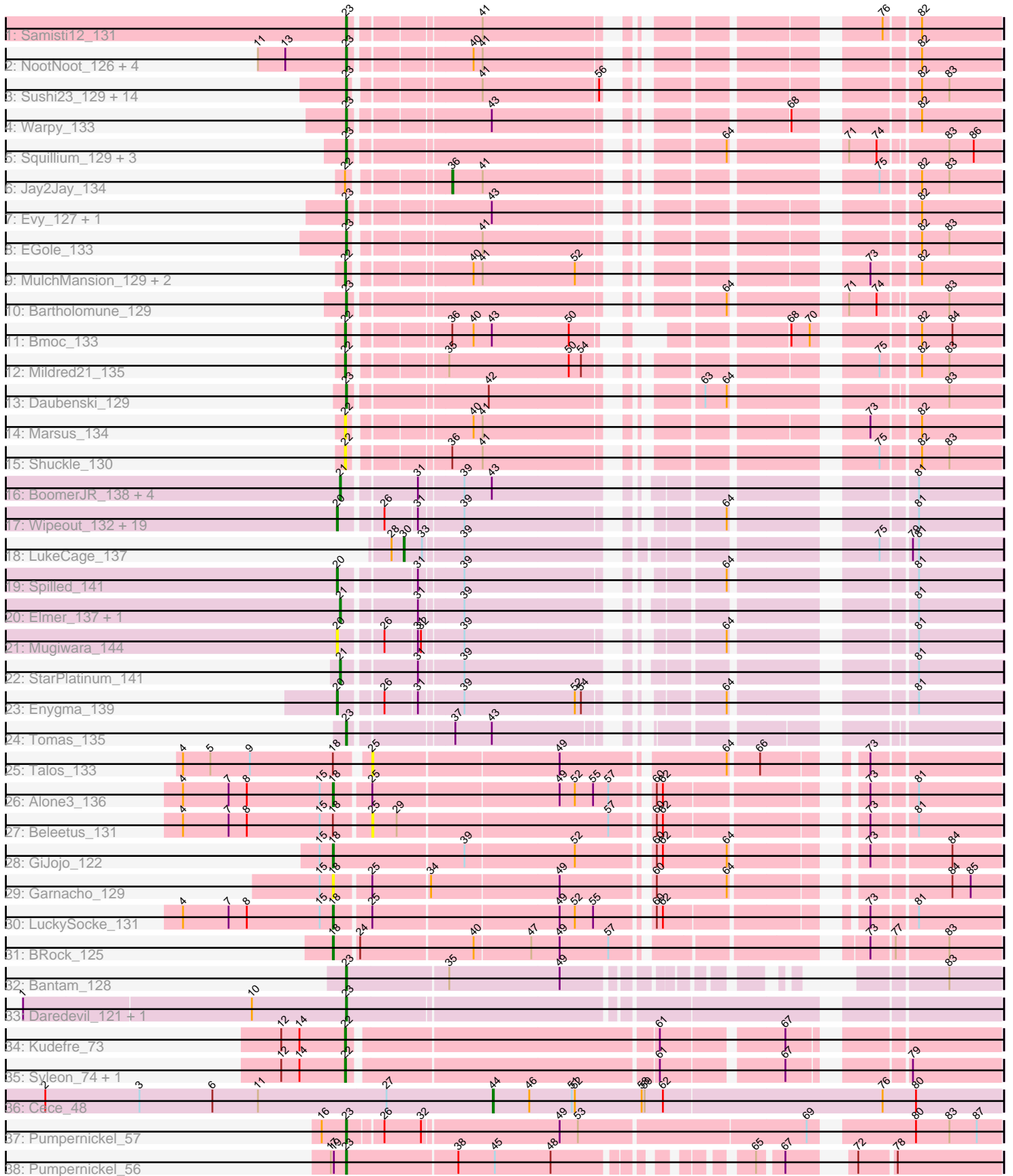


Pham 208550



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 208550 Report

This analysis was run 02/22/25 on database version 588.

Pham number 208550 has 88 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Samisti12_131
- Track 2 : NootNoot_126, Persimmon_129, WhereRU_128, Braelyn_130, Navo_127
- Track 3 : Sushi23_129, Watermoore_129, Tribute_129, Peebs_128, PacManQ_129, Leo04_131, HangryHippo_129, Cross_130, Lululemon_129, Larnav_130, Pepperwood_129, BlueOtter_129, Teutsch_129, Scheme_131, Cursive_128
- Track 4 : Warpy_133
- Track 5 : Squillium_129, Paradiddles_125, Liandry_129, PinkiePie_126
- Track 6 : Jay2Jay_134
- Track 7 : Evy_127, Targaryen_130
- Track 8 : EGole_133
- Track 9 : MulchMansion_129, Angela_130, LilMartin_129
- Track 10 : Bartholomune_129
- Track 11 : Bmoc_133
- Track 12 : Mildred21_135
- Track 13 : Daubenski_129
- Track 14 : Marsus_134
- Track 15 : Shuckle_130
- Track 16 : BoomerJR_138, Genie2_138, Stanimal_136, Yaboi_137, Sollertia_137
- Track 17 : Wipeout_132, TomSawyer_139, Amabiko_139, CeilingFan_138, Spelly_140, Battuta_137, Bordeaux_137, Jollison_137, MindFlayer_134, PumpkinSpice_140, Birchlyn_137, SaltySpittoon_138, JimJam_141, IchabodCrane_133, Karimac_137, Gibbi_144, Quaran19_138, Starbow_136, Rikishi_142, KentuckyRacer_140
- Track 18 : LukeCage_137
- Track 19 : Spilled_141
- Track 20 : Elmer_137, Wofford_133
- Track 21 : Mugiwara_144
- Track 22 : StarPlatinum_141
- Track 23 : Enygma_139
- Track 24 : Tomas_135
- Track 25 : Talos_133
- Track 26 : Alone3_136
- Track 27 : Beleetus_131
- Track 28 : GiJojo_122
- Track 29 : Garnacho_129
- Track 30 : LuckySocke_131
- Track 31 : BRock_125

- Track 32 : Bantam_128
- Track 33 : Daredevil_121, Towmatter_122
- Track 34 : Kudefre_73
- Track 35 : Syleon_74, Sephiroth_72
- Track 36 : Cece_48
- Track 37 : Pumpernickel_57
- Track 38 : Pumpernickel_56

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

The start number called the most often in the published annotations is 23, it was called in 35 of the 78 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bantam_128, Bartholomune_129, BlueOtter_129, Braelyn_130, Cross_130, Cursive_128, Daredevil_121, Daubenski_129, EGole_133, Evy_127, HangryHippo_129, Larnav_130, Leo04_131, Liandry_129, Lululemon_129, Navo_127, NootNoot_126, PacManQ_129, Paradiddles_125, Peebs_128, Pepperwood_129, Persimmon_129, PinkiePie_126, Pumpernickel_56, Pumpernickel_57, Samisti12_131, Scheme_131, Squillium_129, Sushi23_129, Targaryen_130, Teutsch_129, Tomas_135, Towmatter_122, Tribute_129, Warpy_133, Watermoore_129, WhereRU_128,

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

-

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

- Alone3_136, Amabiko_139, Angela_130, BRock_125, Battuta_137, Beleetus_131, Birchlyn_137, Bmoc_133, BoomerJR_138, Bordeaux_137, Cece_48, CeilingFan_138, Elmer_137, Enygma_139, Garnacho_129, Genie2_138, GiJojo_122, Gibbi_144, IchabodCrane_133, Jay2Jay_134, JimJam_141, Jollison_137, Karimac_137, KentuckyRacer_140, Kudefre_73, LilMartin_129, LuckySocke_131, LukeCage_137, Marsus_134, Mildred21_135, MindFlayer_134, Mugiwara_144, MulchMansion_129, PumpkinSpice_140, Quarant19_138, Rikishi_142, SaltySpittoon_138, Sephiroth_72, Shuckle_130, Sollertia_137, Spelly_140, Spilled_141, Stanimal_136, StarPlatinum_141, Starbow_136, Syleon_74, Talos_133, TomSawyer_139, Wipeout_132, Wofford_133, Yaboi_137,

Summary by start number:

Start 18:

- Found in 7 of 88 (8.0%) of genes in pham
- Manual Annotations of this start: 4 of 78
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Alone3_136 (BS), BRock_125 (BS), Garnacho_129 (BS), GiJojo_122 (BS), LuckySocke_131 (BS),

Start 20:

- Found in 23 of 88 (26.1%) of genes in pham
- Manual Annotations of this start: 20 of 78

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amabiko_139 (BE2), Battuta_137 (BE2), Birchlyn_137 (BE2), Bordeaux_137 (BE2), CeilingFan_138 (BE2), Enygma_139 (BE2), Gibbi_144 (BE2), IchabodCrane_133 (BE2), JimJam_141 (BE2), Jollison_137 (BE2), Karimac_137 (BE2), KentuckyRacer_140 (BE2), MindFlayer_134 (BE2), Mugiwara_144 (BE2), PumpkinSpice_140 (BE2), Quaran19_138 (BE2), Rikishi_142 (BE2), SaltySpittoon_138 (BE2), Spelly_140 (BE2), Spilled_141 (BE2), Starbow_136 (BE2), TomSawyer_139 (BE2), Wipeout_132 (BE2),

Start 21:

- Found in 8 of 88 (9.1%) of genes in pham
- Manual Annotations of this start: 8 of 78
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoomerJR_138 (BE2), Elmer_137 (BE2), Genie2_138 (BE2), Sollertia_137 (BE2), Stanimal_136 (BE2), StarPlatinum_141 (BE2), Wofford_133 (BE2), Yaboi_137 (BE2),

Start 22:

- Found in 11 of 88 (12.5%) of genes in pham
- Manual Annotations of this start: 8 of 78
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Angela_130 (BE1), Bmoc_133 (BE1), Kudrefre_73 (DU1), LilMartin_129 (BE1), Marsus_134 (BE1), Mildred21_135 (BE1), MulchMansion_129 (BE1), Sephiroth_72 (DU1), Shuckle_130 (BE1), Syleon_74 (DU1),

Start 23:

- Found in 37 of 88 (42.0%) of genes in pham
- Manual Annotations of this start: 35 of 78
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam_128 (DL), Bartholomune_129 (BE1), BlueOtter_129 (BE1), Braelyn_130 (BE1), Cross_130 (BE1), Cursive_128 (BE1), Daredevil_121 (DL), Daubenski_129 (BE1), EGole_133 (BE1), Evy_127 (BE1), HangryHippo_129 (BE1), Larnav_130 (BE1), Leo04_131 (BE1), Liandry_129 (BE1), Lululemon_129 (BE1), Navo_127 (BE1), NootNoot_126 (BE1), PacManQ_129 (BE1), Paradiddles_125 (BE1), Peebs_128 (BE1), Pepperwood_129 (BE1), Persimmon_129 (BE1), PinkiePie_126 (BE1), Pumpernickel_56 (GD4), Pumpernickel_57 (GD4), Samisti12_131 (BE1), Scheme_131 (BE1), Squillium_129 (BE1), Sushi23_129 (BE1), Targaryen_130 (BE1), Teutsch_129 (BE1), Tomas_135 (BE2), Towmatter_122 (DL), Tribute_129 (BE1), Warpy_133 (BE1), Watermoore_129 (BE1), WhereRU_128 (BE1),

Start 25:

- Found in 5 of 88 (5.7%) of genes in pham
- No Manual Annotations of this start.
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Beleetus_131 (BS), Talos_133 (BS),

Start 30:

- Found in 1 of 88 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 78
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LukeCage_137 (BE2),

Start 36:

- Found in 3 of 88 (3.4%) of genes in pham
- Manual Annotations of this start: 1 of 78
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Jay2Jay_134 (BE1),

Start 44:

- Found in 1 of 88 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 78
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cece_48 (GD3),

Summary by clusters:

There are 7 clusters represented in this pham: DL, GD3, GD4, BS, BE2, DU1, BE1,

Info for manual annotations of cluster BE1:

- Start number 22 was manually annotated 5 times for cluster BE1.
- Start number 23 was manually annotated 30 times for cluster BE1.
- Start number 36 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 20 was manually annotated 20 times for cluster BE2.
- Start number 21 was manually annotated 8 times for cluster BE2.
- Start number 23 was manually annotated 1 time for cluster BE2.
- Start number 30 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BS:

- Start number 18 was manually annotated 4 times for cluster BS.

Info for manual annotations of cluster DL:

- Start number 23 was manually annotated 2 times for cluster DL.

Info for manual annotations of cluster DU1:

- Start number 22 was manually annotated 3 times for cluster DU1.

Info for manual annotations of cluster GD3:

- Start number 44 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 23 was manually annotated 2 times for cluster GD4.

Gene Information:

Gene: Alone3_136 Start: 72885, Stop: 73457, Start Num: 18

Candidate Starts for Alone3_136:

(4, 72738), (7, 72783), (8, 72801), (15, 72873), (Start: 18 @72885 has 4 MA's), (25, 72918), (49, 73095), (52, 73110), (55, 73128), (57, 73143), (60, 73173), (62, 73179), (73, 73338), (81, 73377),

Gene: Amabiko_139 Start: 84183, Stop: 84722, Start Num: 20

Candidate Starts for Amabiko_139:

(Start: 20 @84183 has 20 MA's), (26, 84219), (31, 84249), (39, 84288), (64, 84492), (81, 84639),

Gene: Angela_130 Start: 82931, Stop: 83455, Start Num: 22

Candidate Starts for Angela_130:

(Start: 22 @82931 has 8 MA's), (40, 83033), (41, 83042), (52, 83132), (73, 83336), (82, 83378),

Gene: BRock_125 Start: 67431, Stop: 68009, Start Num: 18

Candidate Starts for BRock_125:

(Start: 18 @67431 has 4 MA's), (24, 67452), (40, 67560), (47, 67614), (49, 67641), (57, 67689), (73, 67890), (77, 67911), (83, 67959),

Gene: Bantam_128 Start: 76459, Stop: 76956, Start Num: 23

Candidate Starts for Bantam_128:

(Start: 23 @76459 has 35 MA's), (35, 76555), (49, 76663), (83, 76906),

Gene: Bartholomune_129 Start: 82729, Stop: 83259, Start Num: 23

Candidate Starts for Bartholomune_129:

(Start: 23 @82729 has 35 MA's), (64, 83035), (71, 83122), (74, 83149), (83, 83209),

Gene: Battuta_137 Start: 84156, Stop: 84695, Start Num: 20

Candidate Starts for Battuta_137:

(Start: 20 @84156 has 20 MA's), (26, 84192), (31, 84222), (39, 84261), (64, 84465), (81, 84612),

Gene: Beleetus_131 Start: 70504, Stop: 71043, Start Num: 25

Candidate Starts for Beleetus_131:

(4, 70324), (7, 70369), (8, 70387), (15, 70459), (Start: 18 @70471 has 4 MA's), (25, 70504), (29, 70528), (57, 70729), (60, 70759), (62, 70765), (73, 70924), (81, 70963),

Gene: Birchlyn_137 Start: 82043, Stop: 82582, Start Num: 20

Candidate Starts for Birchlyn_137:

(Start: 20 @82043 has 20 MA's), (26, 82079), (31, 82109), (39, 82148), (64, 82352), (81, 82499),

Gene: BlueOtter_129 Start: 84968, Stop: 85492, Start Num: 23

Candidate Starts for BlueOtter_129:

(Start: 23 @84968 has 35 MA's), (41, 85079), (56, 85190), (82, 85415), (83, 85442),

Gene: Bmoc_133 Start: 83226, Stop: 83732, Start Num: 22

Candidate Starts for Bmoc_133:

(Start: 22 @83226 has 8 MA's), (Start: 36 @83307 has 1 MA's), (40, 83328), (43, 83346), (50, 83421), (68, 83559), (70, 83577), (82, 83655), (84, 83685),

Gene: BoomerJR_138 Start: 84486, Stop: 85031, Start Num: 21

Candidate Starts for BoomerJR_138:

(Start: 21 @84486 has 8 MA's), (31, 84552), (39, 84591), (43, 84618), (81, 84948),

Gene: Bordeaux_137 Start: 84311, Stop: 84850, Start Num: 20

Candidate Starts for Bordeaux_137:

(Start: 20 @84311 has 20 MA's), (26, 84347), (31, 84377), (39, 84416), (64, 84620), (81, 84767),

Gene: Braelyn_130 Start: 83603, Stop: 84130, Start Num: 23

Candidate Starts for Braelyn_130:

(11, 83516), (13, 83543), (Start: 23 @83603 has 35 MA's), (40, 83708), (41, 83717), (82, 84053),

Gene: Cece_48 Start: 19112, Stop: 18615, Start Num: 44
Candidate Starts for Cece_48:
(2, 19553), (3, 19460), (6, 19388), (11, 19343), (27, 19217), (Start: 44 @19112 has 1 MA's), (46, 19076), (51, 19034), (52, 19031), (58, 18965), (59, 18962), (62, 18944), (76, 18731), (80, 18698),

Gene: CeilingFan_138 Start: 84074, Stop: 84613, Start Num: 20
Candidate Starts for CeilingFan_138:
(Start: 20 @84074 has 20 MA's), (26, 84110), (31, 84140), (39, 84179), (64, 84383), (81, 84530),

Gene: Cross_130 Start: 84969, Stop: 85493, Start Num: 23
Candidate Starts for Cross_130:
(Start: 23 @84969 has 35 MA's), (41, 85080), (56, 85191), (82, 85416), (83, 85443),

Gene: Cursive_128 Start: 83178, Stop: 83702, Start Num: 23
Candidate Starts for Cursive_128:
(Start: 23 @83178 has 35 MA's), (41, 83289), (56, 83400), (82, 83625), (83, 83652),

Gene: Daredevil_121 Start: 73097, Stop: 73678, Start Num: 23
Candidate Starts for Daredevil_121:
(1, 72782), (10, 73004), (Start: 23 @73097 has 35 MA's),

Gene: Daubenski_129 Start: 84407, Stop: 84937, Start Num: 23
Candidate Starts for Daubenski_129:
(Start: 23 @84407 has 35 MA's), (42, 84530), (63, 84692), (64, 84713), (83, 84887),

Gene: EGole_133 Start: 85996, Stop: 86520, Start Num: 23
Candidate Starts for EGole_133:
(Start: 23 @85996 has 35 MA's), (41, 86107), (82, 86443), (83, 86470),

Gene: Elmer_137 Start: 85512, Stop: 86057, Start Num: 21
Candidate Starts for Elmer_137:
(Start: 21 @85512 has 8 MA's), (31, 85578), (39, 85617), (81, 85974),

Gene: Enygma_139 Start: 85995, Stop: 86534, Start Num: 20
Candidate Starts for Enygma_139:
(Start: 20 @85995 has 20 MA's), (26, 86031), (31, 86061), (39, 86100), (52, 86208), (54, 86214), (64, 86304), (81, 86451),

Gene: Evy_127 Start: 84722, Stop: 85249, Start Num: 23
Candidate Starts for Evy_127:
(Start: 23 @84722 has 35 MA's), (43, 84845), (82, 85172),

Gene: Garnacho_129 Start: 70522, Stop: 71097, Start Num: 18
Candidate Starts for Garnacho_129:
(15, 70510), (Start: 18 @70522 has 4 MA's), (25, 70555), (34, 70609), (49, 70732), (60, 70810), (64, 70879), (84, 71050), (85, 71068),

Gene: Genie2_138 Start: 84600, Stop: 85145, Start Num: 21
Candidate Starts for Genie2_138:
(Start: 21 @84600 has 8 MA's), (31, 84666), (39, 84705), (43, 84732), (81, 85062),

Gene: GiJojo_122 Start: 71916, Stop: 72497, Start Num: 18
Candidate Starts for GiJojo_122:

(15, 71904), (Start: 18 @71916 has 4 MA's), (39, 72042), (52, 72147), (60, 72210), (62, 72216), (64, 72279), (73, 72378), (84, 72450),

Gene: Gibbi_144 Start: 84295, Stop: 84834, Start Num: 20

Candidate Starts for Gibbi_144:

(Start: 20 @84295 has 20 MA's), (26, 84331), (31, 84361), (39, 84400), (64, 84604), (81, 84751),

Gene: HangryHippo_129 Start: 84968, Stop: 85492, Start Num: 23

Candidate Starts for HangryHippo_129:

(Start: 23 @84968 has 35 MA's), (41, 85079), (56, 85190), (82, 85415), (83, 85442),

Gene: IchabodCrane_133 Start: 83884, Stop: 84423, Start Num: 20

Candidate Starts for IchabodCrane_133:

(Start: 20 @83884 has 20 MA's), (26, 83920), (31, 83950), (39, 83989), (64, 84193), (81, 84340),

Gene: Jay2Jay_134 Start: 85640, Stop: 86086, Start Num: 36

Candidate Starts for Jay2Jay_134:

(Start: 22 @85559 has 8 MA's), (Start: 36 @85640 has 1 MA's), (41, 85670), (75, 85976), (82, 86009), (83, 86036),

Gene: JimJam_141 Start: 84705, Stop: 85244, Start Num: 20

Candidate Starts for JimJam_141:

(Start: 20 @84705 has 20 MA's), (26, 84741), (31, 84771), (39, 84810), (64, 85014), (81, 85161),

Gene: Jollison_137 Start: 84139, Stop: 84678, Start Num: 20

Candidate Starts for Jollison_137:

(Start: 20 @84139 has 20 MA's), (26, 84175), (31, 84205), (39, 84244), (64, 84448), (81, 84595),

Gene: Karimac_137 Start: 84422, Stop: 84961, Start Num: 20

Candidate Starts for Karimac_137:

(Start: 20 @84422 has 20 MA's), (26, 84458), (31, 84488), (39, 84527), (64, 84731), (81, 84878),

Gene: KentuckyRacer_140 Start: 84570, Stop: 85109, Start Num: 20

Candidate Starts for KentuckyRacer_140:

(Start: 20 @84570 has 20 MA's), (26, 84606), (31, 84636), (39, 84675), (64, 84879), (81, 85026),

Gene: Kudfre_73 Start: 45296, Stop: 45865, Start Num: 22

Candidate Starts for Kudfre_73:

(12, 45233), (14, 45251), (Start: 22 @45296 has 8 MA's), (61, 45581), (67, 45689),

Gene: Larnav_130 Start: 84952, Stop: 85476, Start Num: 23

Candidate Starts for Larnav_130:

(Start: 23 @84952 has 35 MA's), (41, 85063), (56, 85174), (82, 85399), (83, 85426),

Gene: Leo04_131 Start: 85468, Stop: 85992, Start Num: 23

Candidate Starts for Leo04_131:

(Start: 23 @85468 has 35 MA's), (41, 85579), (56, 85690), (82, 85915), (83, 85942),

Gene: Liandry_129 Start: 83472, Stop: 84002, Start Num: 23

Candidate Starts for Liandry_129:

(Start: 23 @83472 has 35 MA's), (64, 83778), (71, 83865), (74, 83892), (83, 83952), (86, 83976),

Gene: LilMartin_129 Start: 82833, Stop: 83357, Start Num: 22

Candidate Starts for LilMartin_129:

(Start: 22 @82833 has 8 MA's), (40, 82935), (41, 82944), (52, 83034), (73, 83238), (82, 83280),

Gene: LuckySocke_131 Start: 70798, Stop: 71370, Start Num: 18

Candidate Starts for LuckySocke_131:

(4, 70651), (7, 70696), (8, 70714), (15, 70786), (Start: 18 @70798 has 4 MA's), (25, 70831), (49, 71008), (52, 71023), (55, 71041), (60, 71086), (62, 71092), (73, 71251), (81, 71290),

Gene: LukeCage_137 Start: 85251, Stop: 85751, Start Num: 30

Candidate Starts for LukeCage_137:

(28, 85239), (Start: 30 @85251 has 1 MA's), (33, 85269), (39, 85305), (75, 85638), (79, 85662), (81, 85668),

Gene: Lululemon_129 Start: 84349, Stop: 84873, Start Num: 23

Candidate Starts for Lululemon_129:

(Start: 23 @84349 has 35 MA's), (41, 84460), (56, 84571), (82, 84796), (83, 84823),

Gene: Marsus_134 Start: 82926, Stop: 83450, Start Num: 22

Candidate Starts for Marsus_134:

(Start: 22 @82926 has 8 MA's), (40, 83028), (41, 83037), (73, 83331), (82, 83373),

Gene: Mildred21_135 Start: 83403, Stop: 83927, Start Num: 22

Candidate Starts for Mildred21_135:

(Start: 22 @83403 has 8 MA's), (35, 83481), (50, 83598), (54, 83610), (75, 83817), (82, 83850), (83, 83877),

Gene: MindFlayer_134 Start: 83791, Stop: 84330, Start Num: 20

Candidate Starts for MindFlayer_134:

(Start: 20 @83791 has 20 MA's), (26, 83827), (31, 83857), (39, 83896), (64, 84100), (81, 84247),

Gene: Mugiwara_144 Start: 85032, Stop: 85571, Start Num: 20

Candidate Starts for Mugiwara_144:

(Start: 20 @85032 has 20 MA's), (26, 85068), (31, 85098), (32, 85101), (39, 85137), (64, 85341), (81, 85488),

Gene: MulchMansion_129 Start: 82879, Stop: 83403, Start Num: 22

Candidate Starts for MulchMansion_129:

(Start: 22 @82879 has 8 MA's), (40, 82981), (41, 82990), (52, 83080), (73, 83284), (82, 83326),

Gene: Navo_127 Start: 83265, Stop: 83792, Start Num: 23

Candidate Starts for Navo_127:

(11, 83178), (13, 83205), (Start: 23 @83265 has 35 MA's), (40, 83370), (41, 83379), (82, 83715),

Gene: NootNoot_126 Start: 82374, Stop: 82901, Start Num: 23

Candidate Starts for NootNoot_126:

(11, 82287), (13, 82314), (Start: 23 @82374 has 35 MA's), (40, 82479), (41, 82488), (82, 82824),

Gene: PacManQ_129 Start: 84349, Stop: 84873, Start Num: 23

Candidate Starts for PacManQ_129:

(Start: 23 @84349 has 35 MA's), (41, 84460), (56, 84571), (82, 84796), (83, 84823),

Gene: Paradiddles_125 Start: 84669, Stop: 85199, Start Num: 23

Candidate Starts for Paradiddles_125:

(Start: 23 @84669 has 35 MA's), (64, 84975), (71, 85062), (74, 85089), (83, 85149), (86, 85173),

Gene: Peebs_128 Start: 84765, Stop: 85289, Start Num: 23

Candidate Starts for Peebs_128:

(Start: 23 @84765 has 35 MA's), (41, 84876), (56, 84987), (82, 85212), (83, 85239),

Gene: Pepperwood_129 Start: 84895, Stop: 85419, Start Num: 23

Candidate Starts for Pepperwood_129:

(Start: 23 @84895 has 35 MA's), (41, 85006), (56, 85117), (82, 85342), (83, 85369),

Gene: Persimmon_129 Start: 82308, Stop: 82835, Start Num: 23

Candidate Starts for Persimmon_129:

(11, 82221), (13, 82248), (Start: 23 @82308 has 35 MA's), (40, 82413), (41, 82422), (82, 82758),

Gene: PinkiePie_126 Start: 83472, Stop: 84002, Start Num: 23

Candidate Starts for PinkiePie_126:

(Start: 23 @83472 has 35 MA's), (64, 83778), (71, 83865), (74, 83892), (83, 83952), (86, 83976),

Gene: Pumpernickel_57 Start: 22003, Stop: 21407, Start Num: 23

Candidate Starts for Pumpernickel_57:

(16, 22027), (Start: 23 @22003 has 35 MA's), (26, 21973), (32, 21937), (49, 21808), (53, 21790), (69, 21574), (80, 21490), (83, 21457), (87, 21430),

Gene: Pumpernickel_56 Start: 21420, Stop: 20887, Start Num: 23

Candidate Starts for Pumpernickel_56:

(17, 21435), (19, 21432), (Start: 23 @21420 has 35 MA's), (38, 21315), (45, 21279), (48, 21225), (65, 21084), (67, 21063), (72, 21021), (78, 20988),

Gene: PumpkinSpice_140 Start: 84747, Stop: 85286, Start Num: 20

Candidate Starts for PumpkinSpice_140:

(Start: 20 @84747 has 20 MA's), (26, 84783), (31, 84813), (39, 84852), (64, 85056), (81, 85203),

Gene: Quaran19_138 Start: 84173, Stop: 84712, Start Num: 20

Candidate Starts for Quaran19_138:

(Start: 20 @84173 has 20 MA's), (26, 84209), (31, 84239), (39, 84278), (64, 84482), (81, 84629),

Gene: Rikishi_142 Start: 84089, Stop: 84628, Start Num: 20

Candidate Starts for Rikishi_142:

(Start: 20 @84089 has 20 MA's), (26, 84125), (31, 84155), (39, 84194), (64, 84398), (81, 84545),

Gene: SaltySpittoon_138 Start: 84186, Stop: 84725, Start Num: 20

Candidate Starts for SaltySpittoon_138:

(Start: 20 @84186 has 20 MA's), (26, 84222), (31, 84252), (39, 84291), (64, 84495), (81, 84642),

Gene: Samisti12_131 Start: 86144, Stop: 86671, Start Num: 23

Candidate Starts for Samisti12_131:

(Start: 23 @86144 has 35 MA's), (41, 86258), (76, 86564), (82, 86594),

Gene: Scheme_131 Start: 85550, Stop: 86074, Start Num: 23

Candidate Starts for Scheme_131:

(Start: 23 @85550 has 35 MA's), (41, 85661), (56, 85772), (82, 85997), (83, 86024),

Gene: Sephiroth_72 Start: 45468, Stop: 46037, Start Num: 22

Candidate Starts for Sephiroth_72:
(12, 45405), (14, 45423), (Start: 22 @45468 has 8 MA's), (61, 45753), (67, 45861), (79, 45951),

Gene: Shuckle_130 Start: 83998, Stop: 84525, Start Num: 22
Candidate Starts for Shuckle_130:
(Start: 22 @83998 has 8 MA's), (Start: 36 @84079 has 1 MA's), (41, 84109), (75, 84415), (82, 84448),
(83, 84475),

Gene: Sollertia_137 Start: 84600, Stop: 85145, Start Num: 21
Candidate Starts for Sollertia_137:
(Start: 21 @84600 has 8 MA's), (31, 84666), (39, 84705), (43, 84732), (81, 85062),

Gene: Spelly_140 Start: 84138, Stop: 84677, Start Num: 20
Candidate Starts for Spelly_140:
(Start: 20 @84138 has 20 MA's), (26, 84174), (31, 84204), (39, 84243), (64, 84447), (81, 84594),

Gene: Spilled_141 Start: 84256, Stop: 84795, Start Num: 20
Candidate Starts for Spilled_141:
(Start: 20 @84256 has 20 MA's), (31, 84322), (39, 84361), (64, 84565), (81, 84712),

Gene: Squillium_129 Start: 83474, Stop: 84004, Start Num: 23
Candidate Starts for Squillium_129:
(Start: 23 @83474 has 35 MA's), (64, 83780), (71, 83867), (74, 83894), (83, 83954), (86, 83978),

Gene: Stanimal_136 Start: 84489, Stop: 85034, Start Num: 21
Candidate Starts for Stanimal_136:
(Start: 21 @84489 has 8 MA's), (31, 84555), (39, 84594), (43, 84621), (81, 84951),

Gene: StarPlatinum_141 Start: 85649, Stop: 86194, Start Num: 21
Candidate Starts for StarPlatinum_141:
(Start: 21 @85649 has 8 MA's), (31, 85715), (39, 85754), (81, 86111),

Gene: Starbow_136 Start: 84158, Stop: 84697, Start Num: 20
Candidate Starts for Starbow_136:
(Start: 20 @84158 has 20 MA's), (26, 84194), (31, 84224), (39, 84263), (64, 84467), (81, 84614),

Gene: Sushi23_129 Start: 85121, Stop: 85645, Start Num: 23
Candidate Starts for Sushi23_129:
(Start: 23 @85121 has 35 MA's), (41, 85232), (56, 85343), (82, 85568), (83, 85595),

Gene: Syleon_74 Start: 45406, Stop: 45975, Start Num: 22
Candidate Starts for Syleon_74:
(12, 45343), (14, 45361), (Start: 22 @45406 has 8 MA's), (61, 45691), (67, 45799), (79, 45889),

Gene: Talos_133 Start: 71066, Stop: 71608, Start Num: 25
Candidate Starts for Talos_133:
(4, 70892), (5, 70919), (9, 70958), (Start: 18 @71039 has 4 MA's), (25, 71066), (49, 71243), (64,
71390), (66, 71417), (73, 71489),

Gene: Targaryen_130 Start: 85702, Stop: 86229, Start Num: 23
Candidate Starts for Targaryen_130:
(Start: 23 @85702 has 35 MA's), (43, 85825), (82, 86152),

Gene: Teutsch_129 Start: 85326, Stop: 85850, Start Num: 23

Candidate Starts for Teutsch_129:

(Start: 23 @85326 has 35 MA's), (41, 85437), (56, 85548), (82, 85773), (83, 85800),

Gene: TomSawyer_139 Start: 84204, Stop: 84743, Start Num: 20

Candidate Starts for TomSawyer_139:

(Start: 20 @84204 has 20 MA's), (26, 84240), (31, 84270), (39, 84309), (64, 84513), (81, 84660),

Gene: Tomas_135 Start: 86321, Stop: 86842, Start Num: 23

Candidate Starts for Tomas_135:

(Start: 23 @86321 has 35 MA's), (37, 86411), (43, 86447),

Gene: Towmatter_122 Start: 73178, Stop: 73759, Start Num: 23

Candidate Starts for Towmatter_122:

(1, 72863), (10, 73085), (Start: 23 @73178 has 35 MA's),

Gene: Tribute_129 Start: 85313, Stop: 85837, Start Num: 23

Candidate Starts for Tribute_129:

(Start: 23 @85313 has 35 MA's), (41, 85424), (56, 85535), (82, 85760), (83, 85787),

Gene: Warpy_133 Start: 85214, Stop: 85741, Start Num: 23

Candidate Starts for Warpy_133:

(Start: 23 @85214 has 35 MA's), (43, 85337), (68, 85568), (82, 85664),

Gene: Watermoore_129 Start: 85540, Stop: 86064, Start Num: 23

Candidate Starts for Watermoore_129:

(Start: 23 @85540 has 35 MA's), (41, 85651), (56, 85762), (82, 85987), (83, 86014),

Gene: WhereRU_128 Start: 83060, Stop: 83587, Start Num: 23

Candidate Starts for WhereRU_128:

(11, 82973), (13, 83000), (Start: 23 @83060 has 35 MA's), (40, 83165), (41, 83174), (82, 83510),

Gene: Wipeout_132 Start: 84528, Stop: 85067, Start Num: 20

Candidate Starts for Wipeout_132:

(Start: 20 @84528 has 20 MA's), (26, 84564), (31, 84594), (39, 84633), (64, 84837), (81, 84984),

Gene: Wofford_133 Start: 85477, Stop: 86022, Start Num: 21

Candidate Starts for Wofford_133:

(Start: 21 @85477 has 8 MA's), (31, 85543), (39, 85582), (81, 85939),

Gene: Yaboi_137 Start: 84062, Stop: 84607, Start Num: 21

Candidate Starts for Yaboi_137:

(Start: 21 @84062 has 8 MA's), (31, 84128), (39, 84167), (43, 84194), (81, 84524),