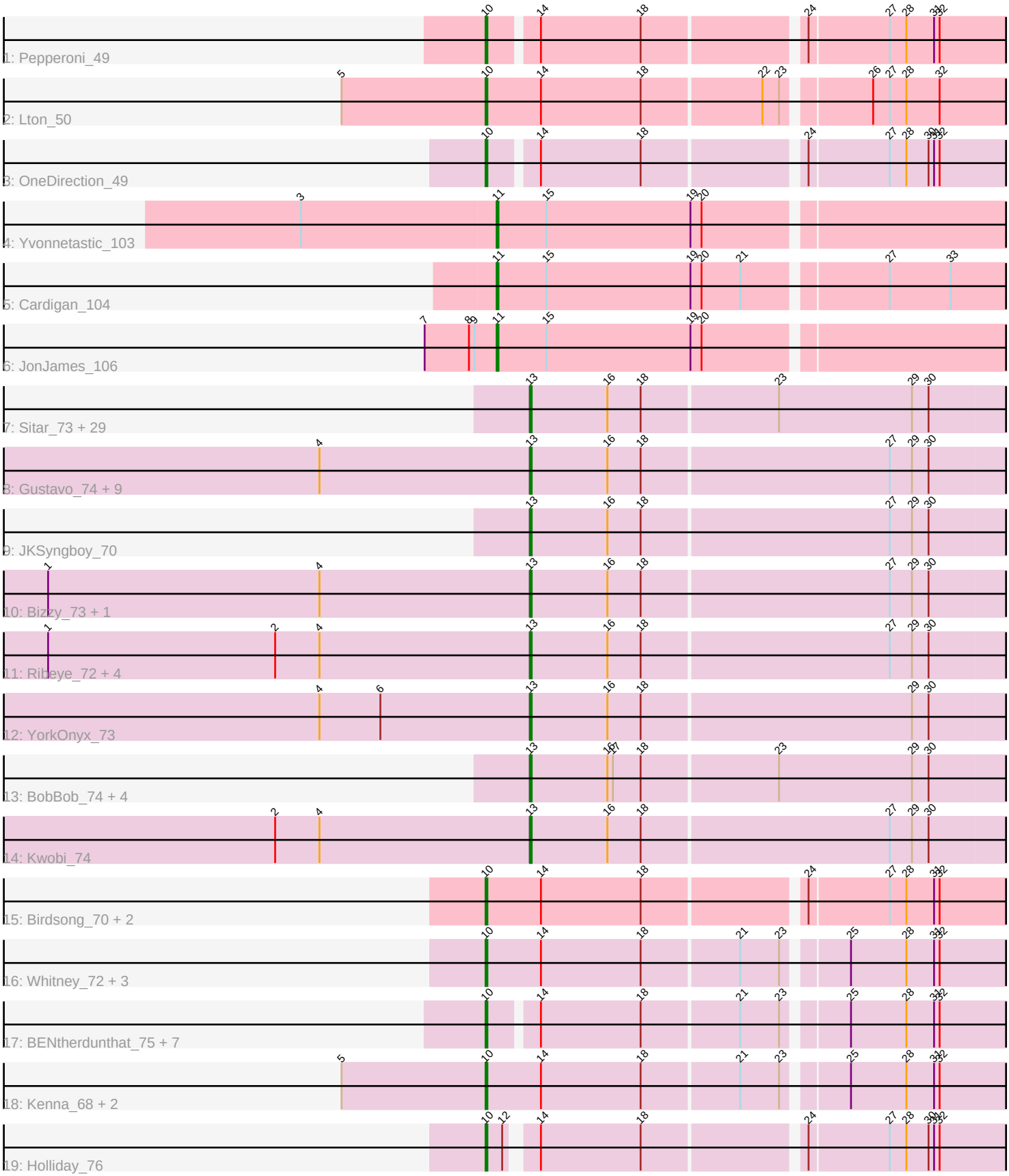
Pham 336668


1: Pepperoni_49
2: Lton_50
3: OneDirection_49
4: Yvonnetastic_103
5: Cardigan_104
6: JonJames_106
7: Sitar_73 + 29
8: Gustavo_74 + 9
9: JKSyngboy_70
10: Bizzy_73 + 1
11: Ribeye_72 + 4
12: YorkOnyx_73
13: BobBob_74 + 4
14: Kwobi_74
15: Birdsong_70 + 2
16: Whitney_72 + 3
17: BENtherdunthat_75 + 7
18: Kenna_68 + 2
19: Holliday_76

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 336668 Report

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

Pham number 336668 has 80 members, 4 are drafts.

Phages represented in each track:
• Track 1 : Pepperoni_49
• Track 2 : Lton_50
• Track 3 : OneDirection_49
• Track 4 : Yvonnetastic_103
• Track 5 : Cardigan_104
• Track 6 : JonJames_106
• Track 7 : Sitar_73, Ailee_71, Barsten_74, Kamashten_72, Keitabear_72, FuegoCuervo_76, Sanjuju_72, Thing3_72, MoontowerMania_73, McCrothy_72, Brandonk123_78, Shivanishola_74, Brawn1_71, Affeca_74, Fosterous_76, Lennon_73, Nordenberg_72, Angelicage_72, Kewpiedoll_72, Love_78, Paries_75, Fitzgerald_72, ChadMasterC_73, Sedona_72, Jabberwocky_72, Stultus_69, Galadriel_74, Bibwit_72, McKinley_75, Geodirt_72
• Track 8 : Gustavo_74, StorminNorm_73, Ashertheman_72, Saronaya_74, Baumdotcom_70, SchottB_70, Baddon_70, LilHam_66, Gaea_73, Kroos_72
• Track 9 : JKSyngboy_70
• Track 10 : Bizzy_73, Tangerine_73
• Track 11 : Ribeye_72, Derg_66, Stichling_69, Flatwoods_72, Tycho_71
• Track 12 : YorkOnyx_73
• Track 13 : BobBob_74, Vivi2_78, Tangent_76, Charming_77, Rofo_74
• Track 14 : Kwobi_74
• Track 15 : Birdsong_70, Frickyeah_77, Asapag_71
• Track 16 : Whitney_72, Lucky10_52, Budski_77, ShawBrad_76
• Track 17 : BENtherdunthat_75, Periwinkle_81, Crater_71, Apricot_71, Phistory_70, Kamaru_68, Morkie_54, Leroy_71
• Track 18 : Kenna_68, Getalong_74, Lutum_74
• Track 19 : Holliday_76

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

The start number called the most often in the published annotations is 13, it was called in 52 of the 76 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Affeca_74, Ailee_71, Angelicage_72, Ashertheman_72, Baddon_70, Barsten_74, Baumdotcom_70, Bibwit_72, Bizzy_73, BobBob_74, Brandonk123_78, Brawn1_71, ChadMasterC_73, Charming_77, Derg_66, Fitzgerald_72, Flatwoods_72, Fosterous_76, FuegoCuervo_76, Gaea_73, Galadriel_74, Geodirt_72, Gustavo_74, JKSyngboy_70, Jabberwocky_72, Kamashten_72, Keitabear_72, Kewpiedoll_72, Kroos_72, Kwobi_74, Lennon_73, LilHam_66, Love_78, McCrothy_72, McKinley_75, MoontowerMania_73, Nordenberg_72, Paries_75, Ribeye_72, Rofo_74, Sanjuju_72, Saronaya_74, SchottB_70, Sedona_72, Shivanishola_74, Sitar_73, Stichling_69, StorminNorm_73, Stultus_69, Tangent_76, Tangerine_73, Thing3_72, Tycho_71, Vivi2_78, YorkOnyx_73,

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

Genes that do not have the "Most Annotated" start:
• Apricot_71, Asapag_71, BENtherdunthat_75, Birdsong_70, Budski_77, Cardigan_104, Crater_71, Frickyeah_77, Getalong_74, Holliday_76, JonJames_106, Kamaru_68, Kenna_68, Leroy_71, Lton_50, Lucky10_52, Lutum_74, Morkie_54, OneDirection_49, Pepperoni_49, Periwinkle_81, Phistory_70, ShawBrad_76, Whitney_72, Yvonnetastic_103,

Summary by start number:

Start 10:
• Found in 22 of 80 (27.5%) of genes in pham
• Manual Annotations of this start: 21 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Apricot_71 (DN3), Asapag_71 (DN1), BENtherdunthat_75 (DN1), Birdsong_70 (DN), Budski_77 (DN), Crater_71 (DN3), Frickyeah_77 (DN1), Getalong_74 (DN1), Holliday_76 (DN1), Kamaru_68 (DN1), Kenna_68 (DN1), Leroy_71 (DN1), Lton_50 (CZ), Lucky10_52 (DH), Lutum_74 (DN1), Morkie_54 (DH), OneDirection_49 (CZ6), Pepperoni_49 (CZ), Periwinkle_81 (DN1), Phistory_70 (DN1), ShawBrad_76 (DN1), Whitney_72 (DN1),

Start 11:
• Found in 3 of 80 (3.8%) of genes in pham
• Manual Annotations of this start: 3 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cardigan_104 (DD), JonJames_106 (DD), Yvonnetastic_103 (DD),

Start 13:
• Found in 55 of 80 (68.8%) of genes in pham
• Manual Annotations of this start: 52 of 76
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Affeca_74 (DE1), Ailee_71 (DE1), Angelicage_72 (DE1), Ashertheman_72 (DE1), Baddon_70 (DE1), Barsten_74 (DE1), Baumdotcom_70 (DE1), Bibwit_72 (DE1), Bizzy_73 (DE1), BobBob_74 (DE1), Brandonk123_78 (DE1), Brawn1_71 (DE1), ChadMasterC_73 (DE1), Charming_77 (DE1), Derg_66 (DE1), Fitzgerald_72 (DE1), Flatwoods_72 (DE1), Fosterous_76 (DE1), FuegoCuervo_76 (DE1), Gaea_73 (DE1), Galadriel_74 (DE1), Geodirt_72 (DE1), Gustavo_74 (DE1), JKSyngboy_70 (DE1), Jabberwocky_72 (DE1), Kamashten_72 (DE1), Keitabear_72 (DE1), Kewpiedoll_72 (DE1), Kroos_72 (DE1),

Kwobi_74 (DE1), Lennon_73 (DE1), LilHam_66 (DE1), Love_78 (DE1), McCrothy_72 (DE1), McKinley_75 (DE1), MoontowerMania_73 (DE1), Nordenberg_72 (DE1), Paries_75 (DE1), Ribeye_72 (DE1), Rofo_74 (DE1), Sanjuju_72 (DE1), Saronaya_74 (DE1), SchottB_70 (DE1), Sedona_72 (DE1), Shivanishola_74 (DE1), Sitar_73 (DE1), Stichling_69 (DE1), StorminNorm_73 (DE1), Stultus_69 (DE1), Tangent_76 (DE1), Tangerine_73 (DE1), Thing3_72 (DE1), Tycho_71 (DE1), Vivi2_78 (DE1), YorkOnyx_73 (DE1),

Summary by clusters:

There are 8 clusters represented in this pham: DN, DH, DE1, DD, CZ6, CZ, DN1, DN3,

Info for manual annotations of cluster CZ:
•Start number 10 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ6:
•Start number 10 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster DD:
•Start number 11 was manually annotated 3 times for cluster DD.

Info for manual annotations of cluster DE1:
•Start number 13 was manually annotated 52 times for cluster DE1.

Info for manual annotations of cluster DH:
•Start number 10 was manually annotated 2 times for cluster DH.

Info for manual annotations of cluster DN:
•Start number 10 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 10 was manually annotated 12 times for cluster DN1.

Info for manual annotations of cluster DN3:
•Start number 10 was manually annotated 2 times for cluster DN3.

Gene Information:

Gene: Affeca_74 Start: 55215, Stop: 55478, Start Num: 13
Candidate Starts for Affeca_74:
(Start: 13 @55215 has 52 MA's), (16, 55257), (18, 55275), (23, 55347), (29, 55419), (30, 55428),

Gene: Ailee_71 Start: 54203, Stop: 54466, Start Num: 13
Candidate Starts for Ailee_71:
(Start: 13 @54203 has 52 MA's), (16, 54245), (18, 54263), (23, 54335), (29, 54407), (30, 54416),

Gene: Angelicage_72 Start: 55142, Stop: 55405, Start Num: 13
Candidate Starts for Angelicage_72:
(Start: 13 @55142 has 52 MA's), (16, 55184), (18, 55202), (23, 55274), (29, 55346), (30, 55355),

Gene: Apricot_71 Start: 42366, Stop: 42629, Start Num: 10
Candidate Starts for Apricot_71:
(Start: 10 @42366 has 21 MA's), (14, 42390), (18, 42444), (21, 42495), (23, 42516), (25, 42546), (28, 42576), (31, 42591), (32, 42594),

Gene: Asapag_71 Start: 42662, Stop: 42931, Start Num: 10
Candidate Starts for Asapag_71:
(Start: 10 @42662 has 21 MA's), (14, 42692), (18, 42746), (24, 42827), (27, 42869), (28, 42878), (31, 42893), (32, 42896),

Gene: Ashertheman_72 Start: 53356, Stop: 53622, Start Num: 13
Candidate Starts for Ashertheman_72:
(4, 53242), (Start: 13 @53356 has 52 MA's), (16, 53398), (18, 53416), (27, 53548), (29, 53560), (30, 53569),

Gene: BENtherdunthat_75 Start: 43714, Stop: 43977, Start Num: 10
Candidate Starts for BENtherdunthat_75:
(Start: 10 @43714 has 21 MA's), (14, 43738), (18, 43792), (21, 43843), (23, 43864), (25, 43894), (28, 43924), (31, 43939), (32, 43942),

Gene: Baddon_70 Start: 54008, Stop: 54274, Start Num: 13
Candidate Starts for Baddon_70:
(4, 53894), (Start: 13 @54008 has 52 MA's), (16, 54050), (18, 54068), (27, 54200), (29, 54212), (30, 54221),

Gene: Barsten_74 Start: 54975, Stop: 55238, Start Num: 13
Candidate Starts for Barsten_74:
(Start: 13 @54975 has 52 MA's), (16, 55017), (18, 55035), (23, 55107), (29, 55179), (30, 55188),

Gene: Baumdotcom_70 Start: 53327, Stop: 53593, Start Num: 13
Candidate Starts for Baumdotcom_70:
(4, 53213), (Start: 13 @53327 has 52 MA's), (16, 53369), (18, 53387), (27, 53519), (29, 53531), (30, 53540),

Gene: Bibwit_72 Start: 53844, Stop: 54107, Start Num: 13
Candidate Starts for Bibwit_72:
(Start: 13 @53844 has 52 MA's), (16, 53886), (18, 53904), (23, 53976), (29, 54048), (30, 54057),

Gene: Birdsong_70 Start: 42398, Stop: 42667, Start Num: 10
Candidate Starts for Birdsong_70:
(Start: 10 @42398 has 21 MA's), (14, 42428), (18, 42482), (24, 42563), (27, 42605), (28, 42614), (31, 42629), (32, 42632),

Gene: Bizzy_73 Start: 53240, Stop: 53506, Start Num: 13
Candidate Starts for Bizzy_73:
(1, 52979), (4, 53126), (Start: 13 @53240 has 52 MA's), (16, 53282), (18, 53300), (27, 53432), (29, 53444), (30, 53453),

Gene: BobBob_74 Start: 54378, Stop: 54641, Start Num: 13
Candidate Starts for BobBob_74:
(Start: 13 @54378 has 52 MA's), (16, 54420), (17, 54423), (18, 54438), (23, 54510), (29, 54582), (30, 54591),

Gene: Brandonk123_78 Start: 54847, Stop: 55110, Start Num: 13
Candidate Starts for Brandonk123_78:
(Start: 13 @54847 has 52 MA's), (16, 54889), (18, 54907), (23, 54979), (29, 55051), (30, 55060),

Gene: Brawn1_71 Start: 53987, Stop: 54250, Start Num: 13
Candidate Starts for Brawn1_71:
(Start: 13 @53987 has 52 MA's), (16, 54029), (18, 54047), (23, 54119), (29, 54191), (30, 54200),

Gene: Budski_77 Start: 44519, Stop: 44788, Start Num: 10
Candidate Starts for Budski_77:
(Start: 10 @44519 has 21 MA's), (14, 44549), (18, 44603), (21, 44654), (23, 44675), (25, 44705), (28, 44735), (31, 44750), (32, 44753),

Gene: Cardigan_104 Start: 62658, Stop: 62927, Start Num: 11
Candidate Starts for Cardigan_104:
(Start: 11 @62658 has 3 MA's), (15, 62685), (19, 62763), (20, 62769), (21, 62790), (27, 62862), (33, 62895),

Gene: ChadMasterC_73 Start: 56203, Stop: 56466, Start Num: 13
Candidate Starts for ChadMasterC_73:
(Start: 13 @56203 has 52 MA's), (16, 56245), (18, 56263), (23, 56335), (29, 56407), (30, 56416),

Gene: Charming_77 Start: 54129, Stop: 54392, Start Num: 13
Candidate Starts for Charming_77:
(Start: 13 @54129 has 52 MA's), (16, 54171), (17, 54174), (18, 54189), (23, 54261), (29, 54333), (30, 54342),

Gene: Crater_71 Start: 42761, Stop: 43024, Start Num: 10
Candidate Starts for Crater_71:
(Start: 10 @42761 has 21 MA's), (14, 42785), (18, 42839), (21, 42890), (23, 42911), (25, 42941), (28, 42971), (31, 42986), (32, 42989),

Gene: Derg_66 Start: 52040, Stop: 52306, Start Num: 13
Candidate Starts for Derg_66:
(1, 51779), (2, 51902), (4, 51926), (Start: 13 @52040 has 52 MA's), (16, 52082), (18, 52100), (27, 52232), (29, 52244), (30, 52253),

Gene: Fitzgerald_72 Start: 54990, Stop: 55253, Start Num: 13
Candidate Starts for Fitzgerald_72:
(Start: 13 @54990 has 52 MA's), (16, 55032), (18, 55050), (23, 55122), (29, 55194), (30, 55203),

Gene: Flatwoods_72 Start: 52549, Stop: 52815, Start Num: 13
Candidate Starts for Flatwoods_72:
(1, 52288), (2, 52411), (4, 52435), (Start: 13 @52549 has 52 MA's), (16, 52591), (18, 52609), (27, 52741), (29, 52753), (30, 52762),

Gene: Fosterous_76 Start: 55123, Stop: 55386, Start Num: 13
Candidate Starts for Fosterous_76:
(Start: 13 @55123 has 52 MA's), (16, 55165), (18, 55183), (23, 55255), (29, 55327), (30, 55336),

Gene: Frickyeah_77 Start: 43797, Stop: 44066, Start Num: 10
Candidate Starts for Frickyeah_77:

(Start: 10 @43797 has 21 MA's), (14, 43827), (18, 43881), (24, 43962), (27, 44004), (28, 44013), (31, 44028), (32, 44031),

Gene: FuegoCuervo_76 Start: 54577, Stop: 54840, Start Num: 13
Candidate Starts for FuegoCuervo_76:
(Start: 13 @54577 has 52 MA's), (16, 54619), (18, 54637), (23, 54709), (29, 54781), (30, 54790),

Gene: Gaea_73 Start: 53136, Stop: 53402, Start Num: 13
Candidate Starts for Gaea_73:
(4, 53022), (Start: 13 @53136 has 52 MA's), (16, 53178), (18, 53196), (27, 53328), (29, 53340), (30, 53349),

Gene: Galadriel_74 Start: 55083, Stop: 55346, Start Num: 13
Candidate Starts for Galadriel_74:
(Start: 13 @55083 has 52 MA's), (16, 55125), (18, 55143), (23, 55215), (29, 55287), (30, 55296),

Gene: Geodirt_72 Start: 55452, Stop: 55715, Start Num: 13
Candidate Starts for Geodirt_72:
(Start: 13 @55452 has 52 MA's), (16, 55494), (18, 55512), (23, 55584), (29, 55656), (30, 55665),

Gene: Getalong_74 Start: 44955, Stop: 45224, Start Num: 10
Candidate Starts for Getalong_74:
(5, 44877), (Start: 10 @44955 has 21 MA's), (14, 44985), (18, 45039), (21, 45090), (23, 45111), (25, 45141), (28, 45171), (31, 45186), (32, 45189),

Gene: Gustavo_74 Start: 54121, Stop: 54387, Start Num: 13
Candidate Starts for Gustavo_74:
(4, 54007), (Start: 13 @54121 has 52 MA's), (16, 54163), (18, 54181), (27, 54313), (29, 54325), (30, 54334),

Gene: Holliday_76 Start: 46772, Stop: 47032, Start Num: 10
Candidate Starts for Holliday_76:
(Start: 10 @46772 has 21 MA's), (12, 46781), (14, 46793), (18, 46847), (24, 46928), (27, 46970), (28, 46979), (30, 46991), (31, 46994), (32, 46997),

Gene: JKSyngboy_70 Start: 54029, Stop: 54295, Start Num: 13
Candidate Starts for JKSyngboy_70:
(Start: 13 @54029 has 52 MA's), (16, 54071), (18, 54089), (27, 54221), (29, 54233), (30, 54242),

Gene: Jabberwocky_72 Start: 55216, Stop: 55479, Start Num: 13
Candidate Starts for Jabberwocky_72:
(Start: 13 @55216 has 52 MA's), (16, 55258), (18, 55276), (23, 55348), (29, 55420), (30, 55429),

Gene: JonJames_106 Start: 63189, Stop: 63458, Start Num: 11
Candidate Starts for JonJames_106:
(7, 63150), (8, 63174), (9, 63177), (Start: 11 @63189 has 3 MA's), (15, 63216), (19, 63294), (20, 63300),

Gene: Kamaru_68 Start: 42281, Stop: 42544, Start Num: 10
Candidate Starts for Kamaru_68:
(Start: 10 @42281 has 21 MA's), (14, 42305), (18, 42359), (21, 42410), (23, 42431), (25, 42461), (28, 42491), (31, 42506), (32, 42509),

Gene: Kamashten_72 Start: 54209, Stop: 54472, Start Num: 13
Candidate Starts for Kamashten_72:
(Start: 13 @54209 has 52 MA's), (16, 54251), (18, 54269), (23, 54341), (29, 54413), (30, 54422),

Gene: Keitabear_72 Start: 55765, Stop: 56028, Start Num: 13
Candidate Starts for Keitabear_72:
(Start: 13 @55765 has 52 MA's), (16, 55807), (18, 55825), (23, 55897), (29, 55969), (30, 55978),

Gene: Kenna_68 Start: 42395, Stop: 42664, Start Num: 10
Candidate Starts for Kenna_68:
(5, 42317), (Start: 10 @42395 has 21 MA's), (14, 42425), (18, 42479), (21, 42530), (23, 42551), (25, 42581), (28, 42611), (31, 42626), (32, 42629),

Gene: Kewpiedoll_72 Start: 55139, Stop: 55402, Start Num: 13
Candidate Starts for Kewpiedoll_72:
(Start: 13 @55139 has 52 MA's), (16, 55181), (18, 55199), (23, 55271), (29, 55343), (30, 55352),

Gene: Kroos_72 Start: 53675, Stop: 53941, Start Num: 13
Candidate Starts for Kroos_72:
(4, 53561), (Start: 13 @53675 has 52 MA's), (16, 53717), (18, 53735), (27, 53867), (29, 53879), (30, 53888),

Gene: Kwobi_74 Start: 53940, Stop: 54206, Start Num: 13
Candidate Starts for Kwobi_74:
(2, 53802), (4, 53826), (Start: 13 @53940 has 52 MA's), (16, 53982), (18, 54000), (27, 54132), (29, 54144), (30, 54153),

Gene: Lennon_73 Start: 55866, Stop: 56129, Start Num: 13
Candidate Starts for Lennon_73:
(Start: 13 @55866 has 52 MA's), (16, 55908), (18, 55926), (23, 55998), (29, 56070), (30, 56079),

Gene: Leroy_71 Start: 42697, Stop: 42960, Start Num: 10
Candidate Starts for Leroy_71:
(Start: 10 @42697 has 21 MA's), (14, 42721), (18, 42775), (21, 42826), (23, 42847), (25, 42877), (28, 42907), (31, 42922), (32, 42925),

Gene: LilHam_66 Start: 51022, Stop: 51288, Start Num: 13
Candidate Starts for LilHam_66:
(4, 50908), (Start: 13 @51022 has 52 MA's), (16, 51064), (18, 51082), (27, 51214), (29, 51226), (30, 51235),

Gene: Love_78 Start: 55608, Stop: 55871, Start Num: 13
Candidate Starts for Love_78:
(Start: 13 @55608 has 52 MA's), (16, 55650), (18, 55668), (23, 55740), (29, 55812), (30, 55821),

Gene: Lton_50 Start: 32177, Stop: 32449, Start Num: 10
Candidate Starts for Lton_50:
(5, 32099), (Start: 10 @32177 has 21 MA's), (14, 32207), (18, 32261), (22, 32324), (23, 32333), (26, 32375), (27, 32384), (28, 32393), (32, 32411),

Gene: Lucky10_52 Start: 35182, Stop: 35445, Start Num: 10
Candidate Starts for Lucky10_52:

(Start: 10 @35182 has 21 MA's), (14, 35206), (18, 35260), (21, 35311), (23, 35332), (25, 35362), (28, 35392), (31, 35407), (32, 35410),

Gene: Lutum_74 Start: 43558, Stop: 43827, Start Num: 10
Candidate Starts for Lutum_74:
(5, 43480), (Start: 10 @43558 has 21 MA's), (14, 43588), (18, 43642), (21, 43693), (23, 43714), (25, 43744), (28, 43774), (31, 43789), (32, 43792),

Gene: McCrothy_72 Start: 55649, Stop: 55912, Start Num: 13
Candidate Starts for McCrothy_72:
(Start: 13 @55649 has 52 MA's), (16, 55691), (18, 55709), (23, 55781), (29, 55853), (30, 55862),

Gene: McKinley_75 Start: 54726, Stop: 54989, Start Num: 13
Candidate Starts for McKinley_75:
(Start: 13 @54726 has 52 MA's), (16, 54768), (18, 54786), (23, 54858), (29, 54930), (30, 54939),

Gene: MoontowerMania_73 Start: 55562, Stop: 55825, Start Num: 13
Candidate Starts for MoontowerMania_73:
(Start: 13 @55562 has 52 MA's), (16, 55604), (18, 55622), (23, 55694), (29, 55766), (30, 55775),

Gene: Morkie_54 Start: 34409, Stop: 34672, Start Num: 10
Candidate Starts for Morkie_54:
(Start: 10 @34409 has 21 MA's), (14, 34433), (18, 34487), (21, 34538), (23, 34559), (25, 34589), (28, 34619), (31, 34634), (32, 34637),

Gene: Nordenberg_72 Start: 53789, Stop: 54052, Start Num: 13
Candidate Starts for Nordenberg_72:
(Start: 13 @53789 has 52 MA's), (16, 53831), (18, 53849), (23, 53921), (29, 53993), (30, 54002),

Gene: OneDirection_49 Start: 32104, Stop: 32367, Start Num: 10
Candidate Starts for OneDirection_49:
(Start: 10 @32104 has 21 MA's), (14, 32128), (18, 32182), (24, 32263), (27, 32305), (28, 32314), (30, 32326), (31, 32329), (32, 32332),

Gene: Paries_75 Start: 55227, Stop: 55490, Start Num: 13
Candidate Starts for Paries_75:
(Start: 13 @55227 has 52 MA's), (16, 55269), (18, 55287), (23, 55359), (29, 55431), (30, 55440),

Gene: Pepperoni_49 Start: 33565, Stop: 33828, Start Num: 10
Candidate Starts for Pepperoni_49:
(Start: 10 @33565 has 21 MA's), (14, 33589), (18, 33643), (24, 33724), (27, 33766), (28, 33775), (31, 33790), (32, 33793),

Gene: Periwinkle_81 Start: 45861, Stop: 46124, Start Num: 10
Candidate Starts for Periwinkle_81:
(Start: 10 @45861 has 21 MA's), (14, 45885), (18, 45939), (21, 45990), (23, 46011), (25, 46041), (28, 46071), (31, 46086), (32, 46089),

Gene: Phistory_70 Start: 41926, Stop: 42189, Start Num: 10
Candidate Starts for Phistory_70:
(Start: 10 @41926 has 21 MA's), (14, 41950), (18, 42004), (21, 42055), (23, 42076), (25, 42106), (28, 42136), (31, 42151), (32, 42154),

Gene: Ribeye_72 Start: 53279, Stop: 53545, Start Num: 13
Candidate Starts for Ribeye_72:
(1, 53018), (2, 53141), (4, 53165), (Start: 13 @53279 has 52 MA's), (16, 53321), (18, 53339), (27, 53471), (29, 53483), (30, 53492),

Gene: Rofo_74 Start: 54705, Stop: 54968, Start Num: 13
Candidate Starts for Rofo_74:
(Start: 13 @54705 has 52 MA's), (16, 54747), (17, 54750), (18, 54765), (23, 54837), (29, 54909), (30, 54918),

Gene: Sanjuju_72 Start: 55080, Stop: 55343, Start Num: 13
Candidate Starts for Sanjuju_72:
(Start: 13 @55080 has 52 MA's), (16, 55122), (18, 55140), (23, 55212), (29, 55284), (30, 55293),

Gene: Saronaya_74 Start: 54121, Stop: 54387, Start Num: 13
Candidate Starts for Saronaya_74:
(4, 54007), (Start: 13 @54121 has 52 MA's), (16, 54163), (18, 54181), (27, 54313), (29, 54325), (30, 54334),

Gene: SchottB_70 Start: 53742, Stop: 54008, Start Num: 13
Candidate Starts for SchottB_70:
(4, 53628), (Start: 13 @53742 has 52 MA's), (16, 53784), (18, 53802), (27, 53934), (29, 53946), (30, 53955),

Gene: Sedona_72 Start: 55650, Stop: 55913, Start Num: 13
Candidate Starts for Sedona_72:
(Start: 13 @55650 has 52 MA's), (16, 55692), (18, 55710), (23, 55782), (29, 55854), (30, 55863),

Gene: ShawBrad_76 Start: 43319, Stop: 43582, Start Num: 10
Candidate Starts for ShawBrad_76:
(Start: 10 @43319 has 21 MA's), (14, 43343), (18, 43397), (21, 43448), (23, 43469), (25, 43499), (28, 43529), (31, 43544), (32, 43547),

Gene: Shivanishola_74 Start: 53430, Stop: 53693, Start Num: 13
Candidate Starts for Shivanishola_74:
(Start: 13 @53430 has 52 MA's), (16, 53472), (18, 53490), (23, 53562), (29, 53634), (30, 53643),

Gene: Sitar_73 Start: 55624, Stop: 55887, Start Num: 13
Candidate Starts for Sitar_73:
(Start: 13 @55624 has 52 MA's), (16, 55666), (18, 55684), (23, 55756), (29, 55828), (30, 55837),

Gene: Stichling_69 Start: 52869, Stop: 53135, Start Num: 13
Candidate Starts for Stichling_69:
(1, 52608), (2, 52731), (4, 52755), (Start: 13 @52869 has 52 MA's), (16, 52911), (18, 52929), (27, 53061), (29, 53073), (30, 53082),

Gene: StorminNorm_73 Start: 53909, Stop: 54175, Start Num: 13
Candidate Starts for StorminNorm_73:
(4, 53795), (Start: 13 @53909 has 52 MA's), (16, 53951), (18, 53969), (27, 54101), (29, 54113), (30, 54122),

Gene: Stultus_69 Start: 53871, Stop: 54134, Start Num: 13
Candidate Starts for Stultus_69:

(Start: 13 @53871 has 52 MA's), (16, 53913), (18, 53931), (23, 54003), (29, 54075), (30, 54084),

Gene: Tangent_76 Start: 54410, Stop: 54673, Start Num: 13
Candidate Starts for Tangent_76:
(Start: 13 @54410 has 52 MA's), (16, 54452), (17, 54455), (18, 54470), (23, 54542), (29, 54614), (30, 54623),

Gene: Tangerine_73 Start: 53415, Stop: 53681, Start Num: 13
Candidate Starts for Tangerine_73:
(1, 53154), (4, 53301), (Start: 13 @53415 has 52 MA's), (16, 53457), (18, 53475), (27, 53607), (29, 53619), (30, 53628),

Gene: Thing3_72 Start: 54209, Stop: 54472, Start Num: 13
Candidate Starts for Thing3_72:
(Start: 13 @54209 has 52 MA's), (16, 54251), (18, 54269), (23, 54341), (29, 54413), (30, 54422),

Gene: Tycho_71 Start: 53228, Stop: 53494, Start Num: 13
Candidate Starts for Tycho_71:
(1, 52967), (2, 53090), (4, 53114), (Start: 13 @53228 has 52 MA's), (16, 53270), (18, 53288), (27, 53420), (29, 53432), (30, 53441),

Gene: Vivi2_78 Start: 55466, Stop: 55729, Start Num: 13
Candidate Starts for Vivi2_78:
(Start: 13 @55466 has 52 MA's), (16, 55508), (17, 55511), (18, 55526), (23, 55598), (29, 55670), (30, 55679),

Gene: Whitney_72 Start: 44432, Stop: 44701, Start Num: 10
Candidate Starts for Whitney_72:
(Start: 10 @44432 has 21 MA's), (14, 44462), (18, 44516), (21, 44567), (23, 44588), (25, 44618), (28, 44648), (31, 44663), (32, 44666),

Gene: YorkOnyx_73 Start: 53429, Stop: 53695, Start Num: 13
Candidate Starts for YorkOnyx_73:
(4, 53315), (6, 53348), (Start: 13 @53429 has 52 MA's), (16, 53471), (18, 53489), (29, 53633), (30, 53642),

Gene: Yvonnetastic_103 Start: 60354, Stop: 60623, Start Num: 11
Candidate Starts for Yvonnetastic_103:
(3, 60249), (Start: 11 @60354 has 3 MA's), (15, 60381), (19, 60459), (20, 60465),