), (48, 14471), (51, 14477), (53, 14495),

Gene: Dalilpop_36 Start: 21951, Stop: 22406, Start Num: 9
Candidate Starts for Dalilpop_36:
(Start: 9 @21951 has 23 MA's), (13, 21978), (18, 22026), (26, 22071), (34, 22185), (37, 22251), (38, 22260),

Gene: Darwin_22 Start: 14820, Stop: 15293, Start Num: 10
Candidate Starts for Darwin_22:
(5, 14787), (Start: 10 @14820 has 32 MA's), (13, 14853), (17, 14898), (22, 14934), (28, 15015), (29, 15018), (30, 15021), (34, 15060), (48, 15216), (51, 15222), (53, 15240),

Gene: Emianna_31 Start: 20673, Stop: 21128, Start Num: 10
Candidate Starts for Emianna_31:
(4, 20592), (Start: 10 @20673 has 32 MA's), (12, 20682), (13, 20700), (18, 20748), (19, 20754), (34, 20907), (36, 20913), (37, 20973), (38, 20982), (47, 21078),

Gene: Ennea_37 Start: 21284, Stop: 21742, Start Num: 9
Candidate Starts for Ennea_37:
(Start: 9 @21284 has 23 MA's), (13, 21305), (18, 21353), (19, 21359), (24, 21392), (34, 21518), (37, 21584), (41, 21629), (52, 21713),

Gene: Flapper_35 Start: 21033, Stop: 21488, Start Num: 9
Candidate Starts for Flapper_35:
(Start: 9 @21033 has 23 MA's), (13, 21060), (18, 21108), (25, 21150), (34, 21267), (37, 21333), (38, 21342),

Gene: Float294_33 Start: 20723, Stop: 21181, Start Num: 9
Candidate Starts for Float294_33:
(Start: 9 @20723 has 23 MA's), (13, 20744), (18, 20792), (19, 20798), (24, 20831), (32, 20936), (34, 20957), (37, 21023), (38, 21032), (41, 21068), (52, 21152),

Gene: Foxboro_32 Start: 21179, Stop: 21634, Start Num: 10
Candidate Starts for Foxboro_32:
(4, 21098), (Start: 10 @21179 has 32 MA's), (12, 21188), (13, 21206), (18, 21254), (19, 21260), (34, 21413), (36, 21419), (37, 21479), (38, 21488), (47, 21584),

Gene: Fury_40 Start: 20327, Stop: 20785, Start Num: 10
Candidate Starts for Fury_40:
(Start: 10 @20327 has 32 MA's), (13, 20354), (16, 20390), (18, 20402), (20, 20414), (24, 20441), (31, 20534), (32, 20543), (34, 20564), (36, 20570), (37, 20630), (38, 20639), (40, 20672),

Gene: GRU1_21 Start: 12918, Stop: 13373, Start Num: 9
Candidate Starts for GRU1_21:
(Start: 9 @12918 has 23 MA's), (13, 12945), (18, 12993), (22, 13026), (26, 13038), (34, 13152), (37, 13218), (38, 13227),

Gene: GTE5_22 Start: 13921, Stop: 14376, Start Num: 9
Candidate Starts for GTE5_22:
(Start: 9 @13921 has 23 MA's), (18, 13996), (34, 14155), (37, 14221), (38, 14230),

Gene: GTE8_20 Start: 13932, Stop: 14387, Start Num: 10

Candidate Starts for GTE8_20:
(2, 13833), (Start: 10 @13932 has 32 MA's), (12, 13941), (13, 13959), (16, 13995), (18, 14007), (19, 14013), (25, 14049), (26, 14052), (31, 14136), (34, 14166), (37, 14232), (38, 14241), (47, 14337),

Gene: Gagieri_35 Start: 21382, Stop: 21795, Start Num: 10
Candidate Starts for Gagieri_35:
(Start: 10 @21382 has 32 MA's), (19, 21466), (33, 21565), (34, 21574), (35, 21577), (37, 21640), (38, 21649), (47, 21745),

Gene: Gallia_27 Start: 17800, Stop: 18252, Start Num: 11
Candidate Starts for Gallia_27:
(11, 17800), (14, 17833), (22, 17914), (28, 17995), (32, 18019), (44, 18169),

Gene: GrootJr_33 Start: 20031, Stop: 20486, Start Num: 10
Candidate Starts for GrootJr_33:
(2, 19932), (Start: 10 @20031 has 32 MA's), (12, 20040), (13, 20058), (18, 20106), (19, 20112), (34, 20265), (36, 20271), (37, 20331), (38, 20340), (47, 20436),

Gene: HomeFry_37 Start: 18984, Stop: 19442, Start Num: 10
Candidate Starts for HomeFry_37:
(Start: 10 @18984 has 32 MA's), (13, 19011), (16, 19047), (24, 19098), (34, 19221), (36, 19227), (37, 19287), (38, 19296), (40, 19329),

Gene: HubbaBubba_29 Start: 16509, Stop: 16964, Start Num: 9
Candidate Starts for HubbaBubba_29:
(4, 16434), (Start: 9 @16509 has 23 MA's), (18, 16584), (26, 16629), (27, 16659), (34, 16743), (36, 16749), (38, 16818),

Gene: IDyn_32 Start: 17905, Stop: 18360, Start Num: 9
Candidate Starts for IDyn_32:
(4, 17830), (Start: 9 @17905 has 23 MA's), (18, 17980), (25, 18022), (26, 18025), (27, 18055), (34, 18139), (36, 18145), (38, 18214),

Gene: Jifall16_30 Start: 20300, Stop: 20755, Start Num: 10
Candidate Starts for Jifall16_30:
(4, 20219), (Start: 10 @20300 has 32 MA's), (12, 20309), (13, 20327), (18, 20375), (19, 20381), (34, 20534), (36, 20540), (37, 20600), (38, 20609), (47, 20705),

Gene: Kabluna_34 Start: 19361, Stop: 19822, Start Num: 7
Candidate Starts for Kabluna_34:
(3, 19271), (Start: 7 @19361 has 3 MA's), (Start: 9 @19367 has 23 MA's), (12, 19376), (26, 19487), (31, 19571), (33, 19592), (34, 19601), (36, 19607), (37, 19667), (38, 19676), (42, 19733), (50, 19778),

Gene: KidneyBean_31 Start: 20448, Stop: 20903, Start Num: 10
Candidate Starts for KidneyBean_31:
(2, 20349), (Start: 10 @20448 has 32 MA's), (12, 20457), (13, 20475), (18, 20523), (19, 20529), (34, 20682), (36, 20688), (37, 20748), (38, 20757), (47, 20853),

Gene: Kimchi1738_19 Start: 13673, Stop: 14146, Start Num: 10
Candidate Starts for Kimchi1738_19:
(5, 13640), (Start: 10 @13673 has 32 MA's), (13, 13706), (17, 13751), (18, 13754), (22, 13787), (28, 13868), (29, 13871), (30, 13874), (34, 13913), (46, 14057), (48, 14069), (51, 14075), (53, 14093),

Gene: Kurt_31 Start: 20688, Stop: 21143, Start Num: 10
Candidate Starts for Kurt_31:
(4, 20607), (Start: 10 @20688 has 32 MA's), (12, 20697), (13, 20715), (18, 20763), (19, 20769), (34, 20922), (36, 20928), (37, 20988), (38, 20997), (47, 21093),

Gene: Lollipop1437_36 Start: 21272, Stop: 21730, Start Num: 9
Candidate Starts for Lollipop1437_36:
(Start: 9 @21272 has 23 MA's), (13, 21293), (18, 21341), (19, 21347), (24, 21380), (34, 21506), (37, 21572), (41, 21617), (52, 21701),

Gene: MacGully_39 Start: 21523, Stop: 21939, Start Num: 10
Candidate Starts for MacGully_39:
(Start: 10 @21523 has 32 MA's), (24, 21643), (34, 21718), (37, 21784), (38, 21793), (47, 21889), (49, 21892),

Gene: Marietta_33 Start: 17822, Stop: 18277, Start Num: 8
Candidate Starts for Marietta_33:
(4, 17750), (Start: 8 @17822 has 1 MA's), (13, 17849), (18, 17897), (25, 17939), (26, 17942), (27, 17972), (34, 18056), (36, 18062), (38, 18131),

Gene: Maselop_35 Start: 21583, Stop: 21996, Start Num: 10
Candidate Starts for Maselop_35:
(Start: 10 @21583 has 32 MA's), (12, 21592), (19, 21667), (20, 21673), (33, 21766), (34, 21775), (35, 21778), (37, 21841), (38, 21850), (45, 21922), (47, 21946),

Gene: MerCougar_32 Start: 20574, Stop: 21029, Start Num: 9
Candidate Starts for MerCougar_32:
(6, 20568), (Start: 9 @20574 has 23 MA's), (12, 20583), (21, 20676), (25, 20691), (26, 20694), (31, 20778), (33, 20799), (34, 20808), (36, 20814), (37, 20874), (38, 20883), (50, 20985),

Gene: NadineRae_31 Start: 17068, Stop: 17523, Start Num: 9
Candidate Starts for NadineRae_31:
(4, 16996), (Start: 9 @17068 has 23 MA's), (18, 17143), (25, 17185), (26, 17188), (27, 17218), (34, 17302), (36, 17308), (38, 17377),

Gene: NatB6_31 Start: 19697, Stop: 20152, Start Num: 10
Candidate Starts for NatB6_31:
(4, 19616), (Start: 10 @19697 has 32 MA's), (12, 19706), (13, 19724), (18, 19772), (19, 19778), (34, 19931), (36, 19937), (37, 19997), (38, 20006), (47, 20102),

Gene: NosilaM_34 Start: 20258, Stop: 20719, Start Num: 7
Candidate Starts for NosilaM_34:
(3, 20168), (Start: 7 @20258 has 3 MA's), (Start: 9 @20264 has 23 MA's), (12, 20273), (26, 20384), (31, 20468), (33, 20489), (34, 20498), (36, 20504), (37, 20564), (38, 20573), (42, 20630), (50, 20675),

Gene: NovumRegina_31 Start: 20030, Stop: 20485, Start Num: 10
Candidate Starts for NovumRegina_31:
(2, 19931), (Start: 10 @20030 has 32 MA's), (12, 20039), (13, 20057), (18, 20105), (19, 20111), (34, 20264), (36, 20270), (37, 20330), (38, 20339), (47, 20435),

Gene: Outis_32 Start: 20268, Stop: 20723, Start Num: 9
Candidate Starts for Outis_32:

(6, 20262), (Start: 9 @20268 has 23 MA's), (12, 20277), (21, 20370), (25, 20385), (26, 20388), (31, 20472), (33, 20493), (34, 20502), (36, 20508), (37, 20568), (38, 20577), (50, 20679),

Gene: P1201_34 Start: 20985, Stop: 21437, Start Num: 11
Candidate Starts for P1201_34:
(11, 20985), (28, 21180), (34, 21225), (39, 21312), (44, 21354),

Gene: Patio_34 Start: 20508, Stop: 20966, Start Num: 9
Candidate Starts for Patio_34:
(Start: 9 @20508 has 23 MA's), (13, 20529), (18, 20577), (19, 20583), (24, 20616), (32, 20721), (34, 20742), (37, 20808), (38, 20817), (41, 20853), (52, 20937),

Gene: Pemberton_34 Start: 17808, Stop: 18263, Start Num: 9
Candidate Starts for Pemberton_34:
(4, 17733), (Start: 9 @17808 has 23 MA's), (18, 17883), (26, 17928), (27, 17958), (34, 18042), (36, 18048), (38, 18117),

Gene: PeteyPab_18 Start: 14040, Stop: 14513, Start Num: 10
Candidate Starts for PeteyPab_18:
(5, 14007), (Start: 10 @14040 has 32 MA's), (13, 14073), (17, 14118), (22, 14154), (28, 14235), (29, 14238), (30, 14241), (34, 14280), (48, 14436), (51, 14442), (53, 14460),

Gene: Phomeo_30 Start: 20323, Stop: 20778, Start Num: 10
Candidate Starts for Phomeo_30:
(4, 20242), (Start: 10 @20323 has 32 MA's), (12, 20332), (13, 20350), (18, 20398), (19, 20404), (34, 20557), (36, 20563), (37, 20623), (38, 20632), (47, 20728),

Gene: Pleakley_40 Start: 20328, Stop: 20786, Start Num: 10
Candidate Starts for Pleakley_40:
(Start: 10 @20328 has 32 MA's), (13, 20355), (16, 20391), (18, 20403), (20, 20415), (24, 20442), (31, 20535), (32, 20544), (34, 20565), (36, 20571), (37, 20631), (38, 20640), (40, 20673),

Gene: Polyyuki_35 Start: 21575, Stop: 21988, Start Num: 10
Candidate Starts for Polyyuki_35:
(Start: 10 @21575 has 32 MA's), (12, 21584), (19, 21659), (20, 21665), (33, 21758), (34, 21767), (35, 21770), (37, 21833), (38, 21842), (45, 21914), (47, 21938),

Gene: PotatoChip_19 Start: 14042, Stop: 14515, Start Num: 10
Candidate Starts for PotatoChip_19:
(5, 14009), (Start: 10 @14042 has 32 MA's), (13, 14075), (17, 14120), (22, 14156), (28, 14237), (29, 14240), (30, 14243), (34, 14282), (48, 14438), (51, 14444), (53, 14462),

Gene: RedRaider_38 Start: 22512, Stop: 22970, Start Num: 9
Candidate Starts for RedRaider_38:
(1, 22362), (Start: 9 @22512 has 23 MA's), (13, 22533), (18, 22581), (19, 22587), (24, 22620), (32, 22725), (34, 22746), (38, 22821), (41, 22857),

Gene: Scuba_40 Start: 20421, Stop: 20879, Start Num: 10
Candidate Starts for Scuba_40:
(Start: 10 @20421 has 32 MA's), (13, 20448), (16, 20484), (18, 20496), (20, 20508), (24, 20535), (31, 20628), (32, 20637), (34, 20658), (36, 20664), (37, 20724), (38, 20733), (40, 20766),

Gene: Skysand_33 Start: 20725, Stop: 21183, Start Num: 9

Candidate Starts for Skysand_33:
(Start: 9 @20725 has 23 MA's), (13, 20746), (18, 20794), (19, 20800), (24, 20833), (32, 20938), (34, 20959), (37, 21025), (38, 21034), (41, 21070), (52, 21154),

Gene: StarStruck_32 Start: 20268, Stop: 20723, Start Num: 9
Candidate Starts for StarStruck_32:
(6, 20262), (Start: 9 @20268 has 23 MA's), (12, 20277), (21, 20370), (25, 20385), (26, 20388), (31, 20472), (33, 20493), (34, 20502), (36, 20508), (37, 20568), (38, 20577), (50, 20679),

Gene: Stickynote_21 Start: 14852, Stop: 15325, Start Num: 10
Candidate Starts for Stickynote_21:
(5, 14819), (Start: 10 @14852 has 32 MA's), (13, 14885), (17, 14930), (22, 14966), (28, 15047), (29, 15050), (30, 15053), (34, 15092), (46, 15236), (48, 15248), (51, 15254), (53, 15272),

Gene: Sukkupi_33 Start: 19382, Stop: 19837, Start Num: 9
Candidate Starts for Sukkupi_33:
(4, 19307), (Start: 9 @19382 has 23 MA's), (18, 19457), (26, 19502), (27, 19532), (34, 19616), (36, 19622), (38, 19691),

Gene: SuperSulley_32 Start: 20452, Stop: 20907, Start Num: 9
Candidate Starts for SuperSulley_32:
(3, 20356), (Start: 7 @20446 has 3 MA's), (Start: 9 @20452 has 23 MA's), (12, 20461), (26, 20572), (31, 20656), (33, 20677), (34, 20686), (36, 20692), (37, 20752), (38, 20761), (42, 20818), (50, 20863),

Gene: Tracker_31 Start: 19451, Stop: 19906, Start Num: 10
Candidate Starts for Tracker_31:
(4, 19370), (Start: 10 @19451 has 32 MA's), (12, 19460), (13, 19478), (18, 19526), (19, 19532), (34, 19685), (36, 19691), (37, 19751), (38, 19760), (47, 19856),

Gene: Turuncu_35 Start: 20726, Stop: 21181, Start Num: 9
Candidate Starts for Turuncu_35:
(Start: 9 @20726 has 23 MA's), (18, 20801), (34, 20960), (37, 21026), (38, 21035),

Gene: Wheezy_31 Start: 19656, Stop: 20111, Start Num: 10
Candidate Starts for Wheezy_31:
(2, 19557), (Start: 10 @19656 has 32 MA's), (12, 19665), (13, 19683), (18, 19731), (19, 19737), (34, 19890), (36, 19896), (37, 19956), (38, 19965), (47, 20061),

Gene: WhoseManz_33 Start: 17434, Stop: 17889, Start Num: 9
Candidate Starts for WhoseManz_33:
(Start: 9 @17434 has 23 MA's), (18, 17509), (25, 17551), (26, 17554), (27, 17584), (34, 17668), (36, 17674), (38, 17743),

Gene: Yndexa_33 Start: 19382, Stop: 19837, Start Num: 9
Candidate Starts for Yndexa_33:
(4, 19307), (Start: 9 @19382 has 23 MA's), (18, 19457), (26, 19502), (27, 19532), (34, 19616), (36, 19622), (38, 19691),

Gene: Zion_19 Start: 14040, Stop: 14513, Start Num: 10
Candidate Starts for Zion_19:
(5, 14007), (Start: 10 @14040 has 32 MA's), (13, 14073), (17, 14118), (22, 14154), (28, 14235), (29, 14238), (30, 14241), (34, 14280), (48, 14436), (51, 14442), (53, 14460),