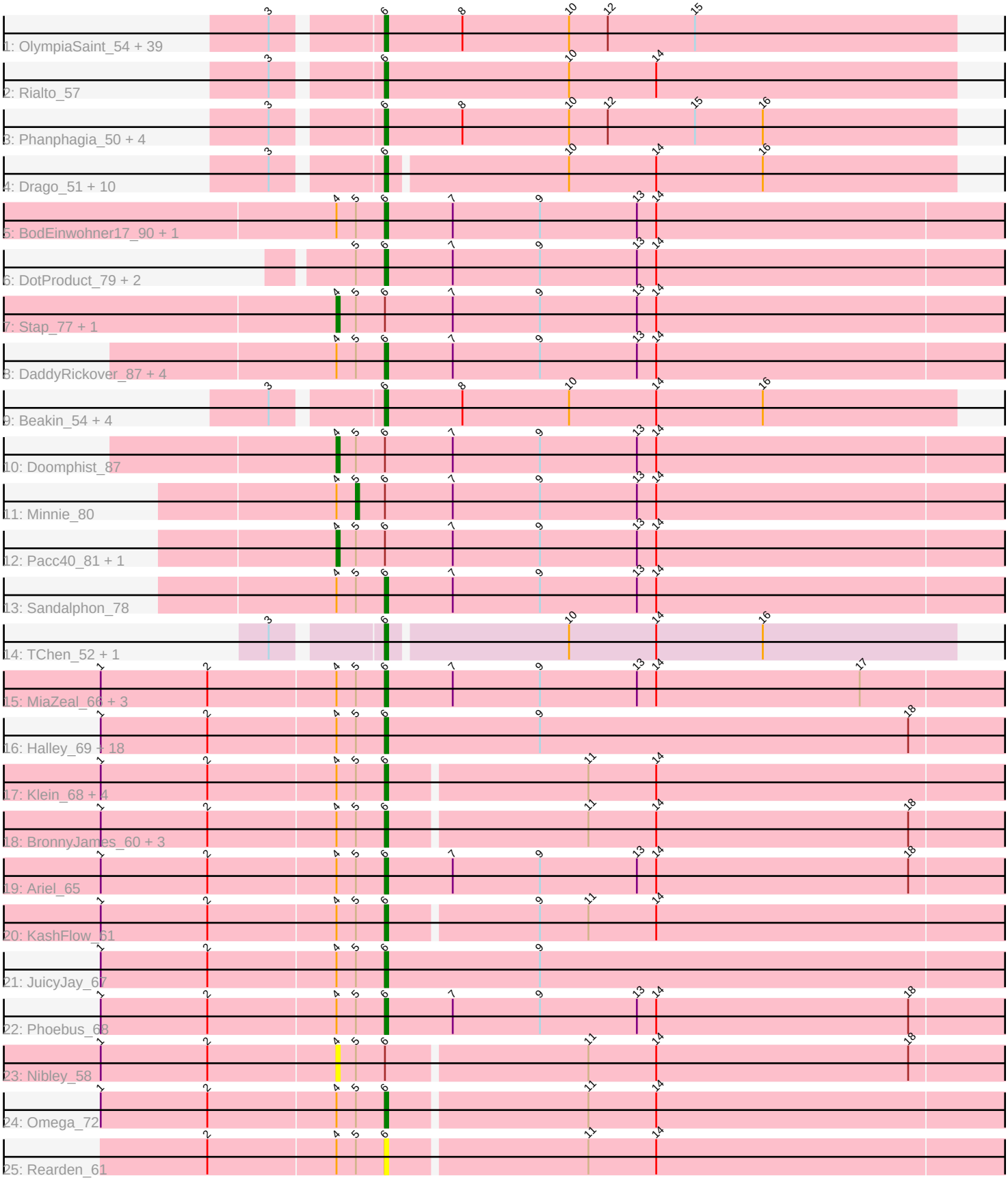
Pham 347403


1: OlympiaSaint_54 + 39
2: Rialto_57
3: Phanphagia_50 + 4
4: Drago_51 + 10
5: BodEinwohner17_90 + 1
6: DotProduct_79 + 2
7: Stap_77 + 1
8: DaddyRickover_87 + 4
9: Beakin_54 + 4
10: Doomphist_87
11: Minnie_80
12: Pacc40_81 + 1
13: Sandalphon_78
14: TChen_52 + 1
15: MiaZeal_66 + 3
16: Halley_69 + 18
17: Klein_68 + 4
18: BronnyJames_60 + 3
19: Ariel_65
20: KashFlow_61
21: JuicyJay_67
22: Phoebus_68
23: Nibley_58
24: Omega_72
25: Rearden_61

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 347403 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347403 has 120 members, 8 are drafts.

Phages represented in each track:
• Track 1 : OlympiaSaint_54, Philus_56, Minnie_57, Alexphander_57, Hades_53, Sarma624_50, Mattes_56, Jabbawokkie_66, Eradicator_45, Cornie_47, Kingsley_49, Velveteen_47, Spartacus_54, WillSterrel_53, DRBy19_56, Gorge_57, Zapner_65, BigPhil_48, SuperGrey_56, JalFarm20_64, Fruitloop_50, Bubbles123_50, IrishSherpFalk_53, Wachhund_54, Brookers_49, Flathead_52, BlueCrab_50, Brushbloom_54, Cerasum_48, Saal_55, Coco12_51, James_56, Guppsters_53, ByChance_44, SilverChicken_61, Spikelee_59, Soul22_56, Cheesepuff_58, PhlipPhlop_52, EleanorGeorge_51
• Track 2 : Rialto_57
• Track 3 : Phanphagia_50, Shauna1_51, Bipolar_52, Jennelsea_51, BobaPhett_56
• Track 4 : Drago_51, Llij_49, Estave1_53, Phatniss_51, Girafales_62, Mutaforma13_56, DosHalletts_53, UncleRicky_52, Eish_54, Lucia_52, DirtMcgirt_52
• Track 5 : BodEinwohner17_90, Scottish_82
• Track 6 : DotProduct_79, Hamulus_83, Fruitloop_81
• Track 7 : Stap_77, Empress_82
• Track 8 : DaddyRickover_87, Tootsieroll_79, KingMidas_83, Polka14_88, Poenanya_87
• Track 9 : Beakin_54, KingJulian_52, KristaRAM_55, Hegedechwinu_52, Ovechkin_49
• Track 10 : Doomphist_87
• Track 11 : Minnie_80
• Track 12 : Pacc40_81, BlueCrab_86
• Track 13 : Sandalphon_78
• Track 14 : TChen_52, LunaStella_50
• Track 15 : MiaZeal_66, Squint_66, Courthouse_66, Porcelain_65
• Track 16 : Halley_69, Redno2_65, Schatzie_63, Hughesyang_67, Zelink_66, DmpstrDiver_67, Dove_61, Bombitas_65, Beem_68, ThreeRngTarjay_66, NihilNomen_68, Minerva_74, HokkenD_61, Yeet_66, Dallas_67, Ejimix_68, Odette_67, Lucky2013_66, Superphikiman_66
• Track 17 : Klein_68, LittleE_69, Kalah2_63, Wanda_72, Gonephishing_66
• Track 18 : BronnyJames_60, Hannaconda_64, Nekros_64, Shaboozey_59
• Track 19 : Ariel_65
• Track 20 : KashFlow_61
• Track 21 : JuicyJay_67
• Track 22 : Phoebus_68
• Track 23 : Nibley_58
• Track 24 : Omega_72

• Track 25 : Rearden_61

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

The start number called the most often in the published annotations is 6, it was called in 106 of the 112 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alexphander_57, Ariel_65, Beakin_54, Beem_68, BigPhil_48, Bipolar_52, BlueCrab_50, BobaPhett_56, BodEinwohner17_90, Bombitas_65, BronnyJames_60, Brookers_49, Brushbloom_54, Bubbles123_50, ByChance_44, Cerasum_48, Cheesepuff_58, Coco12_51, Cornie_47, Courthouse_66, DRBy19_56, DaddyRickover_87, Dallas_67, DirtMcgirt_52, DmpstrDiver_67, DosHalletts_53, DotProduct_79, Dove_61, Drago_51, Eish_54, Ejimix_68, EleanorGeorge_51, Eradicator_45, Estave1_53, Flathead_52, Fruitloop_50, Fruitloop_81, Girafales_62, Gonephishing_66, Gorge_57, Guppsters_53, Hades_53, Halley_69, Hamulus_83, Hannaconda_64, Hegedechwinu_52, HokkenD_61, Hughesyang_67, IrishSherpFalk_53, Jabbawokkie_66, JalFarm20_64, James_56, Jennelsea_51, JuicyJay_67, Kalah2_63, KashFlow_61, KingJulian_52, KingMidas_83, Kingsley_49, Klein_68, KristaRAM_55, LittleE_69, Llij_49, Lucia_52, Lucky2013_66, LunaStella_50, Mattes_56, MiaZeal_66, Minerva_74, Minnie_57, Mutaforma13_56, Nekros_64, NihilNomen_68, Odette_67, OlympiaSaint_54, Omega_72, Ovechkin_49, Phanphagia_50, Phatniss_51, Philus_56, PhlipPhlop_52, Phoebus_68, Poenanya_87, Polka14_88, Porcelain_65, Rearden_61, Redno2_65, Rialto_57, Saal_55, Sandalphon_78, Sarma624_50, Schatzie_63, Scottish_82, Shaboozey_59, Shauna1_51, SilverChicken_61, Soul22_56, Spartacus_54, Spikelee_59, Squint_66, SuperGrey_56, Superphikiman_66, TChen_52, ThreeRngTarjay_66, Tootsieroll_79, UncleRicky_52, Velveteen_47, Wachhund_54, Wanda_72, WillSterrel_53, Yeet_66, Zapner_65, Zelink_66,

Genes that have the "Most Annotated" start but do not call it:
• BlueCrab_86, Doomphist_87, Empress_82, Minnie_80, Nibley_58, Pacc40_81, Stap_77,

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

Summary by start number:

Start 4:
• Found in 53 of 120 (44.2%) of genes in pham
• Manual Annotations of this start: 5 of 112
• Called 11.3% of time when present
• Phage (with cluster) where this start called: BlueCrab_86 (F1), Doomphist_87 (F1), Empress_82 (F1), Nibley_58 (J), Pacc40_81 (F1), Stap_77 (F1),

Start 5:
• Found in 56 of 120 (46.7%) of genes in pham
• Manual Annotations of this start: 1 of 112
• Called 1.8% of time when present

• Phage (with cluster) where this start called: Minnie_80 (F1),

Start 6:
• Found in 120 of 120 (100.0%) of genes in pham
• Manual Annotations of this start: 106 of 112
• Called 94.2% of time when present
• Phage (with cluster) where this start called: Alexphander_57 (F1), Ariel_65 (J), Beakin_54 (F1), Beem_68 (J), BigPhil_48 (F1), Bipolar_52 (F1), BlueCrab_50 (F1), BobaPhett_56 (F1), BodEinwohner17_90 (F1), Bombitas_65 (J), BronnyJames_60 (J), Brookers_49 (F1), Brushbloom_54 (F1), Bubbles123_50 (F1), ByChance_44 (F1), Cerasum_48 (F1), Cheesepuff_58 (F1), Coco12_51 (F1), Cornie_47 (F5), Courthouse_66 (J), DRBy19_56 (F1), DaddyRickover_87 (F1), Dallas_67 (J), DirtMcgirt_52 (F1), DmpstrDiver_67 (J), DosHalletts_53 (F1), DotProduct_79 (F1), Dove_61 (J), Drago_51 (F1), Eish_54 (F1), Ejimix_68 (J), EleanorGeorge_51 (F1), Eradicator_45 (F1), Estave1_53 (F1), Flathead_52 (F1), Fruitloop_50 (F1), Fruitloop_81 (F1), Girafales_62 (F1), Gonephishing_66 (J), Gorge_57 (F1), Guppsters_53 (F1), Hades_53 (F1), Halley_69 (J), Hamulus_83 (F1), Hannaconda_64 (J), Hegedechwinu_52 (F1), HokkenD_61 (J), Hughesyang_67 (J), IrishSherpFalk_53 (F1), Jabbawokkie_66 (F2), JalFarm20_64 (F1), James_56 (F1), Jennelsea_51 (F1), JuicyJay_67 (J), Kalah2_63 (J), KashFlow_61 (J), KingJulian_52 (F1), KingMidas_83 (F1), Kingsley_49 (F1), Klein_68 (J), KristaRAM_55 (F1), LittleE_69 (J), Llij_49 (F1), Lucia_52 (F1), Lucky2013_66 (J), LunaStella_50 (F4), Mattes_56 (F1), MiaZeal_66 (J), Minerva_74 (J), Minnie_57 (F1), Mutaforma13_56 (F1), Nekros_64 (J), NihilNomen_68 (J), Odette_67 (J), OlympiaSaint_54 (F1), Omega_72 (J), Ovechkin_49 (F1), Phanphagia_50 (F1), Phatniss_51 (F1), Philus_56 (F1), PhlipPhlop_52 (F1), Phoebus_68 (J), Poenanya_87 (F1), Polka14_88 (F1), Porcelain_65 (J), Rearden_61 (J), Redno2_65 (J), Rialto_57 (F1), Saal_55 (F1), Sandalphon_78 (F1), Sarma624_50 (F1), Schatzie_63 (J), Scottish_82 (F1), Shaboozey_59 (J), Shauna1_51 (F1), SilverChicken_61 (F2), Soul22_56 (F2), Spartacus_54 (F1), Spikelee_59 (F1), Squint_66 (J), SuperGrey_56 (F1), Superphikiman_66 (J), TChen_52 (F4), ThreeRngTarjay_66 (J), Tootsieroll_79 (F1), UncleRicky_52 (F1), Velveteen_47 (F1), Wachhund_54 (F1), Wanda_72 (J), WillSterrel_53 (F1), Yeet_66 (J), Zapner_65 (F2), Zelink_66 (J),

Summary by clusters:

There are 5 clusters represented in this pham: F1, F2, J, F4, F5,

Info for manual annotations of cluster F1:
•Start number 4 was manually annotated 5 times for cluster F1.
•Start number 5 was manually annotated 1 time for cluster F1.
•Start number 6 was manually annotated 68 times for cluster F1.

Info for manual annotations of cluster F2:
•Start number 6 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster F4:
•Start number 6 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster F5:
•Start number 6 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

•Start number 6 was manually annotated 32 times for cluster J.

Gene Information:

Gene: Alexphander_57 Start: 37923, Stop: 38099, Start Num: 6
Candidate Starts for Alexphander_57:
(3, 37893), (Start: 6 @37923 has 106 MA's), (8, 37947), (10, 37980), (12, 37992), (15, 38019),

Gene: Ariel_65 Start: 44534, Stop: 44331, Start Num: 6
Candidate Starts for Ariel_65:
(1, 44621), (2, 44588), (Start: 4 @44549 has 5 MA's), (Start: 5 @44543 has 1 MA's), (Start: 6 @44534 has 106 MA's), (7, 44513), (9, 44486), (13, 44456), (14, 44450), (18, 44372),

Gene: Beakin_54 Start: 36893, Stop: 37069, Start Num: 6
Candidate Starts for Beakin_54:
(3, 36863), (Start: 6 @36893 has 106 MA's), (8, 36917), (10, 36950), (14, 36977), (16, 37010),

Gene: Beem_68 Start: 49335, Stop: 49132, Start Num: 6
Candidate Starts for Beem_68:
(1, 49422), (2, 49389), (Start: 4 @49350 has 5 MA's), (Start: 5 @49344 has 1 MA's), (Start: 6 @49335 has 106 MA's), (9, 49287), (18, 49173),

Gene: BigPhil_48 Start: 33365, Stop: 33541, Start Num: 6
Candidate Starts for BigPhil_48:
(3, 33335), (Start: 6 @33365 has 106 MA's), (8, 33389), (10, 33422), (12, 33434), (15, 33461),

Gene: Bipolar_52 Start: 37865, Stop: 38041, Start Num: 6
Candidate Starts for Bipolar_52:
(3, 37835), (Start: 6 @37865 has 106 MA's), (8, 37889), (10, 37922), (12, 37934), (15, 37961), (16, 37982),

Gene: BlueCrab_50 Start: 36965, Stop: 37141, Start Num: 6
Candidate Starts for BlueCrab_50:
(3, 36935), (Start: 6 @36965 has 106 MA's), (8, 36989), (10, 37022), (12, 37034), (15, 37061),

Gene: BlueCrab_86 Start: 50966, Stop: 51184, Start Num: 4
Candidate Starts for BlueCrab_86:
(Start: 4 @50966 has 5 MA's), (Start: 5 @50972 has 1 MA's), (Start: 6 @50981 has 106 MA's), (7, 51002), (9, 51029), (13, 51059), (14, 51065),

Gene: BobaPhett_56 Start: 39856, Stop: 40032, Start Num: 6
Candidate Starts for BobaPhett_56:
(3, 39826), (Start: 6 @39856 has 106 MA's), (8, 39880), (10, 39913), (12, 39925), (15, 39952), (16, 39973),

Gene: BodEinwohner17_90 Start: 51806, Stop: 52009, Start Num: 6
Candidate Starts for BodEinwohner17_90:
(Start: 4 @51791 has 5 MA's), (Start: 5 @51797 has 1 MA's), (Start: 6 @51806 has 106 MA's), (7, 51827), (9, 51854), (13, 51884), (14, 51890),

Gene: Bombitas_65 Start: 48931, Stop: 48728, Start Num: 6

Candidate Starts for Bombitas_65:
(1, 49018), (2, 48985), (Start: 4 @48946 has 5 MA's), (Start: 5 @48940 has 1 MA's), (Start: 6 @48931 has 106 MA's), (9, 48883), (18, 48769),

Gene: BronnyJames_60 Start: 42978, Stop: 42778, Start Num: 6
Candidate Starts for BronnyJames_60:
(1, 43065), (2, 43032), (Start: 4 @42993 has 5 MA's), (Start: 5 @42987 has 1 MA's), (Start: 6 @42978 has 106 MA's), (11, 42918), (14, 42897), (18, 42819),

Gene: Brookers_49 Start: 36316, Stop: 36492, Start Num: 6
Candidate Starts for Brookers_49:
(3, 36286), (Start: 6 @36316 has 106 MA's), (8, 36340), (10, 36373), (12, 36385), (15, 36412),

Gene: Brushbloom_54 Start: 37524, Stop: 37700, Start Num: 6
Candidate Starts for Brushbloom_54:
(3, 37494), (Start: 6 @37524 has 106 MA's), (8, 37548), (10, 37581), (12, 37593), (15, 37620),

Gene: Bubbles123_50 Start: 37706, Stop: 37882, Start Num: 6
Candidate Starts for Bubbles123_50:
(3, 37676), (Start: 6 @37706 has 106 MA's), (8, 37730), (10, 37763), (12, 37775), (15, 37802),

Gene: ByChance_44 Start: 32840, Stop: 33016, Start Num: 6
Candidate Starts for ByChance_44:
(3, 32810), (Start: 6 @32840 has 106 MA's), (8, 32864), (10, 32897), (12, 32909), (15, 32936),

Gene: Cerasum_48 Start: 33383, Stop: 33559, Start Num: 6
Candidate Starts for Cerasum_48:
(3, 33353), (Start: 6 @33383 has 106 MA's), (8, 33407), (10, 33440), (12, 33452), (15, 33479),

Gene: Cheesepuff_58 Start: 39041, Stop: 39217, Start Num: 6
Candidate Starts for Cheesepuff_58:
(3, 39011), (Start: 6 @39041 has 106 MA's), (8, 39065), (10, 39098), (12, 39110), (15, 39137),

Gene: Coco12_51 Start: 37440, Stop: 37616, Start Num: 6
Candidate Starts for Coco12_51:
(3, 37410), (Start: 6 @37440 has 106 MA's), (8, 37464), (10, 37497), (12, 37509), (15, 37536),

Gene: Cornie_47 Start: 35500, Stop: 35676, Start Num: 6
Candidate Starts for Cornie_47:
(3, 35470), (Start: 6 @35500 has 106 MA's), (8, 35524), (10, 35557), (12, 35569), (15, 35596),

Gene: Courthouse_66 Start: 45395, Stop: 45192, Start Num: 6
Candidate Starts for Courthouse_66:
(1, 45482), (2, 45449), (Start: 4 @45410 has 5 MA's), (Start: 5 @45404 has 1 MA's), (Start: 6 @45395 has 106 MA's), (7, 45374), (9, 45347), (13, 45317), (14, 45311), (17, 45248),

Gene: DRBy19_56 Start: 38644, Stop: 38820, Start Num: 6
Candidate Starts for DRBy19_56:
(3, 38614), (Start: 6 @38644 has 106 MA's), (8, 38668), (10, 38701), (12, 38713), (15, 38740),

Gene: DaddyRickover_87 Start: 51096, Stop: 51299, Start Num: 6
Candidate Starts for DaddyRickover_87:

(Start: 4 @51081 has 5 MA's), (Start: 5 @51087 has 1 MA's), (Start: 6 @51096 has 106 MA's), (7, 51117), (9, 51144), (13, 51174), (14, 51180),

Gene: Dallas_67 Start: 48256, Stop: 48053, Start Num: 6
Candidate Starts for Dallas_67:
(1, 48343), (2, 48310), (Start: 4 @48271 has 5 MA's), (Start: 5 @48265 has 1 MA's), (Start: 6 @48256 has 106 MA's), (9, 48208), (18, 48094),

Gene: DirtMcgirt_52 Start: 36218, Stop: 36391, Start Num: 6
Candidate Starts for DirtMcgirt_52:
(3, 36188), (Start: 6 @36218 has 106 MA's), (10, 36272), (14, 36299), (16, 36332),

Gene: DmpstrDiver_67 Start: 48683, Stop: 48480, Start Num: 6
Candidate Starts for DmpstrDiver_67:
(1, 48770), (2, 48737), (Start: 4 @48698 has 5 MA's), (Start: 5 @48692 has 1 MA's), (Start: 6 @48683 has 106 MA's), (9, 48635), (18, 48521),

Gene: Doomphist_87 Start: 50490, Stop: 50708, Start Num: 4
Candidate Starts for Doomphist_87:
(Start: 4 @50490 has 5 MA's), (Start: 5 @50496 has 1 MA's), (Start: 6 @50505 has 106 MA's), (7, 50526), (9, 50553), (13, 50583), (14, 50589),

Gene: DosHalletts_53 Start: 38341, Stop: 38508, Start Num: 6
Candidate Starts for DosHalletts_53:
(3, 38311), (Start: 6 @38341 has 106 MA's), (10, 38395), (14, 38422), (16, 38455),

Gene: DotProduct_79 Start: 47850, Stop: 48053, Start Num: 6
Candidate Starts for DotProduct_79:
(Start: 5 @47841 has 1 MA's), (Start: 6 @47850 has 106 MA's), (7, 47871), (9, 47898), (13, 47928), (14, 47934),

Gene: Dove_61 Start: 47197, Stop: 46994, Start Num: 6
Candidate Starts for Dove_61:
(1, 47284), (2, 47251), (Start: 4 @47212 has 5 MA's), (Start: 5 @47206 has 1 MA's), (Start: 6 @47197 has 106 MA's), (9, 47149), (18, 47035),

Gene: Drago_51 Start: 36221, Stop: 36394, Start Num: 6
Candidate Starts for Drago_51:
(3, 36191), (Start: 6 @36221 has 106 MA's), (10, 36275), (14, 36302), (16, 36335),

Gene: Eish_54 Start: 37750, Stop: 37923, Start Num: 6
Candidate Starts for Eish_54:
(3, 37720), (Start: 6 @37750 has 106 MA's), (10, 37804), (14, 37831), (16, 37864),

Gene: Ejimix_68 Start: 50121, Stop: 49918, Start Num: 6
Candidate Starts for Ejimix_68:
(1, 50208), (2, 50175), (Start: 4 @50136 has 5 MA's), (Start: 5 @50130 has 1 MA's), (Start: 6 @50121 has 106 MA's), (9, 50073), (18, 49959),

Gene: EleanorGeorge_51 Start: 36679, Stop: 36855, Start Num: 6
Candidate Starts for EleanorGeorge_51:
(3, 36649), (Start: 6 @36679 has 106 MA's), (8, 36703), (10, 36736), (12, 36748), (15, 36775),

Gene: Empress_82 Start: 49301, Stop: 49519, Start Num: 4
Candidate Starts for Empress_82:
(Start: 4 @49301 has 5 MA's), (Start: 5 @49307 has 1 MA's), (Start: 6 @49316 has 106 MA's), (7, 49337), (9, 49364), (13, 49394), (14, 49400),

Gene: Eradicator_45 Start: 35437, Stop: 35613, Start Num: 6
Candidate Starts for Eradicator_45:
(3, 35407), (Start: 6 @35437 has 106 MA's), (8, 35461), (10, 35494), (12, 35506), (15, 35533),

Gene: Estave1_53 Start: 37114, Stop: 37287, Start Num: 6
Candidate Starts for Estave1_53:
(3, 37084), (Start: 6 @37114 has 106 MA's), (10, 37168), (14, 37195), (16, 37228),

Gene: Flathead_52 Start: 37576, Stop: 37752, Start Num: 6
Candidate Starts for Flathead_52:
(3, 37546), (Start: 6 @37576 has 106 MA's), (8, 37600), (10, 37633), (12, 37645), (15, 37672),

Gene: Fruitloop_50 Start: 37821, Stop: 37997, Start Num: 6
Candidate Starts for Fruitloop_50:
(3, 37791), (Start: 6 @37821 has 106 MA's), (8, 37845), (10, 37878), (12, 37890), (15, 37917),

Gene: Fruitloop_81 Start: 49490, Stop: 49693, Start Num: 6
Candidate Starts for Fruitloop_81:
(Start: 5 @49481 has 1 MA's), (Start: 6 @49490 has 106 MA's), (7, 49511), (9, 49538), (13, 49568), (14, 49574),

Gene: Girafales_62 Start: 39430, Stop: 39603, Start Num: 6
Candidate Starts for Girafales_62:
(3, 39400), (Start: 6 @39430 has 106 MA's), (10, 39484), (14, 39511), (16, 39544),

Gene: Gonephishing_66 Start: 46015, Stop: 45815, Start Num: 6
Candidate Starts for Gonephishing_66:
(1, 46102), (2, 46069), (Start: 4 @46030 has 5 MA's), (Start: 5 @46024 has 1 MA's), (Start: 6 @46015 has 106 MA's), (11, 45955), (14, 45934),

Gene: Gorge_57 Start: 38732, Stop: 38908, Start Num: 6
Candidate Starts for Gorge_57:
(3, 38702), (Start: 6 @38732 has 106 MA's), (8, 38756), (10, 38789), (12, 38801), (15, 38828),

Gene: Guppsters_53 Start: 36675, Stop: 36851, Start Num: 6
Candidate Starts for Guppsters_53:
(3, 36645), (Start: 6 @36675 has 106 MA's), (8, 36699), (10, 36732), (12, 36744), (15, 36771),

Gene: Hades_53 Start: 37331, Stop: 37507, Start Num: 6
Candidate Starts for Hades_53:
(3, 37301), (Start: 6 @37331 has 106 MA's), (8, 37355), (10, 37388), (12, 37400), (15, 37427),

Gene: Halley_69 Start: 49335, Stop: 49132, Start Num: 6
Candidate Starts for Halley_69:
(1, 49422), (2, 49389), (Start: 4 @49350 has 5 MA's), (Start: 5 @49344 has 1 MA's), (Start: 6 @49335 has 106 MA's), (9, 49287), (18, 49173),

Gene: Hamulus_83 Start: 49332, Stop: 49535, Start Num: 6

Candidate Starts for Hamulus_83:
(Start: 5 @49323 has 1 MA's), (Start: 6 @49332 has 106 MA's), (7, 49353), (9, 49380), (13, 49410), (14, 49416),

Gene: Hannaconda_64 Start: 44262, Stop: 44062, Start Num: 6
Candidate Starts for Hannaconda_64:
(1, 44349), (2, 44316), (Start: 4 @44277 has 5 MA's), (Start: 5 @44271 has 1 MA's), (Start: 6 @44262 has 106 MA's), (11, 44202), (14, 44181), (18, 44103),

Gene: Hegedechwinu_52 Start: 35785, Stop: 35961, Start Num: 6
Candidate Starts for Hegedechwinu_52:
(3, 35755), (Start: 6 @35785 has 106 MA's), (8, 35809), (10, 35842), (14, 35869), (16, 35902),

Gene: HokkenD_61 Start: 47604, Stop: 47401, Start Num: 6
Candidate Starts for HokkenD_61:
(1, 47691), (2, 47658), (Start: 4 @47619 has 5 MA's), (Start: 5 @47613 has 1 MA's), (Start: 6 @47604 has 106 MA's), (9, 47556), (18, 47442),

Gene: Hughesyang_67 Start: 49264, Stop: 49061, Start Num: 6
Candidate Starts for Hughesyang_67:
(1, 49351), (2, 49318), (Start: 4 @49279 has 5 MA's), (Start: 5 @49273 has 1 MA's), (Start: 6 @49264 has 106 MA's), (9, 49216), (18, 49102),

Gene: IrishSherpFalk_53 Start: 38533, Stop: 38709, Start Num: 6
Candidate Starts for IrishSherpFalk_53:
(3, 38503), (Start: 6 @38533 has 106 MA's), (8, 38557), (10, 38590), (12, 38602), (15, 38629),

Gene: Jabbawokkie_66 Start: 38286, Stop: 38462, Start Num: 6
Candidate Starts for Jabbawokkie_66:
(3, 38256), (Start: 6 @38286 has 106 MA's), (8, 38310), (10, 38343), (12, 38355), (15, 38382),

Gene: JalFarm20_64 Start: 40606, Stop: 40782, Start Num: 6
Candidate Starts for JalFarm20_64:
(3, 40576), (Start: 6 @40606 has 106 MA's), (8, 40630), (10, 40663), (12, 40675), (15, 40702),

Gene: James_56 Start: 38734, Stop: 38910, Start Num: 6
Candidate Starts for James_56:
(3, 38704), (Start: 6 @38734 has 106 MA's), (8, 38758), (10, 38791), (12, 38803), (15, 38830),

Gene: Jennelsea_51 Start: 36164, Stop: 36340, Start Num: 6
Candidate Starts for Jennelsea_51:
(3, 36134), (Start: 6 @36164 has 106 MA's), (8, 36188), (10, 36221), (12, 36233), (15, 36260), (16, 36281),

Gene: JuicyJay_67 Start: 50469, Stop: 50266, Start Num: 6
Candidate Starts for JuicyJay_67:
(1, 50556), (2, 50523), (Start: 4 @50484 has 5 MA's), (Start: 5 @50478 has 1 MA's), (Start: 6 @50469 has 106 MA's), (9, 50421),

Gene: Kalah2_63 Start: 48628, Stop: 48428, Start Num: 6
Candidate Starts for Kalah2_63:
(1, 48715), (2, 48682), (Start: 4 @48643 has 5 MA's), (Start: 5 @48637 has 1 MA's), (Start: 6 @48628 has 106 MA's), (11, 48568), (14, 48547),

Gene: KashFlow_61 Start: 43883, Stop: 43683, Start Num: 6
Candidate Starts for KashFlow_61:
(1, 43970), (2, 43937), (Start: 4 @43898 has 5 MA's), (Start: 5 @43892 has 1 MA's), (Start: 6 @43883 has 106 MA's), (9, 43838), (11, 43823), (14, 43802),

Gene: KingJulian_52 Start: 36396, Stop: 36572, Start Num: 6
Candidate Starts for KingJulian_52:
(3, 36366), (Start: 6 @36396 has 106 MA's), (8, 36420), (10, 36453), (14, 36480), (16, 36513),

Gene: KingMidas_83 Start: 49731, Stop: 49934, Start Num: 6
Candidate Starts for KingMidas_83:
(Start: 4 @49716 has 5 MA's), (Start: 5 @49722 has 1 MA's), (Start: 6 @49731 has 106 MA's), (7, 49752), (9, 49779), (13, 49809), (14, 49815),

Gene: Kingsley_49 Start: 36173, Stop: 36349, Start Num: 6
Candidate Starts for Kingsley_49:
(3, 36143), (Start: 6 @36173 has 106 MA's), (8, 36197), (10, 36230), (12, 36242), (15, 36269),

Gene: Klein_68 Start: 48651, Stop: 48451, Start Num: 6
Candidate Starts for Klein_68:
(1, 48738), (2, 48705), (Start: 4 @48666 has 5 MA's), (Start: 5 @48660 has 1 MA's), (Start: 6 @48651 has 106 MA's), (11, 48591), (14, 48570),

Gene: KristaRAM_55 Start: 39234, Stop: 39410, Start Num: 6
Candidate Starts for KristaRAM_55:
(3, 39204), (Start: 6 @39234 has 106 MA's), (8, 39258), (10, 39291), (14, 39318), (16, 39351),

Gene: LittleE_69 Start: 48333, Stop: 48133, Start Num: 6
Candidate Starts for LittleE_69:
(1, 48420), (2, 48387), (Start: 4 @48348 has 5 MA's), (Start: 5 @48342 has 1 MA's), (Start: 6 @48333 has 106 MA's), (11, 48273), (14, 48252),

Gene: Llij_49 Start: 36375, Stop: 36548, Start Num: 6
Candidate Starts for Llij_49:
(3, 36345), (Start: 6 @36375 has 106 MA's), (10, 36429), (14, 36456), (16, 36489),

Gene: Lucia_52 Start: 36519, Stop: 36692, Start Num: 6
Candidate Starts for Lucia_52:
(3, 36489), (Start: 6 @36519 has 106 MA's), (10, 36573), (14, 36600), (16, 36633),

Gene: Lucky2013_66 Start: 45074, Stop: 44871, Start Num: 6
Candidate Starts for Lucky2013_66:
(1, 45161), (2, 45128), (Start: 4 @45089 has 5 MA's), (Start: 5 @45083 has 1 MA's), (Start: 6 @45074 has 106 MA's), (9, 45026), (18, 44912),

Gene: LunaStella_50 Start: 35754, Stop: 35927, Start Num: 6
Candidate Starts for LunaStella_50:
(3, 35724), (Start: 6 @35754 has 106 MA's), (10, 35808), (14, 35835), (16, 35868),

Gene: Mattes_56 Start: 38734, Stop: 38910, Start Num: 6
Candidate Starts for Mattes_56:
(3, 38704), (Start: 6 @38734 has 106 MA's), (8, 38758), (10, 38791), (12, 38803), (15, 38830),

Gene: MiaZeal_66 Start: 45206, Stop: 45003, Start Num: 6
Candidate Starts for MiaZeal_66:
(1, 45293), (2, 45260), (Start: 4 @45221 has 5 MA's), (Start: 5 @45215 has 1 MA's), (Start: 6 @45206 has 106 MA's), (7, 45185), (9, 45158), (13, 45128), (14, 45122), (17, 45059),

Gene: Minerva_74 Start: 50751, Stop: 50548, Start Num: 6
Candidate Starts for Minerva_74:
(1, 50838), (2, 50805), (Start: 4 @50766 has 5 MA's), (Start: 5 @50760 has 1 MA's), (Start: 6 @50751 has 106 MA's), (9, 50703), (18, 50589),

Gene: Minnie_57 Start: 39219, Stop: 39395, Start Num: 6
Candidate Starts for Minnie_57:
(3, 39189), (Start: 6 @39219 has 106 MA's), (8, 39243), (10, 39276), (12, 39288), (15, 39315),

Gene: Minnie_80 Start: 51309, Stop: 51521, Start Num: 5
Candidate Starts for Minnie_80:
(Start: 4 @51303 has 5 MA's), (Start: 5 @51309 has 1 MA's), (Start: 6 @51318 has 106 MA's), (7, 51339), (9, 51366), (13, 51396), (14, 51402),

Gene: Mutaforma13_56 Start: 39472, Stop: 39645, Start Num: 6
Candidate Starts for Mutaforma13_56:
(3, 39442), (Start: 6 @39472 has 106 MA's), (10, 39526), (14, 39553), (16, 39586),

Gene: Nekros_64 Start: 47310, Stop: 47110, Start Num: 6
Candidate Starts for Nekros_64:
(1, 47397), (2, 47364), (Start: 4 @47325 has 5 MA's), (Start: 5 @47319 has 1 MA's), (Start: 6 @47310 has 106 MA's), (11, 47250), (14, 47229), (18, 47151),

Gene: Nibley_58 Start: 42775, Stop: 42560, Start Num: 4
Candidate Starts for Nibley_58:
(1, 42847), (2, 42814), (Start: 4 @42775 has 5 MA's), (Start: 5 @42769 has 1 MA's), (Start: 6 @42760 has 106 MA's), (11, 42700), (14, 42679), (18, 42601),

Gene: NihilNomen_68 Start: 49422, Stop: 49219, Start Num: 6
Candidate Starts for NihilNomen_68:
(1, 49509), (2, 49476), (Start: 4 @49437 has 5 MA's), (Start: 5 @49431 has 1 MA's), (Start: 6 @49422 has 106 MA's), (9, 49374), (18, 49260),

Gene: Odette_67 Start: 48465, Stop: 48262, Start Num: 6
Candidate Starts for Odette_67:
(1, 48552), (2, 48519), (Start: 4 @48480 has 5 MA's), (Start: 5 @48474 has 1 MA's), (Start: 6 @48465 has 106 MA's), (9, 48417), (18, 48303),

Gene: OlympiaSaint_54 Start: 37641, Stop: 37817, Start Num: 6
Candidate Starts for OlympiaSaint_54:
(3, 37611), (Start: 6 @37641 has 106 MA's), (8, 37665), (10, 37698), (12, 37710), (15, 37737),

Gene: Omega_72 Start: 50068, Stop: 49868, Start Num: 6
Candidate Starts for Omega_72:
(1, 50155), (2, 50122), (Start: 4 @50083 has 5 MA's), (Start: 5 @50077 has 1 MA's), (Start: 6 @50068 has 106 MA's), (11, 50008), (14, 49987),

Gene: Ovechkin_49 Start: 36688, Stop: 36864, Start Num: 6
Candidate Starts for Ovechkin_49:
(3, 36658), (Start: 6 @36688 has 106 MA's), (8, 36712), (10, 36745), (14, 36772), (16, 36805),

Gene: Pacc40_81 Start: 50751, Stop: 50969, Start Num: 4
Candidate Starts for Pacc40_81:
(Start: 4 @50751 has 5 MA's), (Start: 5 @50757 has 1 MA's), (Start: 6 @50766 has 106 MA's), (7, 50787), (9, 50814), (13, 50844), (14, 50850),

Gene: Phanphagia_50 Start: 37566, Stop: 37742, Start Num: 6
Candidate Starts for Phanphagia_50:
(3, 37536), (Start: 6 @37566 has 106 MA's), (8, 37590), (10, 37623), (12, 37635), (15, 37662), (16, 37683),

Gene: Phatniss_51 Start: 37470, Stop: 37643, Start Num: 6
Candidate Starts for Phatniss_51:
(3, 37440), (Start: 6 @37470 has 106 MA's), (10, 37524), (14, 37551), (16, 37584),

Gene: Philus_56 Start: 38620, Stop: 38796, Start Num: 6
Candidate Starts for Philus_56:
(3, 38590), (Start: 6 @38620 has 106 MA's), (8, 38644), (10, 38677), (12, 38689), (15, 38716),

Gene: PhlipPhlop_52 Start: 38456, Stop: 38632, Start Num: 6
Candidate Starts for PhlipPhlop_52:
(3, 38426), (Start: 6 @38456 has 106 MA's), (8, 38480), (10, 38513), (12, 38525), (15, 38552),

Gene: Phoebus_68 Start: 50080, Stop: 49877, Start Num: 6
Candidate Starts for Phoebus_68:
(1, 50167), (2, 50134), (Start: 4 @50095 has 5 MA's), (Start: 5 @50089 has 1 MA's), (Start: 6 @50080 has 106 MA's), (7, 50059), (9, 50032), (13, 50002), (14, 49996), (18, 49918),

Gene: Poenanya_87 Start: 50505, Stop: 50708, Start Num: 6
Candidate Starts for Poenanya_87:
(Start: 4 @50490 has 5 MA's), (Start: 5 @50496 has 1 MA's), (Start: 6 @50505 has 106 MA's), (7, 50526), (9, 50553), (13, 50583), (14, 50589),

Gene: Polka14_88 Start: 51295, Stop: 51498, Start Num: 6
Candidate Starts for Polka14_88:
(Start: 4 @51280 has 5 MA's), (Start: 5 @51286 has 1 MA's), (Start: 6 @51295 has 106 MA's), (7, 51316), (9, 51343), (13, 51373), (14, 51379),

Gene: Porcelain_65 Start: 45206, Stop: 45003, Start Num: 6
Candidate Starts for Porcelain_65:
(1, 45293), (2, 45260), (Start: 4 @45221 has 5 MA's), (Start: 5 @45215 has 1 MA's), (Start: 6 @45206 has 106 MA's), (7, 45185), (9, 45158), (13, 45128), (14, 45122), (17, 45059),

Gene: Rearden_61 Start: 45037, Stop: 44837, Start Num: 6
Candidate Starts for Rearden_61:
(2, 45091), (Start: 4 @45052 has 5 MA's), (Start: 5 @45046 has 1 MA's), (Start: 6 @45037 has 106 MA's), (11, 44977), (14, 44956),

Gene: Redno2_65 Start: 46218, Stop: 46015, Start Num: 6
Candidate Starts for Redno2_65:

(1, 46305), (2, 46272), (Start: 4 @46233 has 5 MA's), (Start: 5 @46227 has 1 MA's), (Start: 6 @46218 has 106 MA's), (9, 46170), (18, 46056),

Gene: Rialto_57 Start: 39861, Stop: 40037, Start Num: 6
Candidate Starts for Rialto_57:
(3, 39831), (Start: 6 @39861 has 106 MA's), (10, 39918), (14, 39945),

Gene: Saal_55 Start: 38551, Stop: 38727, Start Num: 6
Candidate Starts for Saal_55:
(3, 38521), (Start: 6 @38551 has 106 MA's), (8, 38575), (10, 38608), (12, 38620), (15, 38647),

Gene: Sandalphon_78 Start: 49303, Stop: 49506, Start Num: 6
Candidate Starts for Sandalphon_78:
(Start: 4 @49288 has 5 MA's), (Start: 5 @49294 has 1 MA's), (Start: 6 @49303 has 106 MA's), (7, 49324), (9, 49351), (13, 49381), (14, 49387),

Gene: Sarma624_50 Start: 33365, Stop: 33541, Start Num: 6
Candidate Starts for Sarma624_50:
(3, 33335), (Start: 6 @33365 has 106 MA's), (8, 33389), (10, 33422), (12, 33434), (15, 33461),

Gene: Schatzie_63 Start: 48212, Stop: 48009, Start Num: 6
Candidate Starts for Schatzie_63:
(1, 48299), (2, 48266), (Start: 4 @48227 has 5 MA's), (Start: 5 @48221 has 1 MA's), (Start: 6 @48212 has 106 MA's), (9, 48164), (18, 48050),

Gene: Scottish_82 Start: 48986, Stop: 49189, Start Num: 6
Candidate Starts for Scottish_82:
(Start: 4 @48971 has 5 MA's), (Start: 5 @48977 has 1 MA's), (Start: 6 @48986 has 106 MA's), (7, 49007), (9, 49034), (13, 49064), (14, 49070),

Gene: Shaboozey_59 Start: 42999, Stop: 42799, Start Num: 6
Candidate Starts for Shaboozey_59:
(1, 43086), (2, 43053), (Start: 4 @43014 has 5 MA's), (Start: 5 @43008 has 1 MA's), (Start: 6 @42999 has 106 MA's), (11, 42939), (14, 42918), (18, 42840),

Gene: Shauna1_51 Start: 37547, Stop: 37723, Start Num: 6
Candidate Starts for Shauna1_51:
(3, 37517), (Start: 6 @37547 has 106 MA's), (8, 37571), (10, 37604), (12, 37616), (15, 37643), (16, 37664),

Gene: SilverChicken_61 Start: 37151, Stop: 37327, Start Num: 6
Candidate Starts for SilverChicken_61:
(3, 37121), (Start: 6 @37151 has 106 MA's), (8, 37175), (10, 37208), (12, 37220), (15, 37247),

Gene: Soul22_56 Start: 37411, Stop: 37587, Start Num: 6
Candidate Starts for Soul22_56:
(3, 37381), (Start: 6 @37411 has 106 MA's), (8, 37435), (10, 37468), (12, 37480), (15, 37507),

Gene: Spartacus_54 Start: 37450, Stop: 37626, Start Num: 6
Candidate Starts for Spartacus_54:
(3, 37420), (Start: 6 @37450 has 106 MA's), (8, 37474), (10, 37507), (12, 37519), (15, 37546),

Gene: Spikelee_59 Start: 38952, Stop: 39128, Start Num: 6

Candidate Starts for Spikelee_59:
(3, 38922), (Start: 6 @38952 has 106 MA's), (8, 38976), (10, 39009), (12, 39021), (15, 39048),

Gene: Squint_66 Start: 45325, Stop: 45122, Start Num: 6
Candidate Starts for Squint_66:
(1, 45412), (2, 45379), (Start: 4 @45340 has 5 MA's), (Start: 5 @45334 has 1 MA's), (Start: 6 @45325 has 106 MA's), (7, 45304), (9, 45277), (13, 45247), (14, 45241), (17, 45178),

Gene: Stap_77 Start: 46637, Stop: 46855, Start Num: 4
Candidate Starts for Stap_77:
(Start: 4 @46637 has 5 MA's), (Start: 5 @46643 has 1 MA's), (Start: 6 @46652 has 106 MA's), (7, 46673), (9, 46700), (13, 46730), (14, 46736),

Gene: SuperGrey_56 Start: 38973, Stop: 39149, Start Num: 6
Candidate Starts for SuperGrey_56:
(3, 38943), (Start: 6 @38973 has 106 MA's), (8, 38997), (10, 39030), (12, 39042), (15, 39069),

Gene: Superphikiman_66 Start: 44940, Stop: 44737, Start Num: 6
Candidate Starts for Superphikiman_66:
(1, 45027), (2, 44994), (Start: 4 @44955 has 5 MA's), (Start: 5 @44949 has 1 MA's), (Start: 6 @44940 has 106 MA's), (9, 44892), (18, 44778),

Gene: TChen_52 Start: 37705, Stop: 37878, Start Num: 6
Candidate Starts for TChen_52:
(3, 37675), (Start: 6 @37705 has 106 MA's), (10, 37759), (14, 37786), (16, 37819),

Gene: ThreeRngTarjay_66 Start: 49498, Stop: 49295, Start Num: 6
Candidate Starts for ThreeRngTarjay_66:
(1, 49585), (2, 49552), (Start: 4 @49513 has 5 MA's), (Start: 5 @49507 has 1 MA's), (Start: 6 @49498 has 106 MA's), (9, 49450), (18, 49336),

Gene: Tootsieroll_79 Start: 49980, Stop: 50183, Start Num: 6
Candidate Starts for Tootsieroll_79:
(Start: 4 @49965 has 5 MA's), (Start: 5 @49971 has 1 MA's), (Start: 6 @49980 has 106 MA's), (7, 50001), (9, 50028), (13, 50058), (14, 50064),

Gene: UncleRicky_52 Start: 37718, Stop: 37891, Start Num: 6
Candidate Starts for UncleRicky_52:
(3, 37688), (Start: 6 @37718 has 106 MA's), (10, 37772), (14, 37799), (16, 37832),

Gene: Velveteen_47 Start: 33365, Stop: 33541, Start Num: 6
Candidate Starts for Velveteen_47:
(3, 33335), (Start: 6 @33365 has 106 MA's), (8, 33389), (10, 33422), (12, 33434), (15, 33461),

Gene: Wachhund_54 Start: 36971, Stop: 37147, Start Num: 6
Candidate Starts for Wachhund_54:
(3, 36941), (Start: 6 @36971 has 106 MA's), (8, 36995), (10, 37028), (12, 37040), (15, 37067),

Gene: Wanda_72 Start: 48960, Stop: 48760, Start Num: 6
Candidate Starts for Wanda_72:
(1, 49047), (2, 49014), (Start: 4 @48975 has 5 MA's), (Start: 5 @48969 has 1 MA's), (Start: 6 @48960 has 106 MA's), (11, 48900), (14, 48879),

Gene: WillSterrel_53 Start: 38566, Stop: 38742, Start Num: 6
Candidate Starts for WillSterrel_53:
(3, 38536), (Start: 6 @38566 has 106 MA's), (8, 38590), (10, 38623), (12, 38635), (15, 38662),

Gene: Yeet_66 Start: 48484, Stop: 48281, Start Num: 6
Candidate Starts for Yeet_66:
(1, 48571), (2, 48538), (Start: 4 @48499 has 5 MA's), (Start: 5 @48493 has 1 MA's), (Start: 6 @48484 has 106 MA's), (9, 48436), (18, 48322),

Gene: Zapner_65 Start: 38287, Stop: 38463, Start Num: 6
Candidate Starts for Zapner_65:
(3, 38257), (Start: 6 @38287 has 106 MA's), (8, 38311), (10, 38344), (12, 38356), (15, 38383),

Gene: Zelink_66 Start: 49811, Stop: 49608, Start Num: 6
Candidate Starts for Zelink_66:
(1, 49898), (2, 49865), (Start: 4 @49826 has 5 MA's), (Start: 5 @49820 has 1 MA's), (Start: 6 @49811 has 106 MA's), (9, 49763), (18, 49649),