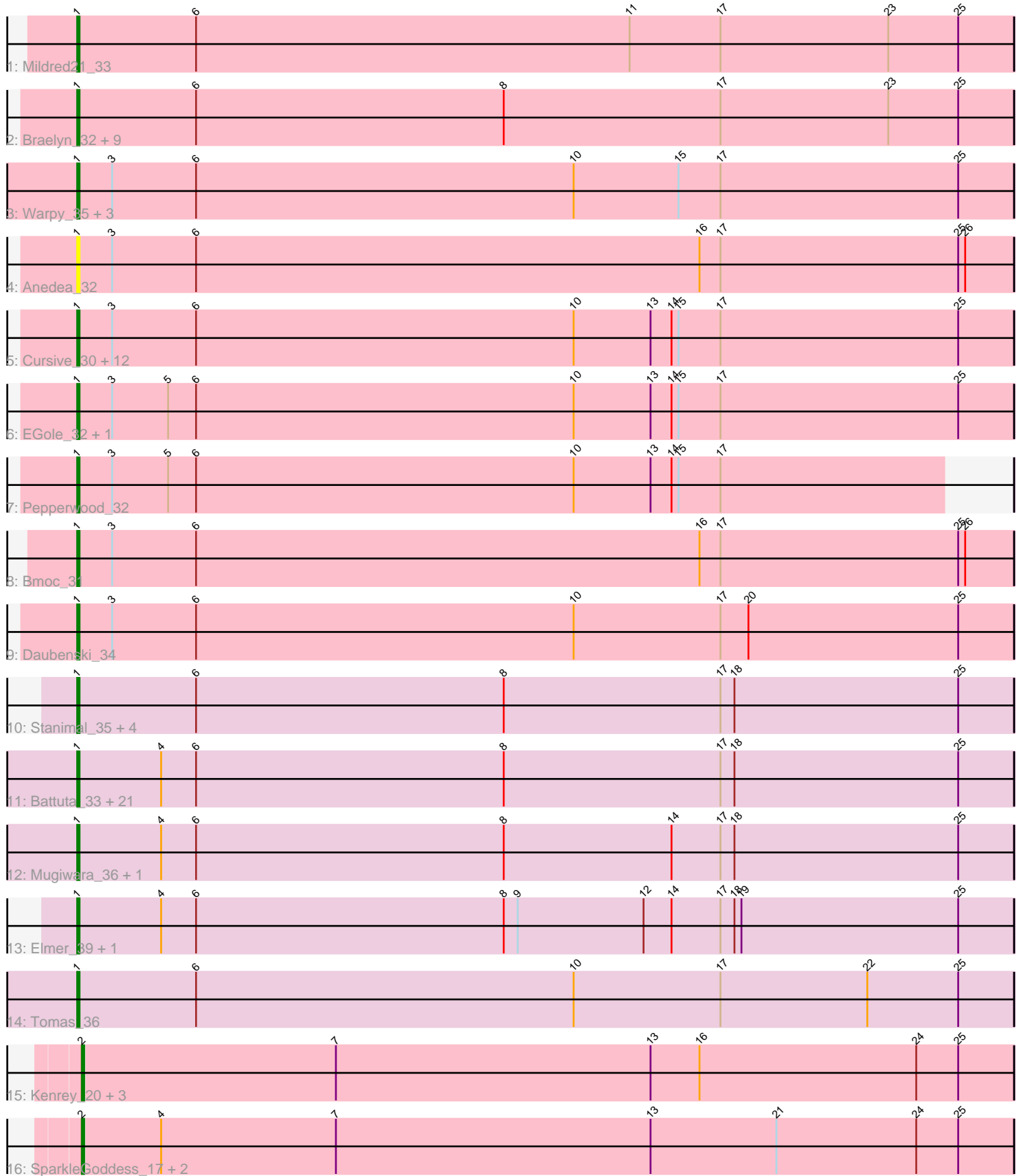


Pham 1751



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 1751 Report

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

Pham number 1751 has 73 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Mildred21_33
- Track 2 : Braelyn_32, WhereRU_31, PinkiePie_32, Liandry_32, NootNoot_29, Persimmon_29, Navo_33, Paradiddles_29, Squillium_32, Bartholomune_32
- Track 3 : Warpy_35, Evy_33, Jay2Jay_35, Targaryen_32
- Track 4 : Anedea_32
- Track 5 : Cursive_30, Watermoore_32, Leo04_32, Sushi23_32, Cross_32, HangryHippo_34, Teutsch_31, Tribute_30, Lululemon_34, BlueOtter_34, PacManQ_34, Samisti12_31, Peebs_31
- Track 6 : EGole_32, Larnav_37
- Track 7 : Pepperwood_32
- Track 8 : Bmoc_31
- Track 9 : Daubenski_34
- Track 10 : Stanimal_35, Sollertia_35, BoomerJR_35, Yaboi_36, Genie2_35
- Track 11 : Battuta_33, Wipeout_33, Bordeaux_33, PumpkinSpice_34, IchabodCrane_33, MindFlayer_33, KentuckyRacer_38, JimJam_35, TomSawyer_33, Gibbi_37, Quarant19_35, Jollison_38, Spelly_35, CeilingFan_37, Spilled_35, Enygma_32, Karimac_34, Birchlyn_32, Amabiko_35, StarPlatinum_33, SaltySpittoon_35, Starbow_33
- Track 12 : Mugiwara_36, LukeCage_34
- Track 13 : Elmer_39, Wofford_32
- Track 14 : Tomas_36
- Track 15 : Kenrey_20, Gilson_20, MeganTheeKilla_18, Emma1919_20
- Track 16 : SparkleGoddess_17, Comrade_17, Stigma_17

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

The start number called the most often in the published annotations is 1, it was called in 52 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko_35, Anedea_32, Bartholomune_32, Battuta_33, Birchlyn_32, BlueOtter_34, Bmoc_31, BoomerJR_35, Bordeaux_33, Braelyn_32, CeilingFan_37, Cross_32, Cursive_30, Daubenski_34, EGole_32, Elmer_39, Enygma_32, Evy_33, Genie2_35, Gibbi_37, HangryHippo_34, IchabodCrane_33, Jay2Jay_35, JimJam_35,

Jollison_38, Karimac_34, KentuckyRacer_38, Larnav_37, Leo04_32, Liandry_32, LukeCage_34, Lululemon_34, Mildred21_33, MindFlayer_33, Mugiwara_36, Navo_33, NootNoot_29, PacManQ_34, Paradiddles_29, Peebs_31, Pepperwood_32, Persimmon_29, PinkiePie_32, PumpkinSpice_34, Quarant19_35, SaltySpittoon_35, Samisti12_31, Sollertia_35, Spelly_35, Spilled_35, Squillium_32, Stanimal_35, StarPlatinum_33, Starbow_33, Sushi23_32, Targaryen_32, Teutsch_31, TomSawyer_33, Tomas_36, Tribute_30, Warpy_35, Watermoore_32, WhereRU_31, Wipeout_33, Wofford_32, Yaboi_36,

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

-

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

- Comrade_17, Emma1919_20, Gilson_20, Kenrey_20, MeganTheeKilla_18, SparkleGoddess_17, Stigma_17,

Summary by start number:

Start 1:

- Found in 66 of 73 (90.4%) of genes in pham
- Manual Annotations of this start: 52 of 59
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amabiko_35 (BE2), Anedea_32 (BE1), Bartholomune_32 (BE1), Battuta_33 (BE2), Birchlyn_32 (BE2), BlueOtter_34 (BE1), Bmoc_31 (BE1), BoomerJR_35 (BE2), Bordeaux_33 (BE2), Braelyn_32 (BE1), CeilingFan_37 (BE2), Cross_32 (BE1), Cursive_30 (BE1), Daubenski_34 (BE1), EGole_32 (BE1), Elmer_39 (BE2), Enygma_32 (BE2), Evy_33 (BE1), Genie2_35 (BE2), Gibbi_37 (BE2), HangryHippo_34 (BE1), IchabodCrane_33 (BE2), Jay2Jay_35 (BE1), JimJam_35 (BE2), Jollison_38 (BE2), Karimac_34 (BE2), KentuckyRacer_38 (BE2), Larnav_37 (BE1), Leo04_32 (BE1), Liandry_32 (BE1), LukeCage_34 (BE2), Lululemon_34 (BE1), Mildred21_33 (BE1), MindFlayer_33 (BE2), Mugiwara_36 (BE2), Navo_33 (BE1), NootNoot_29 (BE1), PacManQ_34 (BE1), Paradiddles_29 (BE1), Peebs_31 (BE1), Pepperwood_32 (BE1), Persimmon_29 (BE1), PinkiePie_32 (BE1), PumpkinSpice_34 (BE2), Quarant19_35 (BE2), SaltySpittoon_35 (BE2), Samisti12_31 (BE1), Sollertia_35 (BE2), Spelly_35 (BE2), Spilled_35 (BE2), Squillium_32 (BE1), Stanimal_35 (BE2), StarPlatinum_33 (BE2), Starbow_33 (BE2), Sushi23_32 (BE1), Targaryen_32 (BE1), Teutsch_31 (BE1), TomSawyer_33 (BE2), Tomas_36 (BE2), Tribute_30 (BE1), Warpy_35 (BE1), Watermoore_32 (BE1), WhereRU_31 (BE1), Wipeout_33 (BE2), Wofford_32 (BE2), Yaboi_36 (BE2),

Start 2:

- Found in 7 of 73 (9.6%) of genes in pham
- Manual Annotations of this start: 7 of 59
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Comrade_17 (BK1), Emma1919_20 (BK1), Gilson_20 (BK1), Kenrey_20 (BK1), MeganTheeKilla_18 (BK1), SparkleGoddess_17 (BK1), Stigma_17 (BK1),

Summary by clusters:

There are 3 clusters represented in this pham: BE2, BE1, BK1,

Info for manual annotations of cluster BE1:

- Start number 1 was manually annotated 26 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 1 was manually annotated 26 times for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 2 was manually annotated 7 times for cluster BK1.

Gene Information:

Gene: Amabiko_35 Start: 15796, Stop: 15395, Start Num: 1

Candidate Starts for Amabiko_35:

(Start: 1 @15796 has 52 MA's), (4, 15760), (6, 15745), (8, 15613), (17, 15520), (18, 15514), (25, 15418),

Gene: Anedea_32 Start: 14776, Stop: 14375, Start Num: 1

Candidate Starts for Anedea_32:

(Start: 1 @14776 has 52 MA's), (3, 14761), (6, 14725), (16, 14509), (17, 14500), (25, 14398), (26, 14395),

Gene: Bartholomune_32 Start: 14565, Stop: 14164, Start Num: 1

Candidate Starts for Bartholomune_32:

(Start: 1 @14565 has 52 MA's), (6, 14514), (8, 14382), (17, 14289), (23, 14217), (25, 14187),

Gene: Battuta_33 Start: 15772, Stop: 15371, Start Num: 1

Candidate Starts for Battuta_33:

(Start: 1 @15772 has 52 MA's), (4, 15736), (6, 15721), (8, 15589), (17, 15496), (18, 15490), (25, 15394),

Gene: Birchlyn_32 Start: 13653, Stop: 13252, Start Num: 1

Candidate Starts for Birchlyn_32:

(Start: 1 @13653 has 52 MA's), (4, 13617), (6, 13602), (8, 13470), (17, 13377), (18, 13371), (25, 13275),

Gene: BlueOtter_34 Start: 14516, Stop: 14115, Start Num: 1

Candidate Starts for BlueOtter_34:

(Start: 1 @14516 has 52 MA's), (3, 14501), (6, 14465), (10, 14303), (13, 14270), (14, 14261), (15, 14258), (17, 14240), (25, 14138),

Gene: Bmoc_31 Start: 14953, Stop: 14552, Start Num: 1

Candidate Starts for Bmoc_31:

(Start: 1 @14953 has 52 MA's), (3, 14938), (6, 14902), (16, 14686), (17, 14677), (25, 14575), (26, 14572),

Gene: BoomerJR_35 Start: 15605, Stop: 15204, Start Num: 1

Candidate Starts for BoomerJR_35:

(Start: 1 @15605 has 52 MA's), (6, 15554), (8, 15422), (17, 15329), (18, 15323), (25, 15227),

Gene: Bordeaux_33 Start: 15787, Stop: 15386, Start Num: 1

Candidate Starts for Bordeaux_33:

(Start: 1 @15787 has 52 MA's), (4, 15751), (6, 15736), (8, 15604), (17, 15511), (18, 15505), (25, 15409),

Gene: Braelyn_32 Start: 14960, Stop: 14559, Start Num: 1

Candidate Starts for Braelyn_32:

(Start: 1 @14960 has 52 MA's), (6, 14909), (8, 14777), (17, 14684), (23, 14612), (25, 14582),

Gene: CeilingFan_37 Start: 15547, Stop: 15146, Start Num: 1

Candidate Starts for CeilingFan_37:

(Start: 1 @15547 has 52 MA's), (4, 15511), (6, 15496), (8, 15364), (17, 15271), (18, 15265), (25, 15169),

Gene: Comrade_17 Start: 5168, Stop: 4770, Start Num: 2

Candidate Starts for Comrade_17:

(Start: 2 @5168 has 7 MA's), (4, 5135), (7, 5060), (13, 4925), (21, 4871), (24, 4811), (25, 4793),

Gene: Cross_32 Start: 14517, Stop: 14116, Start Num: 1

Candidate Starts for Cross_32:

(Start: 1 @14517 has 52 MA's), (3, 14502), (6, 14466), (10, 14304), (13, 14271), (14, 14262), (15, 14259), (17, 14241), (25, 14139),

Gene: Cursive_30 Start: 13334, Stop: 12933, Start Num: 1

Candidate Starts for Cursive_30:

(Start: 1 @13334 has 52 MA's), (3, 13319), (6, 13283), (10, 13121), (13, 13088), (14, 13079), (15, 13076), (17, 13058), (25, 12956),

Gene: Daubenski_34 Start: 14922, Stop: 14521, Start Num: 1

Candidate Starts for Daubenski_34:

(Start: 1 @14922 has 52 MA's), (3, 14907), (6, 14871), (10, 14709), (17, 14646), (20, 14634), (25, 14544),

Gene: EGole_32 Start: 15378, Stop: 14977, Start Num: 1

Candidate Starts for EGole_32:

(Start: 1 @15378 has 52 MA's), (3, 15363), (5, 15339), (6, 15327), (10, 15165), (13, 15132), (14, 15123), (15, 15120), (17, 15102), (25, 15000),

Gene: Elmer_39 Start: 15074, Stop: 14673, Start Num: 1

Candidate Starts for Elmer_39:

(Start: 1 @15074 has 52 MA's), (4, 15038), (6, 15023), (8, 14891), (9, 14885), (12, 14831), (14, 14819), (17, 14798), (18, 14792), (19, 14789), (25, 14696),

Gene: Emma1919_20 Start: 5752, Stop: 5354, Start Num: 2

Candidate Starts for Emma1919_20:

(Start: 2 @5752 has 7 MA's), (7, 5644), (13, 5509), (16, 5488), (24, 5395), (25, 5377),

Gene: Enygma_32 Start: 14918, Stop: 14517, Start Num: 1

Candidate Starts for Enygma_32:

(Start: 1 @14918 has 52 MA's), (4, 14882), (6, 14867), (8, 14735), (17, 14642), (18, 14636), (25, 14540),

Gene: Evy_33 Start: 14542, Stop: 14141, Start Num: 1

Candidate Starts for Evy_33:

(Start: 1 @14542 has 52 MA's), (3, 14527), (6, 14491), (10, 14329), (15, 14284), (17, 14266), (25, 14164),

Gene: Genie2_35 Start: 15608, Stop: 15207, Start Num: 1

Candidate Starts for Genie2_35:

(Start: 1 @15608 has 52 MA's), (6, 15557), (8, 15425), (17, 15332), (18, 15326), (25, 15230),

Gene: Gibbi_37 Start: 15407, Stop: 15006, Start Num: 1

Candidate Starts for Gibbi_37:

(Start: 1 @15407 has 52 MA's), (4, 15371), (6, 15356), (8, 15224), (17, 15131), (18, 15125), (25, 15029),

Gene: Gilson_20 Start: 5705, Stop: 5307, Start Num: 2

Candidate Starts for Gilson_20:

(Start: 2 @5705 has 7 MA's), (7, 5597), (13, 5462), (16, 5441), (24, 5348), (25, 5330),

Gene: HangryHippo_34 Start: 14516, Stop: 14115, Start Num: 1

Candidate Starts for HangryHippo_34:

(Start: 1 @14516 has 52 MA's), (3, 14501), (6, 14465), (10, 14303), (13, 14270), (14, 14261), (15, 14258), (17, 14240), (25, 14138),

Gene: IchabodCrane_33 Start: 15499, Stop: 15098, Start Num: 1

Candidate Starts for IchabodCrane_33:

(Start: 1 @15499 has 52 MA's), (4, 15463), (6, 15448), (8, 15316), (17, 15223), (18, 15217), (25, 15121),

Gene: Jay2Jay_35 Start: 14732, Stop: 14331, Start Num: 1

Candidate Starts for Jay2Jay_35:

(Start: 1 @14732 has 52 MA's), (3, 14717), (6, 14681), (10, 14519), (15, 14474), (17, 14456), (25, 14354),

Gene: JimJam_35 Start: 15735, Stop: 15334, Start Num: 1

Candidate Starts for JimJam_35:

(Start: 1 @15735 has 52 MA's), (4, 15699), (6, 15684), (8, 15552), (17, 15459), (18, 15453), (25, 15357),

Gene: Jollison_38 Start: 15753, Stop: 15352, Start Num: 1

Candidate Starts for Jollison_38:

(Start: 1 @15753 has 52 MA's), (4, 15717), (6, 15702), (8, 15570), (17, 15477), (18, 15471), (25, 15375),

Gene: Karimac_34 Start: 15902, Stop: 15501, Start Num: 1

Candidate Starts for Karimac_34:

(Start: 1 @15902 has 52 MA's), (4, 15866), (6, 15851), (8, 15719), (17, 15626), (18, 15620), (25, 15524),

Gene: Kenrey_20 Start: 5757, Stop: 5359, Start Num: 2

Candidate Starts for Kenrey_20:

(Start: 2 @5757 has 7 MA's), (7, 5649), (13, 5514), (16, 5493), (24, 5400), (25, 5382),

Gene: KentuckyRacer_38 Start: 15548, Stop: 15147, Start Num: 1

Candidate Starts for KentuckyRacer_38:

(Start: 1 @15548 has 52 MA's), (4, 15512), (6, 15497), (8, 15365), (17, 15272), (18, 15266), (25, 15170),

Gene: Larnav_37 Start: 14464, Stop: 14063, Start Num: 1

Candidate Starts for Larnav_37:

(Start: 1 @14464 has 52 MA's), (3, 14449), (5, 14425), (6, 14413), (10, 14251), (13, 14218), (14, 14209), (15, 14206), (17, 14188), (25, 14086),

Gene: Leo04_32 Start: 14515, Stop: 14114, Start Num: 1

Candidate Starts for Leo04_32:

(Start: 1 @14515 has 52 MA's), (3, 14500), (6, 14464), (10, 14302), (13, 14269), (14, 14260), (15, 14257), (17, 14239), (25, 14137),

Gene: Liandry_32 Start: 14564, Stop: 14163, Start Num: 1

Candidate Starts for Liandry_32:

(Start: 1 @14564 has 52 MA's), (6, 14513), (8, 14381), (17, 14288), (23, 14216), (25, 14186),

Gene: LukeCage_34 Start: 15485, Stop: 15084, Start Num: 1

Candidate Starts for LukeCage_34:

(Start: 1 @15485 has 52 MA's), (4, 15449), (6, 15434), (8, 15302), (14, 15230), (17, 15209), (18, 15203), (25, 15107),

Gene: Lululemon_34 Start: 13896, Stop: 13495, Start Num: 1

Candidate Starts for Lululemon_34:

(Start: 1 @13896 has 52 MA's), (3, 13881), (6, 13845), (10, 13683), (13, 13650), (14, 13641), (15, 13638), (17, 13620), (25, 13518),

Gene: MeganTheeKilla_18 Start: 5066, Stop: 4668, Start Num: 2

Candidate Starts for MeganTheeKilla_18:

(Start: 2 @5066 has 7 MA's), (7, 4958), (13, 4823), (16, 4802), (24, 4709), (25, 4691),

Gene: Mildred21_33 Start: 14874, Stop: 14473, Start Num: 1

Candidate Starts for Mildred21_33:

(Start: 1 @14874 has 52 MA's), (6, 14823), (11, 14637), (17, 14598), (23, 14526), (25, 14496),

Gene: MindFlayer_33 Start: 15406, Stop: 15005, Start Num: 1

Candidate Starts for MindFlayer_33:

(Start: 1 @15406 has 52 MA's), (4, 15370), (6, 15355), (8, 15223), (17, 15130), (18, 15124), (25, 15028),

Gene: Mugiwara_36 Start: 15401, Stop: 15000, Start Num: 1

Candidate Starts for Mugiwara_36:

(Start: 1 @15401 has 52 MA's), (4, 15365), (6, 15350), (8, 15218), (14, 15146), (17, 15125), (18, 15119), (25, 15023),

Gene: Navo_33 Start: 14723, Stop: 14322, Start Num: 1

Candidate Starts for Navo_33:

(Start: 1 @14723 has 52 MA's), (6, 14672), (8, 14540), (17, 14447), (23, 14375), (25, 14345),

Gene: NootNoot_29 Start: 13746, Stop: 13345, Start Num: 1

Candidate Starts for NootNoot_29:

(Start: 1 @13746 has 52 MA's), (6, 13695), (8, 13563), (17, 13470), (23, 13398), (25, 13368),

Gene: PacManQ_34 Start: 13896, Stop: 13495, Start Num: 1

Candidate Starts for PacManQ_34:

(Start: 1 @13896 has 52 MA's), (3, 13881), (6, 13845), (10, 13683), (13, 13650), (14, 13641), (15, 13638), (17, 13620), (25, 13518),

Gene: Paradiddles_29 Start: 13737, Stop: 13336, Start Num: 1

Candidate Starts for Paradiddles_29:

(Start: 1 @13737 has 52 MA's), (6, 13686), (8, 13554), (17, 13461), (23, 13389), (25, 13359),

Gene: Peebs_31 Start: 14215, Stop: 13814, Start Num: 1

Candidate Starts for Peebs_31:

(Start: 1 @14215 has 52 MA's), (3, 14200), (6, 14164), (10, 14002), (13, 13969), (14, 13960), (15, 13957), (17, 13939), (25, 13837),

Gene: Pepperwood_32 Start: 14388, Stop: 14017, Start Num: 1

Candidate Starts for Pepperwood_32:

(Start: 1 @14388 has 52 MA's), (3, 14373), (5, 14349), (6, 14337), (10, 14175), (13, 14142), (14, 14133), (15, 14130), (17, 14112),

Gene: Persimmon_29 Start: 13794, Stop: 13393, Start Num: 1

Candidate Starts for Persimmon_29:

(Start: 1 @13794 has 52 MA's), (6, 13743), (8, 13611), (17, 13518), (23, 13446), (25, 13416),

Gene: PinkiePie_32 Start: 14565, Stop: 14164, Start Num: 1

Candidate Starts for PinkiePie_32:

(Start: 1 @14565 has 52 MA's), (6, 14514), (8, 14382), (17, 14289), (23, 14217), (25, 14187),

Gene: PumpkinSpice_34 Start: 15796, Stop: 15395, Start Num: 1

Candidate Starts for PumpkinSpice_34:

(Start: 1 @15796 has 52 MA's), (4, 15760), (6, 15745), (8, 15613), (17, 15520), (18, 15514), (25, 15418),

Gene: Quaran19_35 Start: 15787, Stop: 15386, Start Num: 1

Candidate Starts for Quaran19_35:

(Start: 1 @15787 has 52 MA's), (4, 15751), (6, 15736), (8, 15604), (17, 15511), (18, 15505), (25, 15409),

Gene: SaltySpittoon_35 Start: 15796, Stop: 15395, Start Num: 1

Candidate Starts for SaltySpittoon_35:

(Start: 1 @15796 has 52 MA's), (4, 15760), (6, 15745), (8, 15613), (17, 15520), (18, 15514), (25, 15418),

Gene: Samisti12_31 Start: 14985, Stop: 14584, Start Num: 1

Candidate Starts for Samisti12_31:

(Start: 1 @14985 has 52 MA's), (3, 14970), (6, 14934), (10, 14772), (13, 14739), (14, 14730), (15, 14727), (17, 14709), (25, 14607),

Gene: Sollertia_35 Start: 15608, Stop: 15207, Start Num: 1

Candidate Starts for Sollertia_35:

(Start: 1 @15608 has 52 MA's), (6, 15557), (8, 15425), (17, 15332), (18, 15326), (25, 15230),

Gene: SparkleGoddess_17 Start: 5167, Stop: 4769, Start Num: 2

Candidate Starts for SparkleGoddess_17:

(Start: 2 @5167 has 7 MA's), (4, 5134), (7, 5059), (13, 4924), (21, 4870), (24, 4810), (25, 4792),

Gene: Spelly_35 Start: 15751, Stop: 15350, Start Num: 1

Candidate Starts for Spelly_35:

(Start: 1 @15751 has 52 MA's), (4, 15715), (6, 15700), (8, 15568), (17, 15475), (18, 15469), (25, 15373),

Gene: Spilled_35 Start: 15505, Stop: 15104, Start Num: 1

Candidate Starts for Spilled_35:

(Start: 1 @15505 has 52 MA's), (4, 15469), (6, 15454), (8, 15322), (17, 15229), (18, 15223), (25, 15127),

Gene: Squillium_32 Start: 14564, Stop: 14163, Start Num: 1

Candidate Starts for Squillium_32:

(Start: 1 @14564 has 52 MA's), (6, 14513), (8, 14381), (17, 14288), (23, 14216), (25, 14186),

Gene: Stanimal_35 Start: 15608, Stop: 15207, Start Num: 1

Candidate Starts for Stanimal_35:

(Start: 1 @15608 has 52 MA's), (6, 15557), (8, 15425), (17, 15332), (18, 15326), (25, 15230),

Gene: StarPlatinum_33 Start: 15405, Stop: 15004, Start Num: 1

Candidate Starts for StarPlatinum_33:

(Start: 1 @15405 has 52 MA's), (4, 15369), (6, 15354), (8, 15222), (17, 15129), (18, 15123), (25, 15027),

Gene: Starbow_33 Start: 15772, Stop: 15371, Start Num: 1

Candidate Starts for Starbow_33:

(Start: 1 @15772 has 52 MA's), (4, 15736), (6, 15721), (8, 15589), (17, 15496), (18, 15490), (25, 15394),

Gene: Stigma_17 Start: 5171, Stop: 4773, Start Num: 2

Candidate Starts for Stigma_17:

(Start: 2 @5171 has 7 MA's), (4, 5138), (7, 5063), (13, 4928), (21, 4874), (24, 4814), (25, 4796),

Gene: Sushi23_32 Start: 14611, Stop: 14210, Start Num: 1

Candidate Starts for Sushi23_32:

(Start: 1 @14611 has 52 MA's), (3, 14596), (6, 14560), (10, 14398), (13, 14365), (14, 14356), (15, 14353), (17, 14335), (25, 14233),

Gene: Targaryen_32 Start: 15289, Stop: 14888, Start Num: 1

Candidate Starts for Targaryen_32:

(Start: 1 @15289 has 52 MA's), (3, 15274), (6, 15238), (10, 15076), (15, 15031), (17, 15013), (25, 14911),

Gene: Deutsch_31 Start: 14304, Stop: 13903, Start Num: 1

Candidate Starts for Deutsch_31:

(Start: 1 @14304 has 52 MA's), (3, 14289), (6, 14253), (10, 14091), (13, 14058), (14, 14049), (15, 14046), (17, 14028), (25, 13926),

Gene: TomSawyer_33 Start: 15390, Stop: 14989, Start Num: 1

Candidate Starts for TomSawyer_33:

(Start: 1 @15390 has 52 MA's), (4, 15354), (6, 15339), (8, 15207), (17, 15114), (18, 15108), (25, 15012),

Gene: Tomas_36 Start: 16215, Stop: 15814, Start Num: 1

Candidate Starts for Tomas_36:

(Start: 1 @16215 has 52 MA's), (6, 16164), (10, 16002), (17, 15939), (22, 15876), (25, 15837),

Gene: Tribute_30 Start: 14082, Stop: 13681, Start Num: 1

Candidate Starts for Tribute_30:

(Start: 1 @14082 has 52 MA's), (3, 14067), (6, 14031), (10, 13869), (13, 13836), (14, 13827), (15, 13824), (17, 13806), (25, 13704),

Gene: Warpy_35 Start: 14752, Stop: 14351, Start Num: 1

Candidate Starts for Warpy_35:

(Start: 1 @14752 has 52 MA's), (3, 14737), (6, 14701), (10, 14539), (15, 14494), (17, 14476), (25, 14374),

Gene: Watermoore_32 Start: 14517, Stop: 14116, Start Num: 1

Candidate Starts for Watermoore_32:

(Start: 1 @14517 has 52 MA's), (3, 14502), (6, 14466), (10, 14304), (13, 14271), (14, 14262), (15, 14259), (17, 14241), (25, 14139),

Gene: WhereRU_31 Start: 13794, Stop: 13393, Start Num: 1

Candidate Starts for WhereRU_31:

(Start: 1 @13794 has 52 MA's), (6, 13743), (8, 13611), (17, 13518), (23, 13446), (25, 13416),

Gene: Wipeout_33 Start: 15412, Stop: 15011, Start Num: 1

Candidate Starts for Wipeout_33:

(Start: 1 @15412 has 52 MA's), (4, 15376), (6, 15361), (8, 15229), (17, 15136), (18, 15130), (25, 15034),

Gene: Wofford_32 Start: 14552, Stop: 14151, Start Num: 1

Candidate Starts for Wofford_32:

(Start: 1 @14552 has 52 MA's), (4, 14516), (6, 14501), (8, 14369), (9, 14363), (12, 14309), (14, 14297), (17, 14276), (18, 14270), (19, 14267), (25, 14174),

Gene: Yaboi_36 Start: 15584, Stop: 15183, Start Num: 1

Candidate Starts for Yaboi_36:

(Start: 1 @15584 has 52 MA's), (6, 15533), (8, 15401), (17, 15308), (18, 15302), (25, 15206),