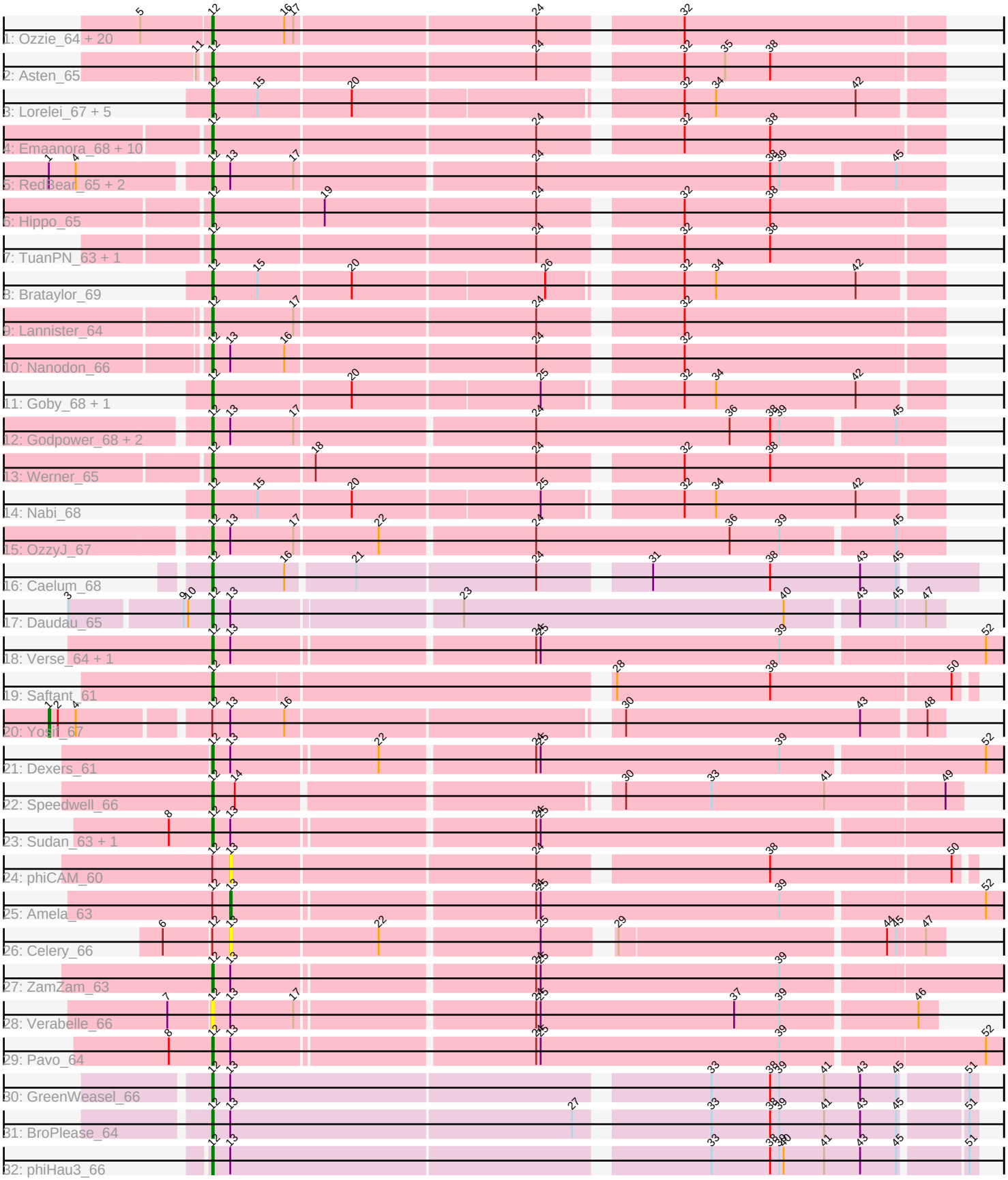
Pham 343933


1: Ozzie_64 + 20
2: Asten_65
3: Lorelei_67 + 5
4: Emaanora_68 + 10
5: RedBear_65 + 2
6: Hippo_65
7: TuanPN_63 + 1
8: Brataylor_69
9: Lannister_64
10: Nanodon_66
11: Goby_68 + 1
12: Godpower_68 + 2
13: Werner_65
14: Nabi_68
15: OzzyJ_67
16: Caelum_68
17: Daudau_65
18: Verse_64 + 1
19: Saftant_61
20: Yosh_67
21: Dexers_61
22: Speedwell_66
23: Sudan_63 + 1
24: phiCAM_60
25: Amela_63
26: Celery_66
27: ZamZam_63
28: Verabelle_66
29: Pavo_64
30: GreenWeasel_66
31: BroPlease_64
32: phiHau3_66

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 343933 Report

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

Pham number 343933 has 75 members, 4 are drafts.

Phages represented in each track:
• Track 1 : Ozzie_64, Eddasa_67, Hydra_67, Caliburn_64, Unstoppable_64, Phettuccine_64, Jash_66, Aaronocolus_64, BeardedLady_65, Bovely_64, Izzy_66, Oliynyk_66, EnochSoames_68, BryanRecycles_66, Nerdos_63, Esperer_65, Rusticus_66, Indigo_63, SunsetPointe_64, Leviticus_65, Legacy_64
• Track 2 : Asten_65
• Track 3 : Lorelei_67, Rana_68, Celeste_68, Danzina_68, Dattran_69, Zemlya_68
• Track 4 : Emaanora_68, SarahRose_65, Triste_66, Dwayne_65, Yasdnil_65, Snorlax_65, Whatever_65, TagePhighter_67, Chucky_65, BarryBee_68, Maneekul_65
• Track 5 : RedBear_65, South40_64, Katalie_64
• Track 6 : Hippo_65
• Track 7 : TuanPN_63, Ejemplo_63
• Track 8 : Brataylor_69
• Track 9 : Lannister_64
• Track 10 : Nanodon_66
• Track 11 : Goby_68, Toma_68
• Track 12 : Godpower_68, Lika_67, Sujidade_68
• Track 13 : Werner_65
• Track 14 : Nabi_68
• Track 15 : OzzyJ_67
• Track 16 : Caelum_68
• Track 17 : Daudau_65
• Track 18 : Verse_64, SunkenRoot_63
• Track 19 : Saftant_61
• Track 20 : Yosif_67
• Track 21 : Dexers_61
• Track 22 : Speedwell_66
• Track 23 : Sudan_63, Alsaber_63
• Track 24 : phiCAM_60
• Track 25 : Amela_63
• Track 26 : Celery_66
• Track 27 : ZamZam_63
• Track 28 : Verabelle_66
• Track 29 : Pavo_64
• Track 30 : GreenWeasel_66
• Track 31 : BroPlease_64
• Track 32 : phiHau3_66

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

The start number called the most often in the published annotations is 12, it was called in 69 of the 71 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aaronocolus_64, Alsaber_63, Asten_65, BarryBee_68, BeardedLady_65, Bovely_64, Brataylor_69, BroPlease_64, BryanRecycles_66, Caelum_68, Caliburn_64, Celeste_68, Chucky_65, Danzina_68, Dattran_69, Daudau_65, Dexers_61, Dwayne_65, Eddasa_67, Ejemplo_63, Emaanora_68, EnochSoames_68, Esperer_65, Goby_68, Godpower_68, GreenWeasel_66, Hippo_65, Hydra_67, Indigo_63, Izzy_66, Jash_66, Katalie_64, Lannister_64, Legacy_64, Leviticus_65, Lika_67, Lorelei_67, Maneekul_65, Nabi_68, Nanodon_66, Nerdos_63, Oliynyk_66, Ozzie_64, OzzyJ_67, Pavo_64, Phettuccine_64, Rana_68, RedBear_65, Rusticus_66, Saftant_61, SarahRose_65, Snorlax_65, South40_64, Speedwell_66, Sudan_63, Sujidade_68, SunkenRoot_63, SunsetPointe_64, TagePhighter_67, Toma_68, Triste_66, TuanPN_63, Unstoppable_64, Verabelle_66, Verse_64, Werner_65, Whatever_65, Yasdnil_65, ZamZam_63, Zemlya_68, phiHau3_66,

Genes that have the "Most Annotated" start but do not call it:
• Amela_63, Celery_66, Yosif_67, phiCAM_60,

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

Summary by start number:

Start 1:
• Found in 4 of 75 (5.3%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Yosif_67 (BD3),

Start 12:
• Found in 75 of 75 (100.0%) of genes in pham
• Manual Annotations of this start: 69 of 71
• Called 94.7% of time when present
• Phage (with cluster) where this start called: Aaronocolus_64 (BD1), Alsaber_63 (BD3), Asten_65 (BD1), BarryBee_68 (BD1), BeardedLady_65 (BD1), Bovely_64 (BD1), Brataylor_69 (BD1), BroPlease_64 (BD4), BryanRecycles_66 (BD1), Caelum_68 (BD2), Caliburn_64 (BD1), Celeste_68 (BD1), Chucky_65 (BD1), Danzina_68 (BD1), Dattran_69 (BD1), Daudau_65 (BD2), Dexers_61 (BD3), Dwayne_65 (BD1), Eddasa_67 (BD1), Ejemplo_63 (BD1), Emaanora_68 (BD1), EnochSoames_68 (BD1), Esperer_65 (BD1), Goby_68 (BD1), Godpower_68 (BD1), GreenWeasel_66 (BD4), Hippo_65 (BD1), Hydra_67 (BD1), Indigo_63 (BD1), Izzy_66 (BD1), Jash_66 (BD1), Katalie_64 (BD1), Lannister_64 (BD1), Legacy_64 (BD1), Leviticus_65 (BD1), Lika_67 (BD1), Lorelei_67 (BD1), Maneekul_65 (BD1), Nabi_68 (BD1), Nanodon_66 (BD1), Nerdos_63 (BD1), Oliynyk_66 (BD1), Ozzie_64 (BD1), OzzyJ_67 (BD1), Pavo_64 (BD3), Phettuccine_64 (BD1), Rana_68 (BD1),

RedBear_65 (BD1), Rusticus_66 (BD1), Saftant_61 (BD3), SarahRose_65 (BD1), Snorlax_65 (BD1), South40_64 (BD1), Speedwell_66 (BD3), Sudan_63 (BD3), Sujidade_68 (BD1), SunkenRoot_63 (BD3), SunsetPointe_64 (BD1), TagePhighter_67 (BD1), Toma_68 (BD1), Triste_66 (BD1), TuanPN_63 (BD1), Unstoppable_64 (BD1), Verabelle_66 (BD3), Verse_64 (BD3), Werner_65 (BD1), Whatever_65 (BD1), Yasdnil_65 (BD1), ZamZam_63 (BD3), Zemlya_68 (BD1), phiHau3_66 (BD4),

Start 13:
• Found in 24 of 75 (32.0%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Amela_63 (BD3), Celery_66 (BD3), phiCAM_60 (BD3),

Summary by clusters:

There are 4 clusters represented in this pham: BD4, BD1, BD3, BD2,

Info for manual annotations of cluster BD1:
•Start number 12 was manually annotated 55 times for cluster BD1.

Info for manual annotations of cluster BD2:
•Start number 12 was manually annotated 2 times for cluster BD2.

Info for manual annotations of cluster BD3:
•Start number 1 was manually annotated 1 time for cluster BD3.
•Start number 12 was manually annotated 9 times for cluster BD3.
•Start number 13 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BD4:
•Start number 12 was manually annotated 3 times for cluster BD4.

Gene Information:

Gene: Aaronocolus_64 Start: 44642, Stop: 44178, Start Num: 12
Candidate Starts for Aaronocolus_64:
(5, 44687), (Start: 12 @44642 has 69 MA's), (16, 44594), (17, 44588), (24, 44432), (32, 44348),

Gene: Alsaber_63 Start: 42755, Stop: 42249, Start Num: 12
Candidate Starts for Alsaber_63:
(8, 42782), (Start: 12 @42755 has 69 MA's), (Start: 13 @42743 has 1 MA's), (24, 42551), (25, 42548),

Gene: Amela_63 Start: 43728, Stop: 43234, Start Num: 13
Candidate Starts for Amela_63:
(Start: 12 @43740 has 69 MA's), (Start: 13 @43728 has 1 MA's), (24, 43536), (25, 43533), (39, 43374), (52, 43245),

Gene: Asten_65 Start: 46994, Stop: 46530, Start Num: 12
Candidate Starts for Asten_65:
(11, 47000), (Start: 12 @46994 has 69 MA's), (24, 46784), (32, 46700), (35, 46673), (38, 46643),

Gene: BarryBee_68 Start: 46970, Stop: 46506, Start Num: 12
Candidate Starts for BarryBee_68:
(Start: 12 @46970 has 69 MA's), (24, 46760), (32, 46676), (38, 46619),

Gene: BeardedLady_65 Start: 45025, Stop: 44561, Start Num: 12
Candidate Starts for BeardedLady_65:
(5, 45070), (Start: 12 @45025 has 69 MA's), (16, 44977), (17, 44971), (24, 44815), (32, 44731),

Gene: Bovely_64 Start: 44645, Stop: 44181, Start Num: 12
Candidate Starts for Bovely_64:
(5, 44690), (Start: 12 @44645 has 69 MA's), (16, 44597), (17, 44591), (24, 44435), (32, 44351),

Gene: Brataylor_69 Start: 46521, Stop: 46066, Start Num: 12
Candidate Starts for Brataylor_69:
(Start: 12 @46521 has 69 MA's), (15, 46491), (20, 46431), (26, 46308), (32, 46233), (34, 46212), (42, 46119),

Gene: BroPlease_64 Start: 43110, Stop: 42628, Start Num: 12
Candidate Starts for BroPlease_64:
(Start: 12 @43110 has 69 MA's), (Start: 13 @43098 has 1 MA's), (27, 42873), (33, 42795), (38, 42756), (39, 42750), (41, 42720), (43, 42696), (45, 42672), (51, 42633),

Gene: BryanRecycles_66 Start: 45140, Stop: 44676, Start Num: 12
Candidate Starts for BryanRecycles_66:
(5, 45185), (Start: 12 @45140 has 69 MA's), (16, 45092), (17, 45086), (24, 44930), (32, 44846),

Gene: Caelum_68 Start: 43388, Stop: 42909, Start Num: 12
Candidate Starts for Caelum_68:
(Start: 12 @43388 has 69 MA's), (16, 43340), (21, 43298), (24, 43181), (31, 43118), (38, 43040), (43, 42980), (45, 42956),

Gene: Caliburn_64 Start: 45033, Stop: 44569, Start Num: 12
Candidate Starts for Caliburn_64:
(5, 45078), (Start: 12 @45033 has 69 MA's), (16, 44985), (17, 44979), (24, 44823), (32, 44739),

Gene: Celery_66 Start: 42659, Stop: 42219, Start Num: 13
Candidate Starts for Celery_66:
(6, 42701), (Start: 12 @42671 has 69 MA's), (Start: 13 @42659 has 1 MA's), (22, 42563), (25, 42461), (29, 42425), (44, 42254), (45, 42248), (47, 42230),

Gene: Celeste_68 Start: 45986, Stop: 45531, Start Num: 12
Candidate Starts for Celeste_68:
(Start: 12 @45986 has 69 MA's), (15, 45956), (20, 45896), (32, 45698), (34, 45677), (42, 45584),

Gene: Chucky_65 Start: 47031, Stop: 46567, Start Num: 12
Candidate Starts for Chucky_65:
(Start: 12 @47031 has 69 MA's), (24, 46821), (32, 46737), (38, 46680),

Gene: Danzina_68 Start: 46235, Stop: 45780, Start Num: 12
Candidate Starts for Danzina_68:
(Start: 12 @46235 has 69 MA's), (15, 46205), (20, 46145), (32, 45947), (34, 45926), (42, 45833),

Gene: Dattran_69 Start: 46439, Stop: 45984, Start Num: 12
Candidate Starts for Dattran_69:
(Start: 12 @46439 has 69 MA's), (15, 46409), (20, 46349), (32, 46151), (34, 46130), (42, 46037),

Gene: Daudau_65 Start: 43293, Stop: 42826, Start Num: 12
Candidate Starts for Daudau_65:
(3, 43383), (9, 43311), (10, 43308), (Start: 12 @43293 has 69 MA's), (Start: 13 @43281 has 1 MA's), (23, 43137), (40, 42924), (43, 42879), (45, 42855), (47, 42837),

Gene: Dexers_61 Start: 42997, Stop: 42491, Start Num: 12
Candidate Starts for Dexers_61:
(Start: 12 @42997 has 69 MA's), (Start: 13 @42985 has 1 MA's), (22, 42892), (24, 42793), (25, 42790), (39, 42631), (52, 42502),

Gene: Dwayne_65 Start: 47019, Stop: 46555, Start Num: 12
Candidate Starts for Dwayne_65:
(Start: 12 @47019 has 69 MA's), (24, 46809), (32, 46725), (38, 46668),

Gene: Eddasa_67 Start: 45679, Stop: 45215, Start Num: 12
Candidate Starts for Eddasa_67:
(5, 45724), (Start: 12 @45679 has 69 MA's), (16, 45631), (17, 45625), (24, 45469), (32, 45385),

Gene: Ejemplo_63 Start: 46958, Stop: 46494, Start Num: 12
Candidate Starts for Ejemplo_63:
(Start: 12 @46958 has 69 MA's), (24, 46748), (32, 46664), (38, 46607),

Gene: Emaanora_68 Start: 46943, Stop: 46479, Start Num: 12
Candidate Starts for Emaanora_68:
(Start: 12 @46943 has 69 MA's), (24, 46733), (32, 46649), (38, 46592),

Gene: EnochSoames_68 Start: 44937, Stop: 44473, Start Num: 12
Candidate Starts for EnochSoames_68:
(5, 44982), (Start: 12 @44937 has 69 MA's), (16, 44889), (17, 44883), (24, 44727), (32, 44643),

Gene: Esperer_65 Start: 44988, Stop: 44524, Start Num: 12
Candidate Starts for Esperer_65:
(5, 45033), (Start: 12 @44988 has 69 MA's), (16, 44940), (17, 44934), (24, 44778), (32, 44694),

Gene: Goby_68 Start: 46856, Stop: 46401, Start Num: 12
Candidate Starts for Goby_68:
(Start: 12 @46856 has 69 MA's), (20, 46766), (25, 46646), (32, 46568), (34, 46547), (42, 46454),

Gene: Godpower_68 Start: 46150, Stop: 45677, Start Num: 12
Candidate Starts for Godpower_68:
(Start: 12 @46150 has 69 MA's), (Start: 13 @46138 has 1 MA's), (17, 46096), (24, 45943), (36, 45814), (38, 45787), (39, 45781), (45, 45709),

Gene: GreenWeasel_66 Start: 43115, Stop: 42633, Start Num: 12
Candidate Starts for GreenWeasel_66:
(Start: 12 @43115 has 69 MA's), (Start: 13 @43103 has 1 MA's), (33, 42800), (38, 42761), (39, 42755), (41, 42725), (43, 42701), (45, 42677), (51, 42638),

Gene: Hippo_65 Start: 47006, Stop: 46542, Start Num: 12

Candidate Starts for Hippo_65:
(Start: 12 @47006 has 69 MA's), (19, 46934), (24, 46796), (32, 46712), (38, 46655),

Gene: Hydra_67 Start: 45835, Stop: 45371, Start Num: 12
Candidate Starts for Hydra_67:
(5, 45880), (Start: 12 @45835 has 69 MA's), (16, 45787), (17, 45781), (24, 45625), (32, 45541),

Gene: Indigo_63 Start: 44638, Stop: 44174, Start Num: 12
Candidate Starts for Indigo_63:
(5, 44683), (Start: 12 @44638 has 69 MA's), (16, 44590), (17, 44584), (24, 44428), (32, 44344),

Gene: Izzy_66 Start: 45187, Stop: 44723, Start Num: 12
Candidate Starts for Izzy_66:
(5, 45232), (Start: 12 @45187 has 69 MA's), (16, 45139), (17, 45133), (24, 44977), (32, 44893),

Gene: Jash_66 Start: 45140, Stop: 44676, Start Num: 12
Candidate Starts for Jash_66:
(5, 45185), (Start: 12 @45140 has 69 MA's), (16, 45092), (17, 45086), (24, 44930), (32, 44846),

Gene: Katalie_64 Start: 46741, Stop: 46268, Start Num: 12
Candidate Starts for Katalie_64:
(Start: 1 @46840 has 1 MA's), (4, 46822), (Start: 12 @46741 has 69 MA's), (Start: 13 @46729 has 1 MA's), (17, 46687), (24, 46534), (38, 46378), (39, 46372), (45, 46300),

Gene: Lannister_64 Start: 45496, Stop: 45032, Start Num: 12
Candidate Starts for Lannister_64:
(Start: 12 @45496 has 69 MA's), (17, 45442), (24, 45286), (32, 45202),

Gene: Legacy_64 Start: 45024, Stop: 44560, Start Num: 12
Candidate Starts for Legacy_64:
(5, 45069), (Start: 12 @45024 has 69 MA's), (16, 44976), (17, 44970), (24, 44814), (32, 44730),

Gene: Leviticus_65 Start: 45175, Stop: 44711, Start Num: 12
Candidate Starts for Leviticus_65:
(5, 45220), (Start: 12 @45175 has 69 MA's), (16, 45127), (17, 45121), (24, 44965), (32, 44881),

Gene: Lika_67 Start: 46703, Stop: 46230, Start Num: 12
Candidate Starts for Lika_67:
(Start: 12 @46703 has 69 MA's), (Start: 13 @46691 has 1 MA's), (17, 46649), (24, 46496), (36, 46367), (38, 46340), (39, 46334), (45, 46262),

Gene: Lorelei_67 Start: 45991, Stop: 45536, Start Num: 12
Candidate Starts for Lorelei_67:
(Start: 12 @45991 has 69 MA's), (15, 45961), (20, 45901), (32, 45703), (34, 45682), (42, 45589),

Gene: Maneekul_65 Start: 47036, Stop: 46572, Start Num: 12
Candidate Starts for Maneekul_65:
(Start: 12 @47036 has 69 MA's), (24, 46826), (32, 46742), (38, 46685),

Gene: Nabi_68 Start: 46562, Stop: 46107, Start Num: 12
Candidate Starts for Nabi_68:
(Start: 12 @46562 has 69 MA's), (15, 46532), (20, 46472), (25, 46352), (32, 46274), (34, 46253), (42, 46160),

Gene: Nanodon_66 Start: 45425, Stop: 44961, Start Num: 12
Candidate Starts for Nanodon_66:
(Start: 12 @45425 has 69 MA's), (Start: 13 @45413 has 1 MA's), (16, 45377), (24, 45215), (32, 45131),

Gene: Nerdos_63 Start: 44637, Stop: 44173, Start Num: 12
Candidate Starts for Nerdos_63:
(5, 44682), (Start: 12 @44637 has 69 MA's), (16, 44589), (17, 44583), (24, 44427), (32, 44343),

Gene: Oliynyk_66 Start: 45140, Stop: 44676, Start Num: 12
Candidate Starts for Oliynyk_66:
(5, 45185), (Start: 12 @45140 has 69 MA's), (16, 45092), (17, 45086), (24, 44930), (32, 44846),

Gene: Ozzie_64 Start: 45033, Stop: 44569, Start Num: 12
Candidate Starts for Ozzie_64:
(5, 45078), (Start: 12 @45033 has 69 MA's), (16, 44985), (17, 44979), (24, 44823), (32, 44739),

Gene: OzzyJ_67 Start: 46939, Stop: 46466, Start Num: 12
Candidate Starts for OzzyJ_67:
(Start: 12 @46939 has 69 MA's), (Start: 13 @46927 has 1 MA's), (17, 46885), (22, 46831), (24, 46732), (36, 46603), (39, 46570), (45, 46498),

Gene: Pavo_64 Start: 42964, Stop: 42458, Start Num: 12
Candidate Starts for Pavo_64:
(8, 42991), (Start: 12 @42964 has 69 MA's), (Start: 13 @42952 has 1 MA's), (24, 42760), (25, 42757), (39, 42598), (52, 42469),

Gene: Phettuccine_64 Start: 44638, Stop: 44174, Start Num: 12
Candidate Starts for Phettuccine_64:
(5, 44683), (Start: 12 @44638 has 69 MA's), (16, 44590), (17, 44584), (24, 44428), (32, 44344),

Gene: Rana_68 Start: 46413, Stop: 45958, Start Num: 12
Candidate Starts for Rana_68:
(Start: 12 @46413 has 69 MA's), (15, 46383), (20, 46323), (32, 46125), (34, 46104), (42, 46011),

Gene: RedBear_65 Start: 46741, Stop: 46268, Start Num: 12
Candidate Starts for RedBear_65:
(Start: 1 @46840 has 1 MA's), (4, 46822), (Start: 12 @46741 has 69 MA's), (Start: 13 @46729 has 1 MA's), (17, 46687), (24, 46534), (38, 46378), (39, 46372), (45, 46300),

Gene: Rusticus_66 Start: 45140, Stop: 44676, Start Num: 12
Candidate Starts for Rusticus_66:
(5, 45185), (Start: 12 @45140 has 69 MA's), (16, 45092), (17, 45086), (24, 44930), (32, 44846),

Gene: Saftant_61 Start: 42845, Stop: 42366, Start Num: 12
Candidate Starts for Saftant_61:
(Start: 12 @42845 has 69 MA's), (28, 42596), (38, 42494), (50, 42377),

Gene: SarahRose_65 Start: 47006, Stop: 46542, Start Num: 12
Candidate Starts for SarahRose_65:
(Start: 12 @47006 has 69 MA's), (24, 46796), (32, 46712), (38, 46655),

Gene: Snorlax_65 Start: 47031, Stop: 46567, Start Num: 12

Candidate Starts for Snorlax_65:
(Start: 12 @47031 has 69 MA's), (24, 46821), (32, 46737), (38, 46680),

Gene: South40_64 Start: 46741, Stop: 46268, Start Num: 12
Candidate Starts for South40_64:
(Start: 1 @46840 has 1 MA's), (4, 46822), (Start: 12 @46741 has 69 MA's), (Start: 13 @46729 has 1 MA's), (17, 46687), (24, 46534), (38, 46378), (39, 46372), (45, 46300),

Gene: Speedwell_66 Start: 43889, Stop: 43422, Start Num: 12
Candidate Starts for Speedwell_66:
(Start: 12 @43889 has 69 MA's), (14, 43874), (30, 43643), (33, 43586), (41, 43511), (49, 43433),

Gene: Sudan_63 Start: 42762, Stop: 42256, Start Num: 12
Candidate Starts for Sudan_63:
(8, 42789), (Start: 12 @42762 has 69 MA's), (Start: 13 @42750 has 1 MA's), (24, 42558), (25, 42555),

Gene: Sujidade_68 Start: 47000, Stop: 46527, Start Num: 12
Candidate Starts for Sujidade_68:
(Start: 12 @47000 has 69 MA's), (Start: 13 @46988 has 1 MA's), (17, 46946), (24, 46793), (36, 46664), (38, 46637), (39, 46631), (45, 46559),

Gene: SunkenRoot_63 Start: 43467, Stop: 42961, Start Num: 12
Candidate Starts for SunkenRoot_63:
(Start: 12 @43467 has 69 MA's), (Start: 13 @43455 has 1 MA's), (24, 43263), (25, 43260), (39, 43101), (52, 42972),

Gene: SunsetPointe_64 Start: 45040, Stop: 44576, Start Num: 12
Candidate Starts for SunsetPointe_64:
(5, 45085), (Start: 12 @45040 has 69 MA's), (16, 44992), (17, 44986), (24, 44830), (32, 44746),

Gene: TagePhighter_67 Start: 47006, Stop: 46542, Start Num: 12
Candidate Starts for TagePhighter_67:
(Start: 12 @47006 has 69 MA's), (24, 46796), (32, 46712), (38, 46655),

Gene: Toma_68 Start: 46859, Stop: 46404, Start Num: 12
Candidate Starts for Toma_68:
(Start: 12 @46859 has 69 MA's), (20, 46769), (25, 46649), (32, 46571), (34, 46550), (42, 46457),

Gene: Triste_66 Start: 47005, Stop: 46541, Start Num: 12
Candidate Starts for Triste_66:
(Start: 12 @47005 has 69 MA's), (24, 46795), (32, 46711), (38, 46654),

Gene: TuanPN_63 Start: 46958, Stop: 46494, Start Num: 12
Candidate Starts for TuanPN_63:
(Start: 12 @46958 has 69 MA's), (24, 46748), (32, 46664), (38, 46607),

Gene: Unstoppable_64 Start: 44636, Stop: 44172, Start Num: 12
Candidate Starts for Unstoppable_64:
(5, 44681), (Start: 12 @44636 has 69 MA's), (16, 44588), (17, 44582), (24, 44426), (32, 44342),

Gene: Verabelle_66 Start: 42441, Stop: 41977, Start Num: 12
Candidate Starts for Verabelle_66:

(7, 42468), (Start: 12 @42441 has 69 MA's), (Start: 13 @42429 has 1 MA's), (17, 42387), (24, 42237), (25, 42234), (37, 42105), (39, 42075), (46, 41988),

Gene: Verse_64 Start: 43731, Stop: 43225, Start Num: 12
Candidate Starts for Verse_64:
(Start: 12 @43731 has 69 MA's), (Start: 13 @43719 has 1 MA's), (24, 43527), (25, 43524), (39, 43365), (52, 43236),

Gene: Werner_65 Start: 47003, Stop: 46539, Start Num: 12
Candidate Starts for Werner_65:
(Start: 12 @47003 has 69 MA's), (18, 46937), (24, 46793), (32, 46709), (38, 46652),

Gene: Whatever_65 Start: 47028, Stop: 46564, Start Num: 12
Candidate Starts for Whatever_65:
(Start: 12 @47028 has 69 MA's), (24, 46818), (32, 46734), (38, 46677),

Gene: Yasdnil_65 Start: 47055, Stop: 46591, Start Num: 12
Candidate Starts for Yasdnil_65:
(Start: 12 @47055 has 69 MA's), (24, 46845), (32, 46761), (38, 46704),

Gene: Yosif_67 Start: 43955, Stop: 43401, Start Num: 1
Candidate Starts for Yosif_67:
(Start: 1 @43955 has 1 MA's), (2, 43949), (4, 43937), (Start: 12 @43859 has 69 MA's), (Start: 13 @43847 has 1 MA's), (16, 43811), (30, 43607), (43, 43451), (48, 43412),

Gene: ZamZam_63 Start: 43187, Stop: 42681, Start Num: 12
Candidate Starts for ZamZam_63:
(Start: 12 @43187 has 69 MA's), (Start: 13 @43175 has 1 MA's), (24, 42983), (25, 42980), (39, 42821),

Gene: Zemlya_68 Start: 46540, Stop: 46085, Start Num: 12
Candidate Starts for Zemlya_68:
(Start: 12 @46540 has 69 MA's), (15, 46510), (20, 46450), (32, 46252), (34, 46231), (42, 46138),

Gene: phiCAM_60 Start: 44491, Stop: 44024, Start Num: 13
Candidate Starts for phiCAM_60:
(Start: 12 @44503 has 69 MA's), (Start: 13 @44491 has 1 MA's), (24, 44293), (38, 44152), (50, 44035),

Gene: phiHau3_66 Start: 43532, Stop: 43050, Start Num: 12
Candidate Starts for phiHau3_66:
(Start: 12 @43532 has 69 MA's), (Start: 13 @43520 has 1 MA's), (33, 43217), (38, 43178), (39, 43172), (40, 43169), (41, 43142), (43, 43118), (45, 43094), (51, 43055),