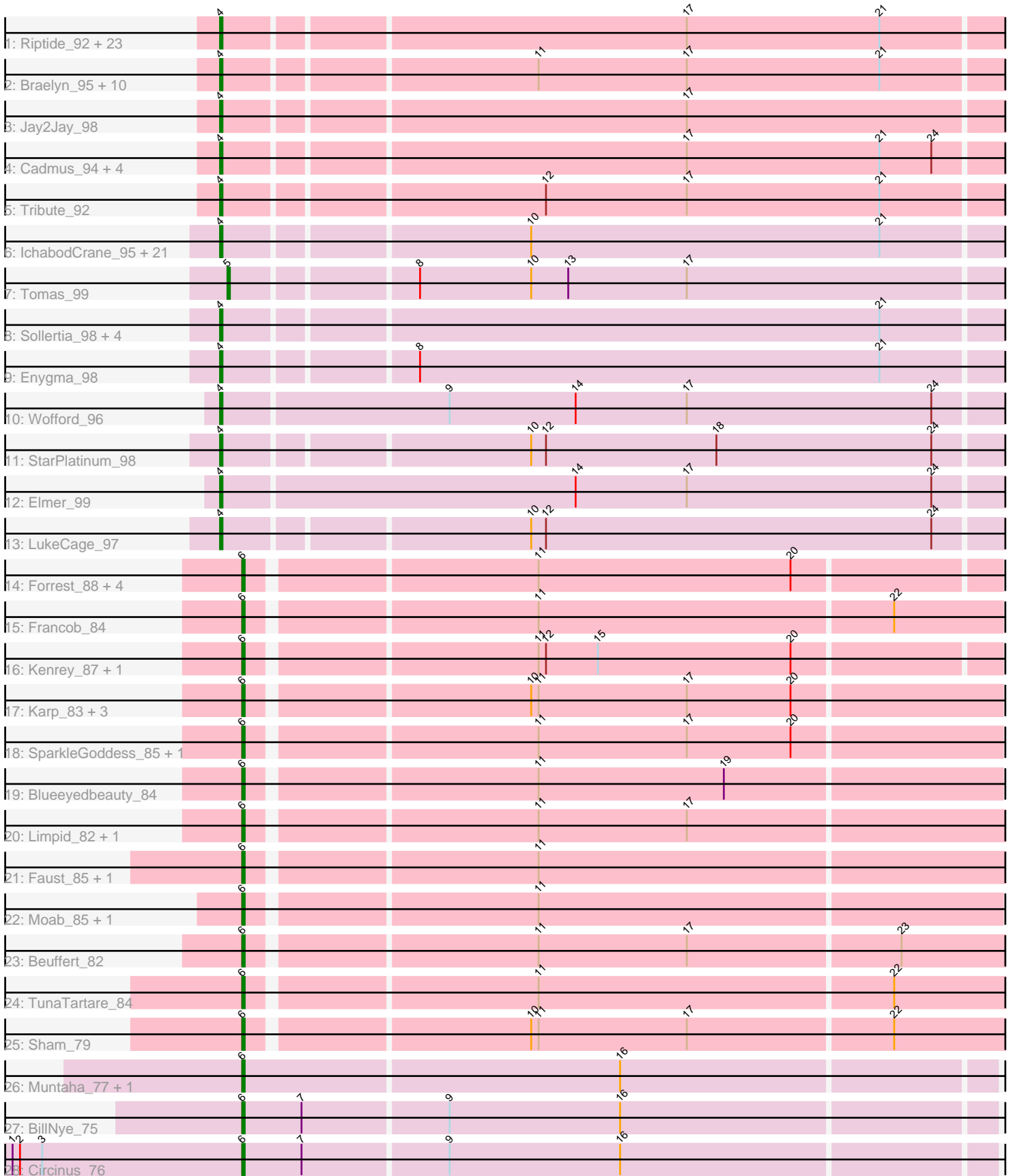


Pham 224455



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 224455 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224455 has 103 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Riptide_92, Evy_94, Cross_94, Bmoc_93, Shuckle_92, Cursive_92, PacManQ_93, Anedea_94, Peebs_93, HangryHippo_94, Pepperwood_94, Larnav_94, Leo04_95, Sushi23_93, Teutsch_94, Warpy_97, Marsus_93, Watermoore_93, BlueOtter_94, EGole_95, Scheme_95, Samisti12_94, Lululemon_93, Targaryen_94
- Track 2 : Braelyn_95, Bartholomune_93, PinkiePie_93, Mildred21_93, Paradiddles_90, Liandry_93, Navo_92, WhereRU_91, NootNoot_90, Persimmon_93, Squillium_94
- Track 3 : Jay2Jay_98
- Track 4 : Cadmus_94, Angela_92, Daubenski_96, LilMartin_92, MulchMansion_92
- Track 5 : Tribute_92
- Track 6 : IchabodCrane_95, Spelly_98, Bordeaux_96, Amabiko_98, CeilingFan_97, MindFlayer_95, Gibbi_102, Battuta_96, Quarant19_97, SaltySpittoon_97, PumpkinSpice_97, Starbow_96, Wipeout_95, Rikishi_100, TomSawyer_96, Spilled_99, Jollison_97, Karimac_97, Mugiwaru_100, Birchlyn_95, KentuckyRacer_98, JimJam_98
- Track 7 : Tomas_99
- Track 8 : Sollertia_98, Genie2_98, Stanimal_98, BoomerJR_98, Yaboi_98
- Track 9 : Enygma_98
- Track 10 : Wofford_96
- Track 11 : StarPlatinum_98
- Track 12 : Elmer_99
- Track 13 : LukeCage_97
- Track 14 : Forrest_88, MeganTheeKilla_84, Gilson_86, Jada_86, Emma1919_87
- Track 15 : Francob_84
- Track 16 : Kenrey_87, Phredrick_85
- Track 17 : Karp_83, Comrade_85, Belfort_87, Westy_83
- Track 18 : SparkleGoddess_85, Stigma_84
- Track 19 : Blueeyedbeauty_84
- Track 20 : Limpid_82, Annadreamy_83
- Track 21 : Faust_85, SeresaTree_85
- Track 22 : Moab_85, Patelgo_85
- Track 23 : Beuffert_82
- Track 24 : TunaTartare_84
- Track 25 : Sham_79
- Track 26 : Muntaha_77, Wakanda_76
- Track 27 : BillNye_75

- Track 28 : Circinus_76

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

The start number called the most often in the published annotations is 4, it was called in 66 of the 93 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko_98, Anedea_94, Angela_92, Bartholomune_93, Battuta_96, Birchlyn_95, BlueOtter_94, Bmoc_93, BoomerJR_98, Bordeaux_96, Braelyn_95, Cadmus_94, CeilingFan_97, Cross_94, Cursive_92, Daubenski_96, EGole_95, Elmer_99, Enygma_98, Evy_94, Genie2_98, Gibbi_102, HangryHippo_94, IchabodCrane_95, Jay2Jay_98, JimJam_98, Jollison_97, Karimac_97, KentuckyRacer_98, Larnav_94, Leo04_95, Liandry_93, LilMartin_92, LukeCage_97, Lululemon_93, Marsus_93, Mildred21_93, MindFlayer_95, Mugiwara_100, MulchMansion_92, Navo_92, NootNoot_90, PacManQ_93, Paradiddles_90, Peebs_93, Pepperwood_94, Persimmon_93, PinkiePie_93, PumpkinSpice_97, Quarant19_97, Rikishi_100, Riptide_92, SaltySpitoon_97, Samisti12_94, Scheme_95, Shuckle_92, Sollertia_98, Spelly_98, Spilled_99, Squillium_94, Stanimal_98, StarPlatinum_98, Starbow_96, Sushi23_93, Targaryen_94, Teutsch_94, TomSawyer_96, Tribute_92, Warpy_97, Watermoore_93, WhereRU_91, Wipeout_95, Wofford_96, Yaboi_98,

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

-

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

- Annadreamy_83, Belfort_87, Beuffert_82, BillNye_75, Blueeyedbeauty_84, Circinus_76, Comrade_85, Emma1919_87, Faust_85, Forrest_88, Francob_84, Gilson_86, Jada_86, Karp_83, Kenrey_87, Limpid_82, MeganTheeKilla_84, Moab_85, Muntaha_77, Patelgo_85, Phredrick_85, SeresaTree_85, Sham_79, SparkleGoddess_85, Stigma_84, Tomas_99, TunaTartare_84, Wakanda_76, Westy_83,

Summary by start number:

Start 4:

- Found in 74 of 103 (71.8%) of genes in pham
- Manual Annotations of this start: 66 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amabiko_98 (BE2), Anedea_94 (BE1), Angela_92 (BE1), Bartholomune_93 (BE1), Battuta_96 (BE2), Birchlyn_95 (BE2), BlueOtter_94 (BE1), Bmoc_93 (BE1), BoomerJR_98 (BE2), Bordeaux_96 (BE2), Braelyn_95 (BE1), Cadmus_94 (BE1), CeilingFan_97 (BE2), Cross_94 (BE1), Cursive_92 (BE1), Daubenski_96 (BE1), EGole_95 (BE1), Elmer_99 (BE2), Enygma_98 (BE2), Evy_94 (BE1), Genie2_98 (BE2), Gibbi_102 (BE2), HangryHippo_94 (BE1), IchabodCrane_95 (BE2), Jay2Jay_98 (BE1), JimJam_98 (BE2), Jollison_97 (BE2), Karimac_97 (BE2), KentuckyRacer_98 (BE2), Larnav_94 (BE1), Leo04_95 (BE1), Liandry_93 (BE1), LilMartin_92 (BE1), LukeCage_97 (BE2), Lululemon_93 (BE1), Marsus_93 (BE1), Mildred21_93 (BE1), MindFlayer_95 (BE2), Mugiwara_100 (BE2), MulchMansion_92 (BE1), Navo_92 (BE1), NootNoot_90 (BE1),

PacManQ_93 (BE1), Paradiddles_90 (BE1), Peebs_93 (BE1), Pepperwood_94 (BE1), Persimmon_93 (BE1), PinkiePie_93 (BE1), PumpkinSpice_97 (BE2), Quarant19_97 (BE2), Rikishi_100 (BE2), Riptide_92 (BE1), SaltySpittoon_97 (BE2), Samisti12_94 (BE1), Scheme_95 (BE1), Shuckle_92 (BE1), Sollertia_98 (BE2), Spelly_98 (BE2), Spilled_99 (BE2), Squillum_94 (BE1), Stanimal_98 (BE2), StarPlatinum_98 (BE2), Starbow_96 (BE2), Sushi23_93 (BE1), Targaryen_94 (BE1), Teutsch_94 (BE1), TomSawyer_96 (BE2), Tribute_92 (BE1), Warpy_97 (BE1), Watermoore_93 (BE1), WhereRU_91 (BE1), Wipeout_95 (BE2), Wofford_96 (BE2), Yaboi_98 (BE2),

Start 5:

- Found in 1 of 103 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tomas_99 (BE2),

Start 6:

- Found in 28 of 103 (27.2%) of genes in pham
- Manual Annotations of this start: 26 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annadreamy_83 (BK1), Belfort_87 (BK1), Beuffert_82 (BK1), BillNye_75 (BK2), Blueeyedbeauty_84 (BK1), Circinus_76 (BK2), Comrade_85 (BK1), Emma1919_87 (BK1), Faust_85 (BK1), Forrest_88 (BK1), Francob_84 (BK1), Gilson_86 (BK1), Jada_86 (BK1), Karp_83 (BK1), Kenrey_87 (BK1), Limpid_82 (BK1), MeganTheeKilla_84 (BK1), Moab_85 (BK1), Muntaha_77 (BK2), Patelgo_85 (BK1), Phredrick_85 (BK1), SeresaTree_85 (BK1), Sham_79 (BK1), SparkleGoddess_85 (BK1), Stigma_84 (BK1), TunaTartare_84 (BK1), Wakanda_76 (BK2), Westy_83 (BK1),

Summary by clusters:

There are 4 clusters represented in this pham: BE2, BE1, BK1, BK2,

Info for manual annotations of cluster BE1:

- Start number 4 was manually annotated 37 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 4 was manually annotated 29 times for cluster BE2.
- Start number 5 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 6 was manually annotated 22 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 6 was manually annotated 4 times for cluster BK2.

Gene Information:

Gene: Amabiko_98 Start: 68362, Stop: 68682, Start Num: 4

Candidate Starts for Amabiko_98:

(Start: 4 @68362 has 66 MA's), (10, 68479), (21, 68620),

Gene: Anedea_94 Start: 67639, Stop: 67959, Start Num: 4

Candidate Starts for Anedea_94:

(Start: 4 @67639 has 66 MA's), (17, 67819), (21, 67897),

Gene: Angela_92 Start: 67111, Stop: 67431, Start Num: 4

Candidate Starts for Angela_92:

(Start: 4 @67111 has 66 MA's), (17, 67291), (21, 67369), (24, 67390),

Gene: Annadreamy_83 Start: 61223, Stop: 61534, Start Num: 6

Candidate Starts for Annadreamy_83:

(Start: 6 @61223 has 26 MA's), (11, 61334), (17, 61394),

Gene: Bartholomune_93 Start: 67538, Stop: 67858, Start Num: 4

Candidate Starts for Bartholomune_93:

(Start: 4 @67538 has 66 MA's), (11, 67658), (17, 67718), (21, 67796),

Gene: Battuta_96 Start: 68336, Stop: 68656, Start Num: 4

Candidate Starts for Battuta_96:

(Start: 4 @68336 has 66 MA's), (10, 68453), (21, 68594),

Gene: Belfort_87 Start: 63047, Stop: 63355, Start Num: 6

Candidate Starts for Belfort_87:

(Start: 6 @63047 has 26 MA's), (10, 63155), (11, 63158), (17, 63218), (20, 63260),

Gene: Beuffert_82 Start: 61773, Stop: 62084, Start Num: 6

Candidate Starts for Beuffert_82:

(Start: 6 @61773 has 26 MA's), (11, 61884), (17, 61944), (23, 62028),

Gene: BillNye_75 Start: 62332, Stop: 62643, Start Num: 6

Candidate Starts for BillNye_75:

(Start: 6 @62332 has 26 MA's), (7, 62356), (9, 62413), (16, 62482),

Gene: Birchlyn_95 Start: 66219, Stop: 66539, Start Num: 4

Candidate Starts for Birchlyn_95:

(Start: 4 @66219 has 66 MA's), (10, 66336), (21, 66477),

Gene: BlueOtter_94 Start: 68150, Stop: 68470, Start Num: 4

Candidate Starts for BlueOtter_94:

(Start: 4 @68150 has 66 MA's), (17, 68330), (21, 68408),

Gene: Blueeyedbeauty_84 Start: 61175, Stop: 61483, Start Num: 6

Candidate Starts for Blueeyedbeauty_84:

(Start: 6 @61175 has 26 MA's), (11, 61286), (19, 61361),

Gene: Bmoc_93 Start: 67477, Stop: 67797, Start Num: 4

Candidate Starts for Bmoc_93:

(Start: 4 @67477 has 66 MA's), (17, 67657), (21, 67735),

Gene: BoomerJR_98 Start: 68191, Stop: 68511, Start Num: 4

Candidate Starts for BoomerJR_98:

(Start: 4 @68191 has 66 MA's), (21, 68449),

Gene: Bordeaux_96 Start: 68491, Stop: 68811, Start Num: 4

Candidate Starts for Bordeaux_96:

(Start: 4 @68491 has 66 MA's), (10, 68608), (21, 68749),

Gene: Braelyn_95 Start: 68302, Stop: 68622, Start Num: 4

Candidate Starts for Braelyn_95:

(Start: 4 @68302 has 66 MA's), (11, 68422), (17, 68482), (21, 68560),

Gene: Cadmus_94 Start: 67088, Stop: 67408, Start Num: 4

Candidate Starts for Cadmus_94:

(Start: 4 @67088 has 66 MA's), (17, 67268), (21, 67346), (24, 67367),

Gene: CeilingFan_97 Start: 68251, Stop: 68571, Start Num: 4

Candidate Starts for CeilingFan_97:

(Start: 4 @68251 has 66 MA's), (10, 68368), (21, 68509),

Gene: Circinus_76 Start: 62319, Stop: 62630, Start Num: 6

Candidate Starts for Circinus_76:

(1, 62226), (2, 62229), (3, 62238), (Start: 6 @62319 has 26 MA's), (7, 62343), (9, 62400), (16, 62469),

Gene: Comrade_85 Start: 62663, Stop: 62971, Start Num: 6

Candidate Starts for Comrade_85:

(Start: 6 @62663 has 26 MA's), (10, 62771), (11, 62774), (17, 62834), (20, 62876),

Gene: Cross_94 Start: 68151, Stop: 68471, Start Num: 4

Candidate Starts for Cross_94:

(Start: 4 @68151 has 66 MA's), (17, 68331), (21, 68409),

Gene: Cursive_92 Start: 67676, Stop: 67996, Start Num: 4

Candidate Starts for Cursive_92:

(Start: 4 @67676 has 66 MA's), (17, 67856), (21, 67934),

Gene: Daubenski_96 Start: 67852, Stop: 68172, Start Num: 4

Candidate Starts for Daubenski_96:

(Start: 4 @67852 has 66 MA's), (17, 68032), (21, 68110), (24, 68131),

Gene: EGole_95 Start: 69096, Stop: 69416, Start Num: 4

Candidate Starts for EGole_95:

(Start: 4 @69096 has 66 MA's), (17, 69276), (21, 69354),

Gene: Elmer_99 Start: 68657, Stop: 68983, Start Num: 4

Candidate Starts for Elmer_99:

(Start: 4 @68657 has 66 MA's), (14, 68798), (17, 68843), (24, 68942),

Gene: Emma1919_87 Start: 61386, Stop: 61691, Start Num: 6

Candidate Starts for Emma1919_87:

(Start: 6 @61386 has 26 MA's), (11, 61497), (20, 61599),

Gene: Enygma_98 Start: 70147, Stop: 70467, Start Num: 4

Candidate Starts for Enygma_98:

(Start: 4 @70147 has 66 MA's), (8, 70219), (21, 70405),

Gene: Evy_94 Start: 68051, Stop: 68371, Start Num: 4

Candidate Starts for Evy_94:
(Start: 4 @68051 has 66 MA's), (17, 68231), (21, 68309),

Gene: Faust_85 Start: 62596, Stop: 62907, Start Num: 6
Candidate Starts for Faust_85:
(Start: 6 @62596 has 26 MA's), (11, 62707),

Gene: Forrest_88 Start: 62679, Stop: 62984, Start Num: 6
Candidate Starts for Forrest_88:
(Start: 6 @62679 has 26 MA's), (11, 62790), (20, 62892),

Gene: Francob_84 Start: 61425, Stop: 61733, Start Num: 6
Candidate Starts for Francob_84:
(Start: 6 @61425 has 26 MA's), (11, 61536), (22, 61677),

Gene: Genie2_98 Start: 68305, Stop: 68625, Start Num: 4
Candidate Starts for Genie2_98:
(Start: 4 @68305 has 66 MA's), (21, 68563),

Gene: Gibbi_102 Start: 68474, Stop: 68794, Start Num: 4
Candidate Starts for Gibbi_102:
(Start: 4 @68474 has 66 MA's), (10, 68591), (21, 68732),

Gene: Gilson_86 Start: 61348, Stop: 61653, Start Num: 6
Candidate Starts for Gilson_86:
(Start: 6 @61348 has 26 MA's), (11, 61459), (20, 61561),

Gene: HangryHippo_94 Start: 68150, Stop: 68470, Start Num: 4
Candidate Starts for HangryHippo_94:
(Start: 4 @68150 has 66 MA's), (17, 68330), (21, 68408),

Gene: IchabodCrane_95 Start: 68063, Stop: 68383, Start Num: 4
Candidate Starts for IchabodCrane_95:
(Start: 4 @68063 has 66 MA's), (10, 68180), (21, 68321),

Gene: Jada_86 Start: 61861, Stop: 62166, Start Num: 6
Candidate Starts for Jada_86:
(Start: 6 @61861 has 26 MA's), (11, 61972), (20, 62074),

Gene: Jay2Jay_98 Start: 68903, Stop: 69223, Start Num: 4
Candidate Starts for Jay2Jay_98:
(Start: 4 @68903 has 66 MA's), (17, 69083),

Gene: JimJam_98 Start: 68437, Stop: 68757, Start Num: 4
Candidate Starts for JimJam_98:
(Start: 4 @68437 has 66 MA's), (10, 68554), (21, 68695),

Gene: Jollison_97 Start: 68319, Stop: 68639, Start Num: 4
Candidate Starts for Jollison_97:
(Start: 4 @68319 has 66 MA's), (10, 68436), (21, 68577),

Gene: Karimac_97 Start: 68468, Stop: 68788, Start Num: 4
Candidate Starts for Karimac_97:

(Start: 4 @68468 has 66 MA's), (10, 68585), (21, 68726),

Gene: Karp_83 Start: 62256, Stop: 62564, Start Num: 6

Candidate Starts for Karp_83:

(Start: 6 @62256 has 26 MA's), (10, 62364), (11, 62367), (17, 62427), (20, 62469),

Gene: Kenrey_87 Start: 61562, Stop: 61867, Start Num: 6

Candidate Starts for Kenrey_87:

(Start: 6 @61562 has 26 MA's), (11, 61673), (12, 61676), (15, 61697), (20, 61775),

Gene: KentuckyRacer_98 Start: 68252, Stop: 68572, Start Num: 4

Candidate Starts for KentuckyRacer_98:

(Start: 4 @68252 has 66 MA's), (10, 68369), (21, 68510),

Gene: Larnav_94 Start: 68135, Stop: 68455, Start Num: 4

Candidate Starts for Larnav_94:

(Start: 4 @68135 has 66 MA's), (17, 68315), (21, 68393),

Gene: Leo04_95 Start: 68650, Stop: 68970, Start Num: 4

Candidate Starts for Leo04_95:

(Start: 4 @68650 has 66 MA's), (17, 68830), (21, 68908),

Gene: Liandry_93 Start: 68287, Stop: 68607, Start Num: 4

Candidate Starts for Liandry_93:

(Start: 4 @68287 has 66 MA's), (11, 68407), (17, 68467), (21, 68545),

Gene: LilMartin_92 Start: 67059, Stop: 67379, Start Num: 4

Candidate Starts for LilMartin_92:

(Start: 4 @67059 has 66 MA's), (17, 67239), (21, 67317), (24, 67338),

Gene: Limpid_82 Start: 61222, Stop: 61533, Start Num: 6

Candidate Starts for Limpid_82:

(Start: 6 @61222 has 26 MA's), (11, 61333), (17, 61393),

Gene: LukeCage_97 Start: 68225, Stop: 68545, Start Num: 4

Candidate Starts for LukeCage_97:

(Start: 4 @68225 has 66 MA's), (10, 68342), (12, 68348), (24, 68504),

Gene: Lululemon_93 Start: 67531, Stop: 67851, Start Num: 4

Candidate Starts for Lululemon_93:

(Start: 4 @67531 has 66 MA's), (17, 67711), (21, 67789),

Gene: Marsus_93 Start: 67308, Stop: 67628, Start Num: 4

Candidate Starts for Marsus_93:

(Start: 4 @67308 has 66 MA's), (17, 67488), (21, 67566),

Gene: MeganTheeKilla_84 Start: 60709, Stop: 61014, Start Num: 6

Candidate Starts for MeganTheeKilla_84:

(Start: 6 @60709 has 26 MA's), (11, 60820), (20, 60922),

Gene: Mildred21_93 Start: 67285, Stop: 67605, Start Num: 4

Candidate Starts for Mildred21_93:

(Start: 4 @67285 has 66 MA's), (11, 67405), (17, 67465), (21, 67543),

Gene: MindFlayer_95 Start: 67970, Stop: 68290, Start Num: 4
Candidate Starts for MindFlayer_95:
(Start: 4 @67970 has 66 MA's), (10, 68087), (21, 68228),

Gene: Moab_85 Start: 62621, Stop: 62929, Start Num: 6
Candidate Starts for Moab_85:
(Start: 6 @62621 has 26 MA's), (11, 62732),

Gene: Mugiwara_100 Start: 68724, Stop: 69044, Start Num: 4
Candidate Starts for Mugiwara_100:
(Start: 4 @68724 has 66 MA's), (10, 68841), (21, 68982),

Gene: MulchMansion_92 Start: 67059, Stop: 67379, Start Num: 4
Candidate Starts for MulchMansion_92:
(Start: 4 @67059 has 66 MA's), (17, 67239), (21, 67317), (24, 67338),

Gene: Muntaha_77 Start: 60800, Stop: 61114, Start Num: 6
Candidate Starts for Muntaha_77:
(Start: 6 @60800 has 26 MA's), (16, 60950),

Gene: Navo_92 Start: 68206, Stop: 68526, Start Num: 4
Candidate Starts for Navo_92:
(Start: 4 @68206 has 66 MA's), (11, 68326), (17, 68386), (21, 68464),

Gene: NootNoot_90 Start: 67201, Stop: 67521, Start Num: 4
Candidate Starts for NootNoot_90:
(Start: 4 @67201 has 66 MA's), (11, 67321), (17, 67381), (21, 67459),

Gene: PacManQ_93 Start: 67531, Stop: 67851, Start Num: 4
Candidate Starts for PacManQ_93:
(Start: 4 @67531 has 66 MA's), (17, 67711), (21, 67789),

Gene: Paradiddles_90 Start: 67465, Stop: 67785, Start Num: 4
Candidate Starts for Paradiddles_90:
(Start: 4 @67465 has 66 MA's), (11, 67585), (17, 67645), (21, 67723),

Gene: Patelgo_85 Start: 62784, Stop: 63092, Start Num: 6
Candidate Starts for Patelgo_85:
(Start: 6 @62784 has 26 MA's), (11, 62895),

Gene: Peebs_93 Start: 67885, Stop: 68205, Start Num: 4
Candidate Starts for Peebs_93:
(Start: 4 @67885 has 66 MA's), (17, 68065), (21, 68143),

Gene: Pepperwood_94 Start: 68018, Stop: 68338, Start Num: 4
Candidate Starts for Pepperwood_94:
(Start: 4 @68018 has 66 MA's), (17, 68198), (21, 68276),

Gene: Persimmon_93 Start: 67134, Stop: 67454, Start Num: 4
Candidate Starts for Persimmon_93:
(Start: 4 @67134 has 66 MA's), (11, 67254), (17, 67314), (21, 67392),

Gene: Phredrick_85 Start: 60642, Stop: 60947, Start Num: 6
Candidate Starts for Phredrick_85:
(Start: 6 @60642 has 26 MA's), (11, 60753), (12, 60756), (15, 60777), (20, 60855),

Gene: PinkiePie_93 Start: 68287, Stop: 68607, Start Num: 4
Candidate Starts for PinkiePie_93:
(Start: 4 @68287 has 66 MA's), (11, 68407), (17, 68467), (21, 68545),

Gene: PumpkinSpice_97 Start: 68362, Stop: 68682, Start Num: 4
Candidate Starts for PumpkinSpice_97:
(Start: 4 @68362 has 66 MA's), (10, 68479), (21, 68620),

Gene: Quaran19_97 Start: 68353, Stop: 68673, Start Num: 4
Candidate Starts for Quaran19_97:
(Start: 4 @68353 has 66 MA's), (10, 68470), (21, 68611),

Gene: Rikishi_100 Start: 68268, Stop: 68588, Start Num: 4
Candidate Starts for Rikishi_100:
(Start: 4 @68268 has 66 MA's), (10, 68385), (21, 68526),

Gene: Riptide_92 Start: 66856, Stop: 67176, Start Num: 4
Candidate Starts for Riptide_92:
(Start: 4 @66856 has 66 MA's), (17, 67036), (21, 67114),

Gene: SaltySpittoon_97 Start: 68362, Stop: 68682, Start Num: 4
Candidate Starts for SaltySpittoon_97:
(Start: 4 @68362 has 66 MA's), (10, 68479), (21, 68620),

Gene: Samisti12_94 Start: 69327, Stop: 69647, Start Num: 4
Candidate Starts for Samisti12_94:
(Start: 4 @69327 has 66 MA's), (17, 69507), (21, 69585),

Gene: Scheme_95 Start: 68732, Stop: 69052, Start Num: 4
Candidate Starts for Scheme_95:
(Start: 4 @68732 has 66 MA's), (17, 68912), (21, 68990),

Gene: SeresaTree_85 Start: 61986, Stop: 62297, Start Num: 6
Candidate Starts for SeresaTree_85:
(Start: 6 @61986 has 26 MA's), (11, 62097),

Gene: Sham_79 Start: 61738, Stop: 62049, Start Num: 6
Candidate Starts for Sham_79:
(Start: 6 @61738 has 26 MA's), (10, 61846), (11, 61849), (17, 61909), (22, 61990),

Gene: Shuckle_92 Start: 68340, Stop: 68660, Start Num: 4
Candidate Starts for Shuckle_92:
(Start: 4 @68340 has 66 MA's), (17, 68520), (21, 68598),

Gene: Sollertia_98 Start: 68305, Stop: 68625, Start Num: 4
Candidate Starts for Sollertia_98:
(Start: 4 @68305 has 66 MA's), (21, 68563),

Gene: SparkleGoddess_85 Start: 62664, Stop: 62972, Start Num: 6

Candidate Starts for SparkleGoddess_85:
(Start: 6 @62664 has 26 MA's), (11, 62775), (17, 62835), (20, 62877),

Gene: Spelly_98 Start: 68317, Stop: 68637, Start Num: 4
Candidate Starts for Spelly_98:
(Start: 4 @68317 has 66 MA's), (10, 68434), (21, 68575),

Gene: Spilled_99 Start: 68434, Stop: 68754, Start Num: 4
Candidate Starts for Spilled_99:
(Start: 4 @68434 has 66 MA's), (10, 68551), (21, 68692),

Gene: Squillium_94 Start: 68288, Stop: 68608, Start Num: 4
Candidate Starts for Squillium_94:
(Start: 4 @68288 has 66 MA's), (11, 68408), (17, 68468), (21, 68546),

Gene: Stanimal_98 Start: 68194, Stop: 68514, Start Num: 4
Candidate Starts for Stanimal_98:
(Start: 4 @68194 has 66 MA's), (21, 68452),

Gene: StarPlatinum_98 Start: 68870, Stop: 69190, Start Num: 4
Candidate Starts for StarPlatinum_98:
(Start: 4 @68870 has 66 MA's), (10, 68987), (12, 68993), (18, 69062), (24, 69149),

Gene: Starbow_96 Start: 68338, Stop: 68658, Start Num: 4
Candidate Starts for Starbow_96:
(Start: 4 @68338 has 66 MA's), (10, 68455), (21, 68596),

Gene: Stigma_84 Start: 62672, Stop: 62980, Start Num: 6
Candidate Starts for Stigma_84:
(Start: 6 @62672 has 26 MA's), (11, 62783), (17, 62843), (20, 62885),

Gene: Sushi23_93 Start: 68243, Stop: 68563, Start Num: 4
Candidate Starts for Sushi23_93:
(Start: 4 @68243 has 66 MA's), (17, 68423), (21, 68501),

Gene: Targaryen_94 Start: 68953, Stop: 69273, Start Num: 4
Candidate Starts for Targaryen_94:
(Start: 4 @68953 has 66 MA's), (17, 69133), (21, 69211),

Gene: Teutsch_94 Start: 68506, Stop: 68826, Start Num: 4
Candidate Starts for Teutsch_94:
(Start: 4 @68506 has 66 MA's), (17, 68686), (21, 68764),

Gene: TomSawyer_96 Start: 67953, Stop: 68273, Start Num: 4
Candidate Starts for TomSawyer_96:
(Start: 4 @67953 has 66 MA's), (10, 68070), (21, 68211),

Gene: Tomas_99 Start: 70399, Stop: 70716, Start Num: 5
Candidate Starts for Tomas_99:
(Start: 5 @70399 has 1 MA's), (8, 70468), (10, 70513), (13, 70528), (17, 70576),

Gene: Tribute_92 Start: 67712, Stop: 68032, Start Num: 4
Candidate Starts for Tribute_92:

(Start: 4 @67712 has 66 MA's), (12, 67835), (17, 67892), (21, 67970),

Gene: TunaTartare_84 Start: 63152, Stop: 63463, Start Num: 6

Candidate Starts for TunaTartare_84:

(Start: 6 @63152 has 26 MA's), (11, 63263), (22, 63404),

Gene: Wakanda_76 Start: 60737, Stop: 61051, Start Num: 6

Candidate Starts for Wakanda_76:

(Start: 6 @60737 has 26 MA's), (16, 60887),

Gene: Warpy_97 Start: 68416, Stop: 68736, Start Num: 4

Candidate Starts for Warpy_97:

(Start: 4 @68416 has 66 MA's), (17, 68596), (21, 68674),

Gene: Watermoore_93 Start: 68722, Stop: 69042, Start Num: 4

Candidate Starts for Watermoore_93:

(Start: 4 @68722 has 66 MA's), (17, 68902), (21, 68980),

Gene: Westy_83 Start: 62664, Stop: 62972, Start Num: 6

Candidate Starts for Westy_83:

(Start: 6 @62664 has 26 MA's), (10, 62772), (11, 62775), (17, 62835), (20, 62877),

Gene: WhereRU_91 Start: 67722, Stop: 68042, Start Num: 4

Candidate Starts for WhereRU_91:

(Start: 4 @67722 has 66 MA's), (11, 67842), (17, 67902), (21, 67980),

Gene: Wipeout_95 Start: 68704, Stop: 69024, Start Num: 4

Candidate Starts for Wipeout_95:

(Start: 4 @68704 has 66 MA's), (10, 68821), (21, 68962),

Gene: Wofford_96 Start: 68620, Stop: 68946, Start Num: 4

Candidate Starts for Wofford_96:

(Start: 4 @68620 has 66 MA's), (9, 68710), (14, 68761), (17, 68806), (24, 68905),

Gene: Yaboi_98 Start: 68282, Stop: 68602, Start Num: 4

Candidate Starts for Yaboi_98:

(Start: 4 @68282 has 66 MA's), (21, 68540),