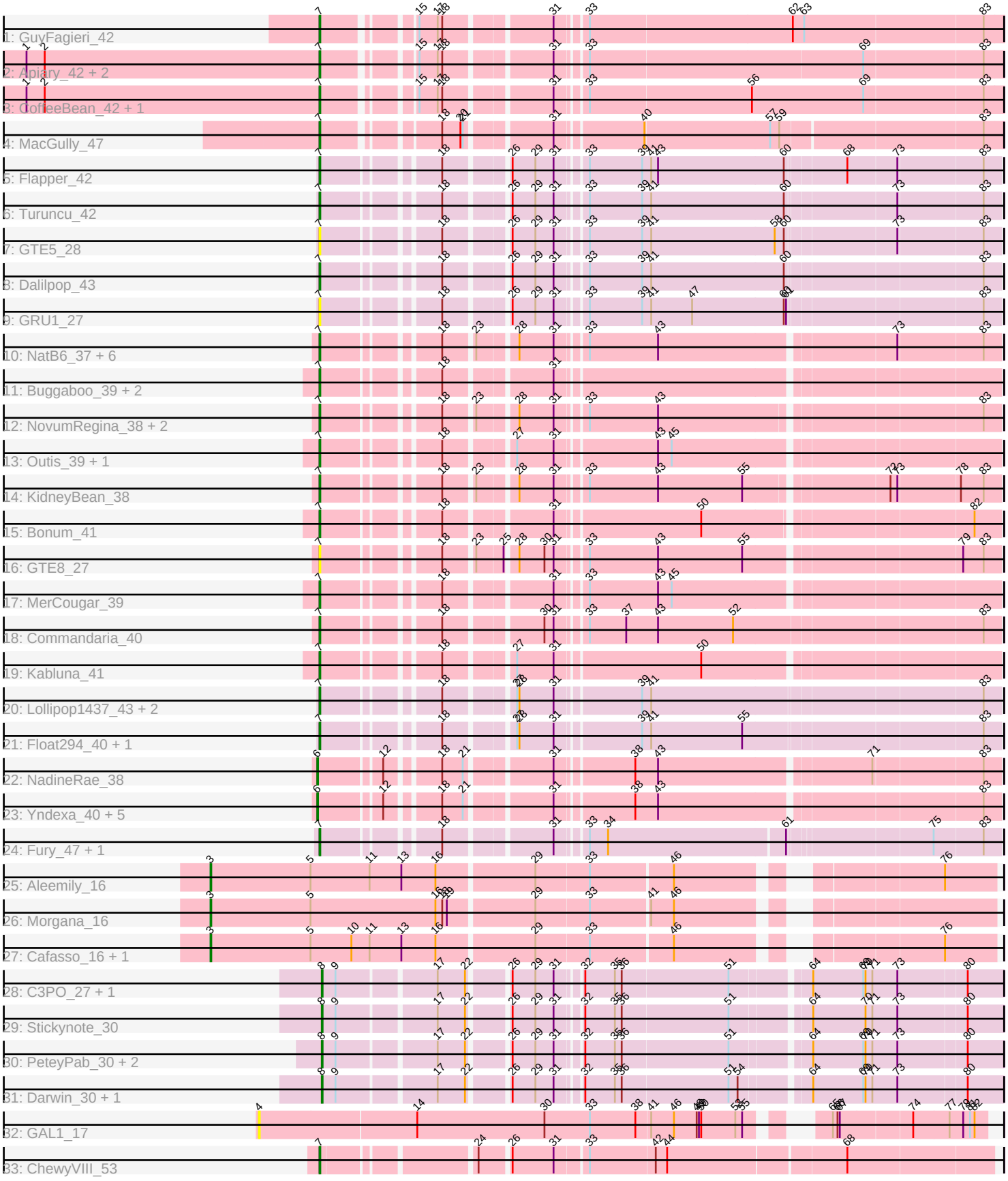
Pham 202950


1: GuyFagieri_42
2: Apiary_42 + 2
3: CoffeeBean_42 + 1
4: MacGully_47
5: Flapper_42
6: Turuncu_42
7: GTE5_28
8: Dalilpop_43
9: GRU1_27
10: NatB6_37 + 6
11: Buggaboo_39 + 2
12: NovumRegina_38 + 2
13: Outis_39 + 1
14: KidneyBean_38
15: Bonum_41
16: GTE8_27
17: MerCougar_39
18: Commandaria_40
19: Kabluna_41
20: Lollipop1437_43 + 2
21: Float294_40 + 1
22: NadineRae_38
23: Yndexa_40 + 5
24: Fury_47 + 1
25: Aleemily_16
26: Morgana_16
27: Cafasso_16 + 1
28: C3PO_27 + 1
29: Stickynote_30
30: PeteyPab_30 + 2
31: Darwin_30 + 1
32: GAL1_17
33: ChewyVIII_53

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 202950 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202950 has 61 members, 4 are drafts.

Phages represented in each track:
- Track 1 : GuyFagieri_42
- Track 2 : Apiary_42, Braxoaddie_42, Polyyuki_42
- Track 3 : CoffeeBean_42, Maselop_42
- Track 4 : MacGully_47
- Track 5 : Flapper_42
- Track 6 : Turuncu_42
- Track 7 : GTE5_28
- Track 8 : Dalilpop_43
- Track 9 : GRU1_27
- Track 10 : NatB6_37, Kurt_38, Wheezy_38, Jifall16_37, Tracker_38, Foxboro_39, Emianna_38
- Track 11 : Buggaboo_39, NosilaM_41, SuperSulley_39
- Track 12 : NovumRegina_38, GrootJr_40, Arti_38
- Track 13 : Outis_39, StarStruck_39
- Track 14 : KidneyBean_38
- Track 15 : Bonum_41
- Track 16 : GTE8_27
- Track 17 : MerCougar_39
- Track 18 : Commandaria_40
- Track 19 : Kabluna_41
- Track 20 : Lollipop1437_43, Ennea_44, Patio_41
- Track 21 : Float294_40, Skysand_40
- Track 22 : NadineRae_38
- Track 23 : Yndexa_40, IDyn_39, BiPauneto_41, Marietta_40, Sukkupi_40, WhoseManz_40
- Track 24 : Fury_47, Pleakley_47
- Track 25 : Aleemily_16
- Track 26 : Morgana_16
- Track 27 : Cafasso_16, ObLaDi_16
- Track 28 : C3PO_27, Cruella_28
- Track 29 : Stickynote_30
- Track 30 : PeteyPab_30, PotatoChip_30, Zion_30
- Track 31 : Darwin_30, Kimchi1738_28
- Track 32 : GAL1_17
- Track 33 : ChewyVIII_53

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

The start number called the most often in the published annotations is 7, it was called in 38 of the 57 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Apiary_42, Arti_38, Bonum_41, Braxoaddie_42, Buggaboo_39, ChewyVIII_53, CoffeeBean_42, Commandaria_40, Dalilpop_43, Emianna_38, Ennea_44, Flapper_42, Float294_40, Foxboro_39, Fury_47, GRU1_27, GTE5_28, GTE8_27, GrootJr_40, GuyFagieri_42, Jifall16_37, Kabluna_41, KidneyBean_38, Kurt_38, Lollipop1437_43, MacGully_47, Maselop_42, MerCougar_39, NatB6_37, NosilaM_41, NovumRegina_38, Outis_39, Patio_41, Pleakley_47, Polyyuki_42, Skysand_40, StarStruck_39, SuperSulley_39, Tracker_38, Turuncu_42, Wheezy_38,

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

Genes that do not have the "Most Annotated" start:
• Aleemily_16, BiPauneto_41, C3PO_27, Cafasso_16, Cruella_28, Darwin_30, GAL1_17, IDyn_39, Kimchi1738_28, Marietta_40, Morgana_16, NadineRae_38, ObLaDi_16, PeteyPab_30, PotatoChip_30, Stickynote_30, Sukkupi_40, WhoseManz_40, Yndexa_40, Zion_30,

Summary by start number:

Start 3:
• Found in 4 of 61 (6.6%) of genes in pham
• Manual Annotations of this start: 4 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aleemily_16 (DZ), Cafasso_16 (DZ), Morgana_16 (DZ), ObLaDi_16 (DZ),

Start 4:
• Found in 1 of 61 (1.6%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GAL1_17 (singleton),

Start 6:
• Found in 7 of 61 (11.5%) of genes in pham
• Manual Annotations of this start: 7 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BiPauneto_41 (CR4), IDyn_39 (CR4), Marietta_40 (CR4), NadineRae_38 (CR4), Sukkupi_40 (CR4), WhoseManz_40 (CR4), Yndexa_40 (CR4),

Start 7:
• Found in 41 of 61 (67.2%) of genes in pham
• Manual Annotations of this start: 38 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Apiary_42 (CR), Arti_38 (CR2), Bonum_41 (CR2), Braxoaddie_42 (CR), Buggaboo_39 (CR2), ChewyVIII_53

(singleton), CoffeeBean_42 (CR), Commandaria_40 (CR2), Dalilpop_43 (CR1), Emianna_38 (CR2), Ennea_44 (CR3), Flapper_42 (CR1), Float294_40 (CR3), Foxboro_39 (CR2), Fury_47 (CR5), GRU1_27 (CR1), GTE5_28 (CR1), GTE8_27 (CR2), GrootJr_40 (CR2), GuyFagieri_42 (CR), Jifall16_37 (CR2), Kabluna_41 (CR2), KidneyBean_38 (CR2), Kurt_38 (CR2), Lollipop1437_43 (CR3), MacGully_47 (CR), Maselop_42 (CR), MerCougar_39 (CR2), NatB6_37 (CR2), NosilaM_41 (CR2), NovumRegina_38 (CR2), Outis_39 (CR2), Patio_41 (CR3), Pleakley_47 (CR5), Polyyuki_42 (CR), Skysand_40 (CR3), StarStruck_39 (CR2), SuperSulley_39 (CR2), Tracker_38 (CR2), Turuncu_42 (CR1), Wheezy_38 (CR2),

Start 8:
• Found in 8 of 61 (13.1%) of genes in pham
• Manual Annotations of this start: 8 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: C3PO_27 (EN), Cruella_28 (EN), Darwin_30 (EN), Kimchi1738_28 (EN), PeteyPab_30 (EN), PotatoChip_30 (EN), Stickynote_30 (EN), Zion_30 (EN),

Summary by clusters:

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

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

Info for manual annotations of cluster CR1:
•Start number 7 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:
•Start number 7 was manually annotated 20 times for cluster CR2.

Info for manual annotations of cluster CR3:
•Start number 7 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:
•Start number 6 was manually annotated 7 times for cluster CR4.

Info for manual annotations of cluster CR5:
•Start number 7 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster DZ:
•Start number 3 was manually annotated 4 times for cluster DZ.

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

Gene Information:

Gene: Aleemily_16 Start: 9981, Stop: 10933, Start Num: 3
Candidate Starts for Aleemily_16:

(Start: 3 @9981 has 4 MA's), (5, 10113), (11, 10191), (13, 10233), (16, 10278), (29, 10401), (33, 10470), (46, 10575), (76, 10866),

Gene: Apiary_42 Start: 24321, Stop: 25141, Start Num: 7
Candidate Starts for Apiary_42:
(1, 23934), (2, 23958), (Start: 7 @24321 has 38 MA's), (15, 24420), (17, 24444), (18, 24450), (31, 24576), (33, 24609), (69, 24963), (83, 25116),

Gene: Arti_38 Start: 22581, Stop: 23383, Start Num: 7
Candidate Starts for Arti_38:
(Start: 7 @22581 has 38 MA's), (18, 22713), (23, 22749), (28, 22794), (31, 22839), (33, 22872), (43, 22962), (83, 23361),

Gene: BiPauneto_41 Start: 22337, Stop: 23145, Start Num: 6
Candidate Starts for BiPauneto_41:
(Start: 6 @22337 has 7 MA's), (12, 22412), (18, 22472), (21, 22499), (31, 22598), (38, 22691), (43, 22721), (83, 23123),

Gene: Bonum_41 Start: 22920, Stop: 23722, Start Num: 7
Candidate Starts for Bonum_41:
(Start: 7 @22920 has 38 MA's), (18, 23052), (31, 23178), (50, 23358), (82, 23688),

Gene: Braxoaddie_42 Start: 24310, Stop: 25130, Start Num: 7
Candidate Starts for Braxoaddie_42:
(1, 23923), (2, 23947), (Start: 7 @24310 has 38 MA's), (15, 24409), (17, 24433), (18, 24439), (31, 24565), (33, 24598), (69, 24952), (83, 25105),

Gene: Buggaboo_39 Start: 23405, Stop: 24210, Start Num: 7
Candidate Starts for Buggaboo_39:
(Start: 7 @23405 has 38 MA's), (18, 23537), (31, 23663),

Gene: C3PO_27 Start: 20302, Stop: 21122, Start Num: 8
Candidate Starts for C3PO_27:
(Start: 8 @20302 has 8 MA's), (9, 20320), (17, 20440), (22, 20476), (26, 20521), (29, 20551), (31, 20575), (32, 20602), (35, 20641), (36, 20650), (51, 20788), (64, 20878), (69, 20944), (70, 20947), (71, 20956), (73, 20989), (80, 21076),

Gene: Cafasso_16 Start: 9969, Stop: 10921, Start Num: 3
Candidate Starts for Cafasso_16:
(Start: 3 @9969 has 4 MA's), (5, 10101), (10, 10155), (11, 10179), (13, 10221), (16, 10266), (29, 10389), (33, 10458), (46, 10563), (76, 10854),

Gene: ChewyVIII_53 Start: 31497, Stop: 32314, Start Num: 7
Candidate Starts for ChewyVIII_53:
(Start: 7 @31497 has 38 MA's), (24, 31674), (26, 31710), (31, 31764), (33, 31803), (42, 31887), (44, 31902), (68, 32127),

Gene: CoffeeBean_42 Start: 24265, Stop: 25088, Start Num: 7
Candidate Starts for CoffeeBean_42:
(1, 23878), (2, 23902), (Start: 7 @24265 has 38 MA's), (15, 24364), (17, 24388), (18, 24394), (31, 24520), (33, 24553), (56, 24763), (69, 24910), (83, 25063),

Gene: Commandaria_40 Start: 23900, Stop: 24714, Start Num: 7

Candidate Starts for Commandaria_40:
(Start: 7 @23900 has 38 MA's), (18, 24032), (30, 24146), (31, 24158), (33, 24191), (37, 24239), (43, 24281), (52, 24380), (83, 24692),

Gene: Cruella_28 Start: 20302, Stop: 21122, Start Num: 8
Candidate Starts for Cruella_28:
(Start: 8 @20302 has 8 MA's), (9, 20320), (17, 20440), (22, 20476), (26, 20521), (29, 20551), (31, 20575), (32, 20602), (35, 20641), (36, 20650), (51, 20788), (64, 20878), (69, 20944), (70, 20947), (71, 20956), (73, 20989), (80, 21076),

Gene: Dalilpop_43 Start: 24905, Stop: 25716, Start Num: 7
Candidate Starts for Dalilpop_43:
(Start: 7 @24905 has 38 MA's), (18, 25037), (26, 25109), (29, 25139), (31, 25163), (33, 25196), (39, 25265), (41, 25277), (60, 25451), (83, 25694),

Gene: Darwin_30 Start: 19987, Stop: 20807, Start Num: 8
Candidate Starts for Darwin_30:
(Start: 8 @19987 has 8 MA's), (9, 20005), (17, 20125), (22, 20161), (26, 20206), (29, 20236), (31, 20260), (32, 20287), (35, 20326), (36, 20335), (51, 20473), (54, 20485), (64, 20563), (69, 20629), (70, 20632), (71, 20641), (73, 20674), (80, 20761),

Gene: Emianna_38 Start: 23597, Stop: 24402, Start Num: 7
Candidate Starts for Emianna_38:
(Start: 7 @23597 has 38 MA's), (18, 23729), (23, 23765), (28, 23810), (31, 23855), (33, 23888), (43, 23978), (73, 24272), (83, 24380),

Gene: Ennea_44 Start: 24223, Stop: 25034, Start Num: 7
Candidate Starts for Ennea_44:
(Start: 7 @24223 has 38 MA's), (18, 24355), (27, 24433), (28, 24436), (31, 24481), (39, 24583), (41, 24595), (83, 25012),

Gene: Flapper_42 Start: 23966, Stop: 24777, Start Num: 7
Candidate Starts for Flapper_42:
(Start: 7 @23966 has 38 MA's), (18, 24098), (26, 24170), (29, 24200), (31, 24224), (33, 24257), (39, 24326), (41, 24338), (43, 24347), (60, 24512), (68, 24584), (73, 24647), (83, 24755),

Gene: Float294_40 Start: 23662, Stop: 24473, Start Num: 7
Candidate Starts for Float294_40:
(Start: 7 @23662 has 38 MA's), (18, 23794), (27, 23872), (28, 23875), (31, 23920), (39, 24022), (41, 24034), (55, 24154), (83, 24451),

Gene: Foxboro_39 Start: 24103, Stop: 24908, Start Num: 7
Candidate Starts for Foxboro_39:
(Start: 7 @24103 has 38 MA's), (18, 24235), (23, 24271), (28, 24316), (31, 24361), (33, 24394), (43, 24484), (73, 24778), (83, 24886),

Gene: Fury_47 Start: 23325, Stop: 24127, Start Num: 7
Candidate Starts for Fury_47:
(Start: 7 @23325 has 38 MA's), (18, 23457), (31, 23583), (33, 23616), (34, 23640), (61, 23868), (75, 24042), (83, 24105),

Gene: GAL1_17 Start: 10786, Stop: 11669, Start Num: 4
Candidate Starts for GAL1_17:

(4, 10786), (14, 10990), (30, 11158), (33, 11218), (38, 11278), (41, 11296), (46, 11326), (48, 11356), (49, 11359), (50, 11362), (53, 11407), (55, 11416), (65, 11476), (66, 11482), (67, 11485), (74, 11575), (77, 11620), (79, 11638), (81, 11647), (82, 11653),

Gene: GRU1_27 Start: 15854, Stop: 16665, Start Num: 7
Candidate Starts for GRU1_27:
(Start: 7 @15854 has 38 MA's), (18, 15986), (26, 16058), (29, 16088), (31, 16112), (33, 16145), (39, 16214), (41, 16226), (47, 16280), (60, 16400), (61, 16403), (83, 16643),

Gene: GTE5_28 Start: 16818, Stop: 17629, Start Num: 7
Candidate Starts for GTE5_28:
(Start: 7 @16818 has 38 MA's), (18, 16950), (26, 17022), (29, 17052), (31, 17076), (33, 17109), (39, 17178), (41, 17190), (58, 17352), (60, 17364), (73, 17499), (83, 17607),

Gene: GTE8_27 Start: 16862, Stop: 17667, Start Num: 7
Candidate Starts for GTE8_27:
(Start: 7 @16862 has 38 MA's), (18, 16994), (23, 17030), (25, 17063), (28, 17075), (30, 17108), (31, 17120), (33, 17153), (43, 17243), (55, 17354), (79, 17618), (83, 17645),

Gene: GrootJr_40 Start: 22976, Stop: 23778, Start Num: 7
Candidate Starts for GrootJr_40:
(Start: 7 @22976 has 38 MA's), (18, 23108), (23, 23144), (28, 23189), (31, 23234), (33, 23267), (43, 23357), (83, 23756),

Gene: GuyFagieri_42 Start: 24140, Stop: 24963, Start Num: 7
Candidate Starts for GuyFagieri_42:
(Start: 7 @24140 has 38 MA's), (15, 24239), (17, 24263), (18, 24269), (31, 24395), (33, 24428), (62, 24692), (63, 24707), (83, 24938),

Gene: IDyn_39 Start: 20751, Stop: 21559, Start Num: 6
Candidate Starts for IDyn_39:
(Start: 6 @20751 has 7 MA's), (12, 20826), (18, 20886), (21, 20913), (31, 21012), (38, 21105), (43, 21135), (83, 21537),

Gene: Jifall16_37 Start: 23251, Stop: 24056, Start Num: 7
Candidate Starts for Jifall16_37:
(Start: 7 @23251 has 38 MA's), (18, 23383), (23, 23419), (28, 23464), (31, 23509), (33, 23542), (43, 23632), (73, 23926), (83, 24034),

Gene: Kabluna_41 Start: 22320, Stop: 23125, Start Num: 7
Candidate Starts for Kabluna_41:
(Start: 7 @22320 has 38 MA's), (18, 22452), (27, 22530), (31, 22578), (50, 22758),

Gene: KidneyBean_38 Start: 23375, Stop: 24177, Start Num: 7
Candidate Starts for KidneyBean_38:
(Start: 7 @23375 has 38 MA's), (18, 23507), (23, 23543), (28, 23588), (31, 23633), (33, 23666), (43, 23756), (55, 23867), (72, 24038), (73, 24047), (78, 24125), (83, 24155),

Gene: Kimchi1738_28 Start: 19390, Stop: 20210, Start Num: 8
Candidate Starts for Kimchi1738_28:
(Start: 8 @19390 has 8 MA's), (9, 19408), (17, 19528), (22, 19564), (26, 19609), (29, 19639), (31, 19663), (32, 19690), (35, 19729), (36, 19738), (51, 19876), (54, 19888), (64, 19966), (69, 20032), (70, 20035), (71, 20044), (73, 20077), (80, 20164),

Gene: Kurt_38 Start: 23612, Stop: 24417, Start Num: 7
Candidate Starts for Kurt_38:
(Start: 7 @23612 has 38 MA's), (18, 23744), (23, 23780), (28, 23825), (31, 23870), (33, 23903), (43, 23993), (73, 24287), (83, 24395),

Gene: Lollipop1437_43 Start: 24211, Stop: 25022, Start Num: 7
Candidate Starts for Lollipop1437_43:
(Start: 7 @24211 has 38 MA's), (18, 24343), (27, 24421), (28, 24424), (31, 24469), (39, 24571), (41, 24583), (83, 25000),

Gene: MacGully_47 Start: 24813, Stop: 25627, Start Num: 7
Candidate Starts for MacGully_47:
(Start: 7 @24813 has 38 MA's), (18, 24942), (20, 24966), (21, 24969), (31, 25068), (40, 25173), (57, 25335), (59, 25347), (83, 25602),

Gene: Marietta_40 Start: 20667, Stop: 21475, Start Num: 6
Candidate Starts for Marietta_40:
(Start: 6 @20667 has 7 MA's), (12, 20742), (18, 20802), (21, 20829), (31, 20928), (38, 21021), (43, 21051), (83, 21453),

Gene: Maselop_42 Start: 24341, Stop: 25164, Start Num: 7
Candidate Starts for Maselop_42:
(1, 23954), (2, 23978), (Start: 7 @24341 has 38 MA's), (15, 24440), (17, 24464), (18, 24470), (31, 24596), (33, 24629), (56, 24839), (69, 24986), (83, 25139),

Gene: MerCougar_39 Start: 23519, Stop: 24324, Start Num: 7
Candidate Starts for MerCougar_39:
(Start: 7 @23519 has 38 MA's), (18, 23651), (31, 23777), (33, 23810), (43, 23900), (45, 23918),

Gene: Morgana_16 Start: 9973, Stop: 10925, Start Num: 3
Candidate Starts for Morgana_16:
(Start: 3 @9973 has 4 MA's), (5, 10105), (16, 10270), (18, 10279), (19, 10285), (29, 10393), (33, 10462), (41, 10537), (46, 10567),

Gene: NadineRae_38 Start: 19914, Stop: 20722, Start Num: 6
Candidate Starts for NadineRae_38:
(Start: 6 @19914 has 7 MA's), (12, 19989), (18, 20049), (21, 20076), (31, 20175), (38, 20268), (43, 20298), (71, 20562), (83, 20700),

Gene: NatB6_37 Start: 22648, Stop: 23453, Start Num: 7
Candidate Starts for NatB6_37:
(Start: 7 @22648 has 38 MA's), (18, 22780), (23, 22816), (28, 22861), (31, 22906), (33, 22939), (43, 23029), (73, 23323), (83, 23431),

Gene: NosilaM_41 Start: 23217, Stop: 24022, Start Num: 7
Candidate Starts for NosilaM_41:
(Start: 7 @23217 has 38 MA's), (18, 23349), (31, 23475),

Gene: NovumRegina_38 Start: 22975, Stop: 23777, Start Num: 7
Candidate Starts for NovumRegina_38:
(Start: 7 @22975 has 38 MA's), (18, 23107), (23, 23143), (28, 23188), (31, 23233), (33, 23266), (43, 23356), (83, 23755),

Gene: ObLaDi_16 Start: 9957, Stop: 10909, Start Num: 3
Candidate Starts for ObLaDi_16:
(Start: 3 @9957 has 4 MA's), (5, 10089), (10, 10143), (11, 10167), (13, 10209), (16, 10254), (29, 10377), (33, 10446), (46, 10551), (76, 10842),

Gene: Outis_39 Start: 23207, Stop: 24012, Start Num: 7
Candidate Starts for Outis_39:
(Start: 7 @23207 has 38 MA's), (18, 23339), (27, 23417), (31, 23465), (43, 23588), (45, 23606),

Gene: Patio_41 Start: 23447, Stop: 24258, Start Num: 7
Candidate Starts for Patio_41:
(Start: 7 @23447 has 38 MA's), (18, 23579), (27, 23657), (28, 23660), (31, 23705), (39, 23807), (41, 23819), (83, 24236),

Gene: PeteyPab_30 Start: 21147, Stop: 21967, Start Num: 8
Candidate Starts for PeteyPab_30:
(Start: 8 @21147 has 8 MA's), (9, 21165), (17, 21285), (22, 21321), (26, 21366), (29, 21396), (31, 21420), (32, 21447), (35, 21486), (36, 21495), (51, 21633), (64, 21723), (69, 21789), (70, 21792), (71, 21801), (73, 21834), (80, 21921),

Gene: Pleakley_47 Start: 23326, Stop: 24128, Start Num: 7
Candidate Starts for Pleakley_47:
(Start: 7 @23326 has 38 MA's), (18, 23458), (31, 23584), (33, 23617), (34, 23641), (61, 23869), (75, 24043), (83, 24106),

Gene: Polyyuki_42 Start: 24333, Stop: 25153, Start Num: 7
Candidate Starts for Polyyuki_42:
(1, 23946), (2, 23970), (Start: 7 @24333 has 38 MA's), (15, 24432), (17, 24456), (18, 24462), (31, 24588), (33, 24621), (69, 24975), (83, 25128),

Gene: PotatoChip_30 Start: 21149, Stop: 21969, Start Num: 8
Candidate Starts for PotatoChip_30:
(Start: 8 @21149 has 8 MA's), (9, 21167), (17, 21287), (22, 21323), (26, 21368), (29, 21398), (31, 21422), (32, 21449), (35, 21488), (36, 21497), (51, 21635), (64, 21725), (69, 21791), (70, 21794), (71, 21803), (73, 21836), (80, 21923),

Gene: Skysand_40 Start: 23664, Stop: 24475, Start Num: 7
Candidate Starts for Skysand_40:
(Start: 7 @23664 has 38 MA's), (18, 23796), (27, 23874), (28, 23877), (31, 23922), (39, 24024), (41, 24036), (55, 24156), (83, 24453),

Gene: StarStruck_39 Start: 23207, Stop: 24012, Start Num: 7
Candidate Starts for StarStruck_39:
(Start: 7 @23207 has 38 MA's), (18, 23339), (27, 23417), (31, 23465), (43, 23588), (45, 23606),

Gene: Stickynote_30 Start: 20569, Stop: 21389, Start Num: 8
Candidate Starts for Stickynote_30:
(Start: 8 @20569 has 8 MA's), (9, 20587), (17, 20707), (22, 20743), (26, 20788), (29, 20818), (31, 20842), (32, 20869), (35, 20908), (36, 20917), (51, 21055), (64, 21145), (70, 21214), (71, 21223), (73, 21256), (80, 21343),

Gene: Sukkupi_40 Start: 22228, Stop: 23036, Start Num: 6

Candidate Starts for Sukkupi_40:
(Start: 6 @22228 has 7 MA's), (12, 22303), (18, 22363), (21, 22390), (31, 22489), (38, 22582), (43, 22612), (83, 23014),

Gene: SuperSulley_39 Start: 23405, Stop: 24210, Start Num: 7
Candidate Starts for SuperSulley_39:
(Start: 7 @23405 has 38 MA's), (18, 23537), (31, 23663),

Gene: Tracker_38 Start: 22375, Stop: 23180, Start Num: 7
Candidate Starts for Tracker_38:
(Start: 7 @22375 has 38 MA's), (18, 22507), (23, 22543), (28, 22588), (31, 22633), (33, 22666), (43, 22756), (73, 23050), (83, 23158),

Gene: Turuncu_42 Start: 23671, Stop: 24482, Start Num: 7
Candidate Starts for Turuncu_42:
(Start: 7 @23671 has 38 MA's), (18, 23803), (26, 23875), (29, 23905), (31, 23929), (33, 23962), (39, 24031), (41, 24043), (60, 24217), (73, 24352), (83, 24460),

Gene: Wheezy_38 Start: 22580, Stop: 23385, Start Num: 7
Candidate Starts for Wheezy_38:
(Start: 7 @22580 has 38 MA's), (18, 22712), (23, 22748), (28, 22793), (31, 22838), (33, 22871), (43, 22961), (73, 23255), (83, 23363),

Gene: WhoseManz_40 Start: 20280, Stop: 21088, Start Num: 6
Candidate Starts for WhoseManz_40:
(Start: 6 @20280 has 7 MA's), (12, 20355), (18, 20415), (21, 20442), (31, 20541), (38, 20634), (43, 20664), (83, 21066),

Gene: Yndexa_40 Start: 22228, Stop: 23036, Start Num: 6
Candidate Starts for Yndexa_40:
(Start: 6 @22228 has 7 MA's), (12, 22303), (18, 22363), (21, 22390), (31, 22489), (38, 22582), (43, 22612), (83, 23014),

Gene: Zion_30 Start: 21147, Stop: 21967, Start Num: 8
Candidate Starts for Zion_30:
(Start: 8 @21147 has 8 MA's), (9, 21165), (17, 21285), (22, 21321), (26, 21366), (29, 21396), (31, 21420), (32, 21447), (35, 21486), (36, 21495), (51, 21633), (64, 21723), (69, 21789), (70, 21792), (71, 21801), (73, 21834), (80, 21921),