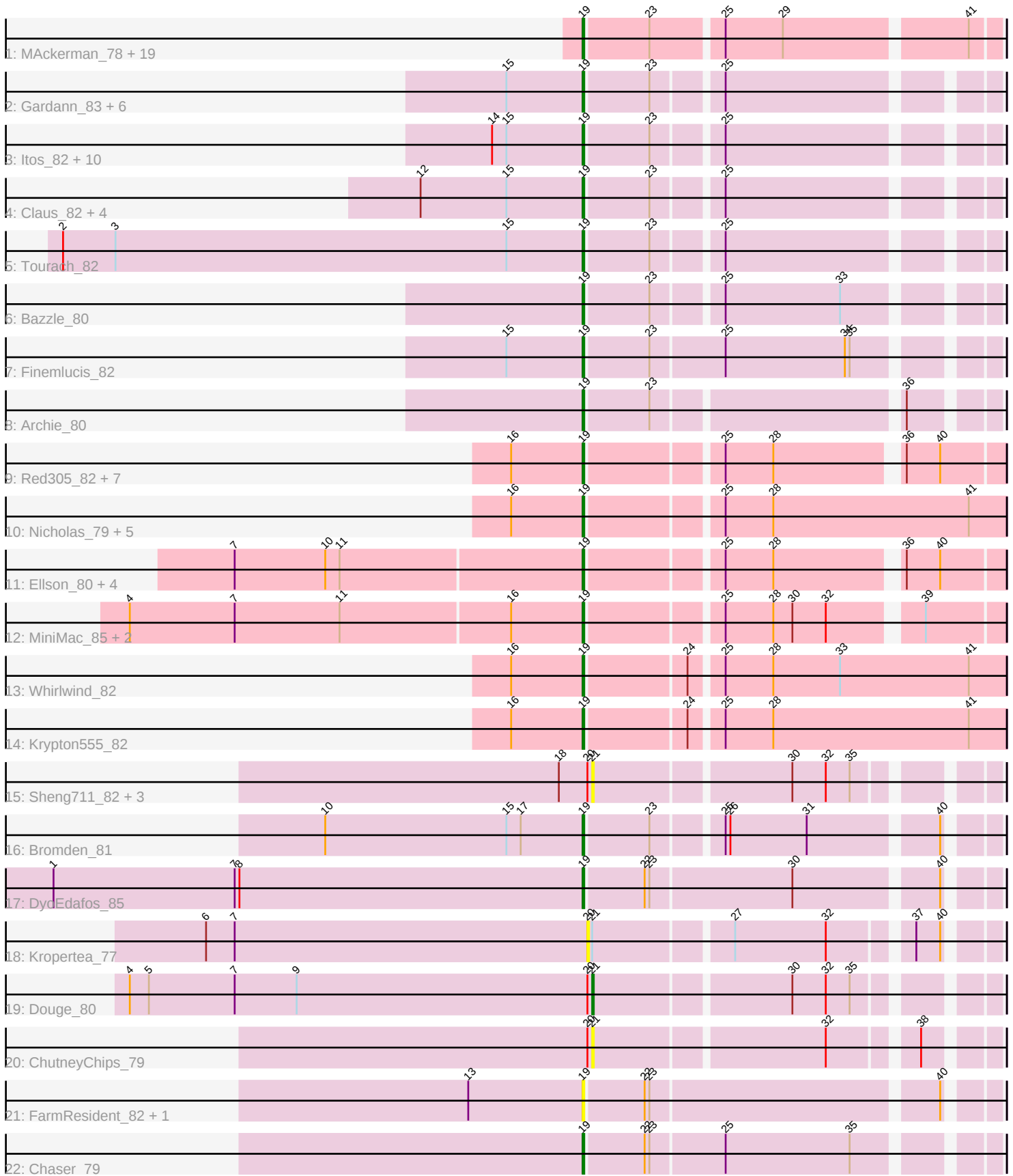


Pham 278109



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 278109 Report

This analysis was run 02/07/26 on database version 634.

Pham number 278109 has 83 members, 21 are drafts.

Phages represented in each track:

- Track 1 : MAckerman_78, Enceladus_77, AvadaKedavra_80, Appletree2_79, Wyatt2_81, Rose5_80, CicholasNage_77, Acquire49_80, Poochiewood_78, Wamburggrxpress_80, JoeDirt_80, LeBron_79, Zaria_81, OhShagHennessy_77, DirkDirk_77, UPIE_79, Halena_78, Tyson_81, Calm_82, Silverleaf_80
- Track 2 : Gardann_83, Crossroads_83, Rumpelstiltskin_80, Sarshaun_84, Soap141_83, Nicholasp3_83, Underpass_74
- Track 3 : Itos_82, Winky_83, Miley16_83, SoJulia_85, BobsGarage_83, Netyap_84, Gabriela_82, Faith1_83, DrSeegs_83, Breezona_83, BigCheese_83
- Track 4 : Claus_82, DanBing_83, Hafay_84, ZhongYanYuan_80, Baoshan_80
- Track 5 : Tourach_82
- Track 6 : Bazzle_80
- Track 7 : Finemlucis_82
- Track 8 : Archie_80
- Track 9 : Red305_82, Lumos_81, Clautastrophe_79, MsGreen_81, Bellis_81, Jobypre_81, Snenia_80, Jubie_80
- Track 10 : Nicholas_79, Moostard_79, TriFive_82, Finnry_81, Kingsolomon_79, Samty_80
- Track 11 : Ellson_80, DuncansLeg_81, LiyuLake_80, BourbonZero_82, KirDoubleO7_79
- Track 12 : MiniMac_85, Lolly9_80, MiniLon_85
- Track 13 : Whirlwind_82
- Track 14 : Krypton555_82
- Track 15 : Sheng711_82, BrainDrainer_81, Douzhi_81, PYPDinur_80
- Track 16 : Bromden_81
- Track 17 : DyoEdafos_85
- Track 18 : Kropertea_77
- Track 19 : Douge_80
- Track 20 : ChutneyChips_79
- Track 21 : FarmResident_82, Quby_81
- Track 22 : Chaser_79

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

The start number called the most often in the published annotations is 19, it was called in 61 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_80, Appletree2_79, Archie_80, AvadaKedavra_80, Baoshan_80, Bazzle_80, Bellis_81, BigCheese_83, BobsGarage_83, BourbonZero_82, Breezona_83, Bromden_81, Calm_82, Chaser_79, CicholasNage_77, Claus_82, Clautastrophe_79, Crossroads_83, DanBing_83, DirkDirk_77, DrSeegs_83, DuncansLeg_81, DyoEdafos_85, Ellson_80, Enceladus_77, Faith1_83, FarmResident_82, Finemlucis_82, Finnry_81, Gabriela_82, Gardann_83, Hafay_84, Halena_78, Itos_82, Jobypre_81, JoeDirt_80, Jubie_80, Kingsolomon_79, KirDoubleO7_79, Krypton555_82, LeBron_79, LiyuLake_80, Lolly9_80, Lumos_81, MAckerman_78, Miley16_83, MiniLon_85, MiniMac_85, Moostard_79, MsGreen_81, Netyap_84, Nicholas_79, Nicholasp3_83, OhShagHennessy_77, Poochiewood_78, Quby_81, Red305_82, Rose5_80, Rumpelstiltskin_80, Samty_80, Sarshaun_84, Silverleaf_80, Snenia_80, SoJulia_85, Soap141_83, Tourach_82, TriFive_82, Tyson_81, UPIE_79, Underpass_74, Wamburggrxpress_80, Whirlwind_82, Winky_83, Wyatt2_81, Zaria_81, ZhongYanYuan_80,

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

-

Genes that do not have the "Most Annotated" start:

- BrainDrainer_81, ChutneyChips_79, Douge_80, Douzhi_81, Kropertea_77, PYPDinur_80, Sheng711_82,

Summary by start number:

Start 19:

- Found in 76 of 83 (91.6%) of genes in pham
- Manual Annotations of this start: 61 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_80 (L1), Appletree2_79 (L1), Archie_80 (L2), AvadaKedavra_80 (L1), Baoshan_80 (L2), Bazzle_80 (L2), Bellis_81 (L3), BigCheese_83 (L2), BobsGarage_83 (L2), BourbonZero_82 (L3), Breezona_83 (L2), Bromden_81 (L4), Calm_82 (L1), Chaser_79 (L4), CicholasNage_77 (L1), Claus_82 (L2), Clautastrophe_79 (L3), Crossroads_83 (L2), DanBing_83 (L2), DirkDirk_77 (L1), DrSeegs_83 (L2), DuncansLeg_81 (L3), DyoEdafos_85 (L4), Ellson_80 (L3), Enceladus_77 (L1), Faith1_83 (L2), FarmResident_82 (L4), Finemlucis_82 (L2), Finnry_81 (L3), Gabriela_82 (L2), Gardann_83 (L2), Hafay_84 (L2), Halena_78 (L1), Itos_82 (L2), Jobypre_81 (L3), JoeDirt_80 (L1), Jubie_80 (L3), Kingsolomon_79 (L3), KirDoubleO7_79 (L3), Krypton555_82 (L3), LeBron_79 (L1), LiyuLake_80 (L3), Lolly9_80 (L3), Lumos_81 (L3), MAckerman_78 (L1), Miley16_83 (L2), MiniLon_85 (L3), MiniMac_85 (L3), Moostard_79 (L3), MsGreen_81 (L3), Netyap_84 (L2), Nicholas_79 (L3), Nicholasp3_83 (L2), OhShagHennessy_77 (L1), Poochiewood_78 (L1), Quby_81 (L4), Red305_82 (L3), Rose5_80 (L1), Rumpelstiltskin_80 (L2), Samty_80 (L3), Sarshaun_84 (L2), Silverleaf_80 (L1), Snenia_80 (L3), SoJulia_85 (L2), Soap141_83 (L2), Tourach_82 (L2), TriFive_82 (L3), Tyson_81 (L1), UPIE_79 (L1), Underpass_74 (L2), Wamburggrxpress_80 (L1), Whirlwind_82 (L3), Winky_83 (L2), Wyatt2_81 (L1), Zaria_81 (L1), ZhongYanYuan_80 (L2),

Start 20:

- Found in 7 of 83 (8.4%) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Kropertea_77 (L4),

Start 21:

- Found in 7 of 83 (8.4%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 85.7% of time when present
- Phage (with cluster) where this start called: BrainDrainer_81 (L4), ChutneyChips_79 (L4), Douge_80 (L4), Douzhi_81 (L4), PYPDinur_80 (L4), Sheng711_82 (L4),

Summary by clusters:

There are 4 clusters represented in this pham: L4, L2, L3, L1,

Info for manual annotations of cluster L1:

- Start number 19 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 19 was manually annotated 20 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 19 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 19 was manually annotated 3 times for cluster L4.
- Start number 21 was manually annotated 1 time for cluster L4.

Gene Information:

Gene: Acquire49_80 Start: 52642, Stop: 52884, Start Num: 19

Candidate Starts for Acquire49_80:

(Start: 19 @52642 has 61 MA's), (23, 52681), (25, 52723), (29, 52759), (41, 52867),

Gene: Appletree2_79 Start: 52253, Stop: 52495, Start Num: 19

Candidate Starts for Appletree2_79:

(Start: 19 @52253 has 61 MA's), (23, 52292), (25, 52334), (29, 52370), (41, 52478),

Gene: Archie_80 Start: 54193, Stop: 54423, Start Num: 19

Candidate Starts for Archie_80:

(Start: 19 @54193 has 61 MA's), (23, 54232), (36, 54376),

Gene: AvadaKedavra_80 Start: 52721, Stop: 52963, Start Num: 19

Candidate Starts for AvadaKedavra_80:

(Start: 19 @52721 has 61 MA's), (23, 52760), (25, 52802), (29, 52838), (41, 52946),

Gene: Baoshan_80 Start: 54479, Stop: 54709, Start Num: 19

Candidate Starts for Baoshan_80:

(12, 54377), (15, 54431), (Start: 19 @54479 has 61 MA's), (23, 54518), (25, 54557),

Gene: Bazzle_80 Start: 54382, Stop: 54612, Start Num: 19
Candidate Starts for Bazzle_80:
(Start: 19 @54382 has 61 MA's), (23, 54421), (25, 54460), (33, 54532),

Gene: Bellis_81 Start: 54375, Stop: 54614, Start Num: 19
Candidate Starts for Bellis_81:
(16, 54330), (Start: 19 @54375 has 61 MA's), (25, 54453), (28, 54483), (36, 54555), (40, 54576),

Gene: BigCheese_83 Start: 54609, Stop: 54839, Start Num: 19
Candidate Starts for BigCheese_83:
(14, 54552), (15, 54561), (Start: 19 @54609 has 61 MA's), (23, 54648), (25, 54687),

Gene: BobsGarage_83 Start: 54609, Stop: 54839, Start Num: 19
Candidate Starts for BobsGarage_83:
(14, 54552), (15, 54561), (Start: 19 @54609 has 61 MA's), (23, 54648), (25, 54687),

Gene: BourbonZero_82 Start: 54404, Stop: 54643, Start Num: 19
Candidate Starts for BourbonZero_82:
(7, 54188), (10, 54245), (11, 54254), (Start: 19 @54404 has 61 MA's), (25, 54482), (28, 54512), (36, 54584), (40, 54605),

Gene: BrainDrainer_81 Start: 53381, Stop: 53605, Start Num: 21
Candidate Starts for BrainDrainer_81:
(18, 53360), (20, 53378), (Start: 21 @53381 has 1 MA's), (30, 53498), (32, 53519), (35, 53534),

Gene: Breezona_83 Start: 54609, Stop: 54839, Start Num: 19
Candidate Starts for Breezona_83:
(14, 54552), (15, 54561), (Start: 19 @54609 has 61 MA's), (23, 54648), (25, 54687),

Gene: Bromden_81 Start: 54008, Stop: 54238, Start Num: 19
Candidate Starts for Bromden_81:
(10, 53846), (15, 53960), (17, 53969), (Start: 19 @54008 has 61 MA's), (23, 54047), (25, 54086), (26, 54089), (31, 54137), (40, 54212),

Gene: Calm_82 Start: 52964, Stop: 53206, Start Num: 19
Candidate Starts for Calm_82:
(Start: 19 @52964 has 61 MA's), (23, 53003), (25, 53045), (29, 53081), (41, 53189),

Gene: Chaser_79 Start: 53007, Stop: 53243, Start Num: 19
Candidate Starts for Chaser_79:
(Start: 19 @53007 has 61 MA's), (22, 53043), (23, 53046), (25, 53091), (35, 53169),

Gene: ChutneyChips_79 Start: 53352, Stop: 53576, Start Num: 21
Candidate Starts for ChutneyChips_79:
(20, 53349), (Start: 21 @53352 has 1 MA's), (32, 53490), (38, 53538),

Gene: CicholasNage_77 Start: 52306, Stop: 52548, Start Num: 19
Candidate Starts for CicholasNage_77:
(Start: 19 @52306 has 61 MA's), (23, 52345), (25, 52387), (29, 52423), (41, 52531),

Gene: Claus_82 Start: 54544, Stop: 54774, Start Num: 19
Candidate Starts for Claus_82:
(12, 54442), (15, 54496), (Start: 19 @54544 has 61 MA's), (23, 54583), (25, 54622),

Gene: Clautastrophe_79 Start: 54373, Stop: 54612, Start Num: 19

Candidate Starts for Clautastrophe_79:

(16, 54328), (Start: 19 @54373 has 61 MA's), (25, 54451), (28, 54481), (36, 54553), (40, 54574),

Gene: Crossroads_83 Start: 54684, Stop: 54914, Start Num: 19

Candidate Starts for Crossroads_83:

(15, 54636), (Start: 19 @54684 has 61 MA's), (23, 54723), (25, 54762),

Gene: DanBing_83 Start: 54414, Stop: 54644, Start Num: 19

Candidate Starts for DanBing_83:

(12, 54312), (15, 54366), (Start: 19 @54414 has 61 MA's), (23, 54453), (25, 54492),

Gene: DirkDirk_77 Start: 51833, Stop: 52075, Start Num: 19

Candidate Starts for DirkDirk_77:

(Start: 19 @51833 has 61 MA's), (23, 51872), (25, 51914), (29, 51950), (41, 52058),

Gene: Douge_80 Start: 52966, Stop: 53190, Start Num: 21

Candidate Starts for Douge_80:

(4, 52675), (5, 52687), (7, 52741), (9, 52780), (20, 52963), (Start: 21 @52966 has 1 MA's), (30, 53083), (32, 53104), (35, 53119),

Gene: Douzhi_81 Start: 53198, Stop: 53422, Start Num: 21

Candidate Starts for Douzhi_81:

(18, 53177), (20, 53195), (Start: 21 @53198 has 1 MA's), (30, 53315), (32, 53336), (35, 53351),

Gene: DrSeegs_83 Start: 54609, Stop: 54839, Start Num: 19

Candidate Starts for DrSeegs_83:

(14, 54552), (15, 54561), (Start: 19 @54609 has 61 MA's), (23, 54648), (25, 54687),

Gene: DuncansLeg_81 Start: 54392, Stop: 54631, Start Num: 19

Candidate Starts for DuncansLeg_81:

(7, 54176), (10, 54233), (11, 54242), (Start: 19 @54392 has 61 MA's), (25, 54470), (28, 54500), (36, 54572), (40, 54593),

Gene: DyoEdafos_85 Start: 53861, Stop: 54097, Start Num: 19

Candidate Starts for DyoEdafos_85:

(1, 53528), (7, 53642), (8, 53645), (Start: 19 @53861 has 61 MA's), (22, 53897), (23, 53900), (30, 53987), (40, 54071),

Gene: Ellson_80 Start: 54707, Stop: 54946, Start Num: 19

Candidate Starts for Ellson_80:

(7, 54491), (10, 54548), (11, 54557), (Start: 19 @54707 has 61 MA's), (25, 54785), (28, 54815), (36, 54887), (40, 54908),

Gene: Enceladus_77 Start: 52610, Stop: 52852, Start Num: 19

Candidate Starts for Enceladus_77:

(Start: 19 @52610 has 61 MA's), (23, 52649), (25, 52691), (29, 52727), (41, 52835),

Gene: Faith1_83 Start: 54609, Stop: 54839, Start Num: 19

Candidate Starts for Faith1_83:

(14, 54552), (15, 54561), (Start: 19 @54609 has 61 MA's), (23, 54648), (25, 54687),

Gene: FarmResident_82 Start: 52928, Stop: 53164, Start Num: 19

Candidate Starts for FarmResident_82:

(13, 52856), (Start: 19 @52928 has 61 MA's), (22, 52964), (23, 52967), (40, 53138),

Gene: Finemlucis_82 Start: 55077, Stop: 55313, Start Num: 19

Candidate Starts for Finemlucis_82:

(15, 55029), (Start: 19 @55077 has 61 MA's), (23, 55116), (25, 55161), (34, 55236), (35, 55239),

Gene: Finnry_81 Start: 54624, Stop: 54878, Start Num: 19

Candidate Starts for Finnry_81:

(16, 54579), (Start: 19 @54624 has 61 MA's), (25, 54702), (28, 54732), (41, 54855),

Gene: Gabriela_82 Start: 53955, Stop: 54185, Start Num: 19

Candidate Starts for Gabriela_82:

(14, 53898), (15, 53907), (Start: 19 @53955 has 61 MA's), (23, 53994), (25, 54033),

Gene: Gardann_83 Start: 54444, Stop: 54674, Start Num: 19

Candidate Starts for Gardann_83:

(15, 54396), (Start: 19 @54444 has 61 MA's), (23, 54483), (25, 54522),

Gene: Hafay_84 Start: 54539, Stop: 54769, Start Num: 19

Candidate Starts for Hafay_84:

(12, 54437), (15, 54491), (Start: 19 @54539 has 61 MA's), (23, 54578), (25, 54617),

Gene: Halena_78 Start: 51880, Stop: 52122, Start Num: 19

Candidate Starts for Halena_78:

(Start: 19 @51880 has 61 MA's), (23, 51919), (25, 51961), (29, 51997), (41, 52105),

Gene: Itos_82 Start: 53515, Stop: 53745, Start Num: 19

Candidate Starts for Itos_82:

(14, 53458), (15, 53467), (Start: 19 @53515 has 61 MA's), (23, 53554), (25, 53593),

Gene: Jobypre_81 Start: 54373, Stop: 54612, Start Num: 19

Candidate Starts for Jobypre_81:

(16, 54328), (Start: 19 @54373 has 61 MA's), (25, 54451), (28, 54481), (36, 54553), (40, 54574),

Gene: JoeDirt_80 Start: 53208, Stop: 53450, Start Num: 19

Candidate Starts for JoeDirt_80:

(Start: 19 @53208 has 61 MA's), (23, 53247), (25, 53289), (29, 53325), (41, 53433),

Gene: Jubie_80 Start: 54508, Stop: 54747, Start Num: 19

Candidate Starts for Jubie_80:

(16, 54463), (Start: 19 @54508 has 61 MA's), (25, 54586), (28, 54616), (36, 54688), (40, 54709),

Gene: Kingsolomon_79 Start: 54380, Stop: 54634, Start Num: 19

Candidate Starts for Kingsolomon_79:

(16, 54335), (Start: 19 @54380 has 61 MA's), (25, 54458), (28, 54488), (41, 54611),

Gene: KirDoubleO7_79 Start: 54394, Stop: 54633, Start Num: 19

Candidate Starts for KirDoubleO7_79:

(7, 54178), (10, 54235), (11, 54244), (Start: 19 @54394 has 61 MA's), (25, 54472), (28, 54502), (36, 54574), (40, 54595),

Gene: Kropertea_77 Start: 53146, Stop: 53373, Start Num: 20

Candidate Starts for Kropertea_77:

(6, 52906), (7, 52924), (20, 53146), (Start: 21 @53149 has 1 MA's), (27, 53230), (32, 53287), (37, 53332), (40, 53347),

Gene: Krypton555_82 Start: 54649, Stop: 54903, Start Num: 19

Candidate Starts for Krypton555_82:

(16, 54604), (Start: 19 @54649 has 61 MA's), (24, 54709), (25, 54727), (28, 54757), (41, 54880),

Gene: LeBron_79 Start: 51879, Stop: 52121, Start Num: 19

Candidate Starts for LeBron_79:

(Start: 19 @51879 has 61 MA's), (23, 51918), (25, 51960), (29, 51996), (41, 52104),

Gene: LiyuLake_80 Start: 54467, Stop: 54706, Start Num: 19

Candidate Starts for LiyuLake_80:

(7, 54251), (10, 54308), (11, 54317), (Start: 19 @54467 has 61 MA's), (25, 54545), (28, 54575), (36, 54647), (40, 54668),

Gene: Lolly9_80 Start: 54471, Stop: 54710, Start Num: 19

Candidate Starts for Lolly9_80:

(4, 54189), (7, 54255), (11, 54321), (16, 54426), (Start: 19 @54471 has 61 MA's), (25, 54549), (28, 54579), (30, 54591), (32, 54612), (39, 54663),

Gene: Lumos_81 Start: 54370, Stop: 54609, Start Num: 19

Candidate Starts for Lumos_81:

(16, 54325), (Start: 19 @54370 has 61 MA's), (25, 54448), (28, 54478), (36, 54550), (40, 54571),

Gene: MAckerman_78 Start: 51873, Stop: 52115, Start Num: 19

Candidate Starts for MAckerman_78:

(Start: 19 @51873 has 61 MA's), (23, 51912), (25, 51954), (29, 51990), (41, 52098),

Gene: Miley16_83 Start: 54609, Stop: 54839, Start Num: 19

Candidate Starts for Miley16_83:

(14, 54552), (15, 54561), (Start: 19 @54609 has 61 MA's), (23, 54648), (25, 54687),

Gene: MiniLon_85 Start: 54472, Stop: 54711, Start Num: 19

Candidate Starts for MiniLon_85:

(4, 54190), (7, 54256), (11, 54322), (16, 54427), (Start: 19 @54472 has 61 MA's), (25, 54550), (28, 54580), (30, 54592), (32, 54613), (39, 54664),

Gene: MiniMac_85 Start: 54467, Stop: 54706, Start Num: 19

Candidate Starts for MiniMac_85:

(4, 54185), (7, 54251), (11, 54317), (16, 54422), (Start: 19 @54467 has 61 MA's), (25, 54545), (28, 54575), (30, 54587), (32, 54608), (39, 54659),

Gene: Moostard_79 Start: 54375, Stop: 54629, Start Num: 19

Candidate Starts for Moostard_79:

(16, 54330), (Start: 19 @54375 has 61 MA's), (25, 54453), (28, 54483), (41, 54606),

Gene: MsGreen_81 Start: 54372, Stop: 54611, Start Num: 19

Candidate Starts for MsGreen_81:

(16, 54327), (Start: 19 @54372 has 61 MA's), (25, 54450), (28, 54480), (36, 54552), (40, 54573),

Gene: Netyap_84 Start: 54610, Stop: 54840, Start Num: 19

Candidate Starts for Netyap_84:

(14, 54553), (15, 54562), (Start: 19 @54610 has 61 MA's), (23, 54649), (25, 54688),

Gene: Nicholas_79 Start: 54380, Stop: 54634, Start Num: 19

Candidate Starts for Nicholas_79:

(16, 54335), (Start: 19 @54380 has 61 MA's), (25, 54458), (28, 54488), (41, 54611),

Gene: Nicholasp3_83 Start: 54444, Stop: 54674, Start Num: 19

Candidate Starts for Nicholasp3_83:

(15, 54396), (Start: 19 @54444 has 61 MA's), (23, 54483), (25, 54522),

Gene: OhShagHennessy_77 Start: 51911, Stop: 52153, Start Num: 19

Candidate Starts for OhShagHennessy_77:

(Start: 19 @51911 has 61 MA's), (23, 51950), (25, 51992), (29, 52028), (41, 52136),

Gene: PYPDinur_80 Start: 53633, Stop: 53857, Start Num: 21

Candidate Starts for PYPDinur_80:

(18, 53612), (20, 53630), (Start: 21 @53633 has 1 MA's), (30, 53750), (32, 53771), (35, 53786),

Gene: Poochiewood_78 Start: 53216, Stop: 53458, Start Num: 19

Candidate Starts for Poochiewood_78:

(Start: 19 @53216 has 61 MA's), (23, 53255), (25, 53297), (29, 53333), (41, 53441),

Gene: Quby_81 Start: 52952, Stop: 53188, Start Num: 19

Candidate Starts for Quby_81:

(13, 52880), (Start: 19 @52952 has 61 MA's), (22, 52988), (23, 52991), (40, 53162),

Gene: Red305_82 Start: 54373, Stop: 54612, Start Num: 19

Candidate Starts for Red305_82:

(16, 54328), (Start: 19 @54373 has 61 MA's), (25, 54451), (28, 54481), (36, 54553), (40, 54574),

Gene: Rose5_80 Start: 53053, Stop: 53295, Start Num: 19

Candidate Starts for Rose5_80:

(Start: 19 @53053 has 61 MA's), (23, 53092), (25, 53134), (29, 53170), (41, 53278),

Gene: Rumpelstiltskin_80 Start: 54237, Stop: 54467, Start Num: 19

Candidate Starts for Rumpelstiltskin_80:

(15, 54189), (Start: 19 @54237 has 61 MA's), (23, 54276), (25, 54315),

Gene: Samty_80 Start: 54368, Stop: 54622, Start Num: 19

Candidate Starts for Samty_80:

(16, 54323), (Start: 19 @54368 has 61 MA's), (25, 54446), (28, 54476), (41, 54599),

Gene: Sarshaun_84 Start: 54702, Stop: 54932, Start Num: 19

Candidate Starts for Sarshaun_84:

(15, 54654), (Start: 19 @54702 has 61 MA's), (23, 54741), (25, 54780),

Gene: Sheng711_82 Start: 53267, Stop: 53491, Start Num: 21

Candidate Starts for Sheng711_82:

(18, 53246), (20, 53264), (Start: 21 @53267 has 1 MA's), (30, 53384), (32, 53405), (35, 53420),

Gene: Silverleaf_80 Start: 52509, Stop: 52751, Start Num: 19

Candidate Starts for Silverleaf_80:

(Start: 19 @52509 has 61 MA's), (23, 52548), (25, 52590), (29, 52626), (41, 52734),

Gene: Snenia_80 Start: 54374, Stop: 54613, Start Num: 19

Candidate Starts for Snenia_80:

(16, 54329), (Start: 19 @54374 has 61 MA's), (25, 54452), (28, 54482), (36, 54554), (40, 54575),

Gene: SoJulia_85 Start: 55770, Stop: 56000, Start Num: 19

Candidate Starts for SoJulia_85:

(14, 55713), (15, 55722), (Start: 19 @55770 has 61 MA's), (23, 55809), (25, 55848),

Gene: Soap141_83 Start: 54702, Stop: 54932, Start Num: 19

Candidate Starts for Soap141_83:

(15, 54654), (Start: 19 @54702 has 61 MA's), (23, 54741), (25, 54780),

Gene: Tourach_82 Start: 54727, Stop: 54957, Start Num: 19

Candidate Starts for Tourach_82:

(2, 54400), (3, 54433), (15, 54679), (Start: 19 @54727 has 61 MA's), (23, 54766), (25, 54805),

Gene: TriFive_82 Start: 54373, Stop: 54627, Start Num: 19

Candidate Starts for TriFive_82:

(16, 54328), (Start: 19 @54373 has 61 MA's), (25, 54451), (28, 54481), (41, 54604),

Gene: Tyson_81 Start: 52979, Stop: 53221, Start Num: 19

Candidate Starts for Tyson_81:

(Start: 19 @52979 has 61 MA's), (23, 53018), (25, 53060), (29, 53096), (41, 53204),

Gene: UPIE_79 Start: 52575, Stop: 52817, Start Num: 19

Candidate Starts for UPIE_79:

(Start: 19 @52575 has 61 MA's), (23, 52614), (25, 52656), (29, 52692), (41, 52800),

Gene: Underpass_74 Start: 49480, Stop: 49710, Start Num: 19

Candidate Starts for Underpass_74:

(15, 49432), (Start: 19 @49480 has 61 MA's), (23, 49519), (25, 49558),

Gene: Wamburgexpress_80 Start: 53014, Stop: 53256, Start Num: 19

Candidate Starts for Wamburgexpress_80:

(Start: 19 @53014 has 61 MA's), (23, 53053), (25, 53095), (29, 53131), (41, 53239),

Gene: Whirlwind_82 Start: 54612, Stop: 54866, Start Num: 19

Candidate Starts for Whirlwind_82:

(16, 54567), (Start: 19 @54612 has 61 MA's), (24, 54672), (25, 54690), (28, 54720), (33, 54762), (41, 54843),

Gene: Winky_83 Start: 54609, Stop: 54839, Start Num: 19

Candidate Starts for Winky_83:

(14, 54552), (15, 54561), (Start: 19 @54609 has 61 MA's), (23, 54648), (25, 54687),

Gene: Wyatt2_81 Start: 52977, Stop: 53219, Start Num: 19

Candidate Starts for Wyatt2_81:

(Start: 19 @52977 has 61 MA's), (23, 53016), (25, 53058), (29, 53094), (41, 53202),

Gene: Zaria_81 Start: 52429, Stop: 52671, Start Num: 19

Candidate Starts for Zaria_81:

(Start: 19 @52429 has 61 MA's), (23, 52468), (25, 52510), (29, 52546), (41, 52654),

Gene: ZhongYanYuan_80 Start: 54062, Stop: 54292, Start Num: 19

Candidate Starts for ZhongYanYuan_80:

(12, 53960), (15, 54014), (Start: 19 @54062 has 61 MA's), (23, 54101), (25, 54140),