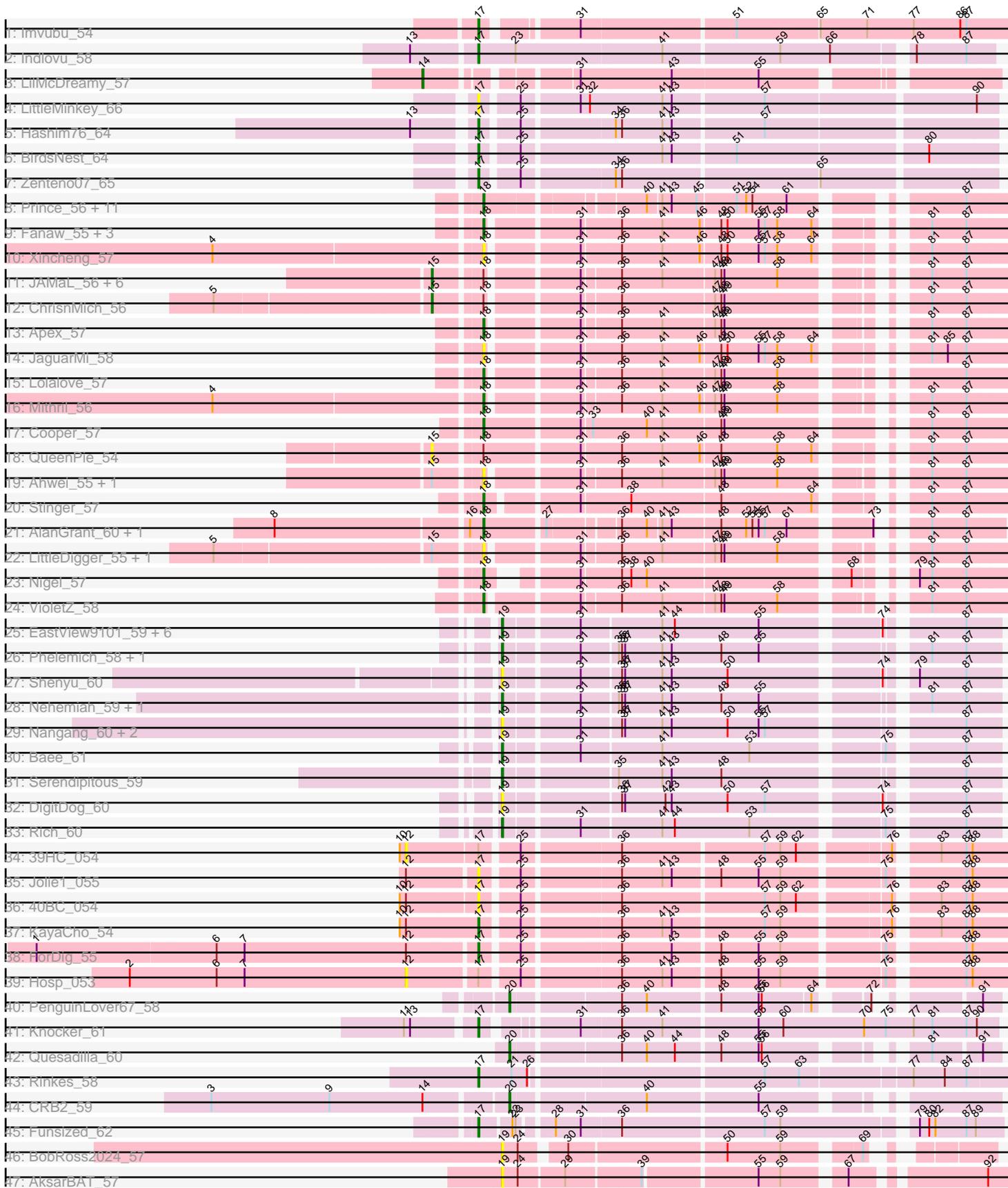# Pham 287832

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 287832 Report

This analysis was run 03/28/26 on database version 641.

Pham number 287832 has 80 members, 30 are drafts.

Phages represented in each track:
• Track 1 : Imvubu_54
• Track 2 : Indlovu_58
• Track 3 : LilMcDreamy_57
• Track 4 : LittleMinkey_66
• Track 5 : Hashim76_64
• Track 6 : BirdsNest_64
• Track 7 : Zenteno07_65
• Track 8 : Prince_56, BobbyK_57, Zemanar_57, Heath_55, JoyceMaria_56, Hydro_56, Frederick_57, BrownCNA_58, Austelle_57, Waleliano_56, Mudslide_56, Hangman_56
• Track 9 : Fanaw_55, Fortunato_57, RawrgerThat_57, Magpie_55
• Track 10 : Xincheng_57
• Track 11 : JAMaL_56, GinPorsche_56, Antihero_55, Poster_55, Epah_55, Hally898_55, Lambano_55
• Track 12 : ChrisnMich_56
• Track 13 : Apex_57
• Track 14 : JaguarMi_58
• Track 15 : Lolalove_57
• Track 16 : Mithril_56
• Track 17 : Cooper_57
• Track 18 : QueenPie_54
• Track 19 : Ahwei_55, Nanao_55
• Track 20 : Stinger_57
• Track 21 : AlanGrant_60, Vincenzo_59
• Track 22 : LittleDigger_55, Renkei_55
• Track 23 : Nigel_57
• Track 24 : VioletZ_58
• Track 25 : EastView9101_59, Suigeneris_61, Acadian_60, Reccee_60, Donny_61, SirJeffery_59, Rita130_59
• Track 26 : Phelemich_58, Reprobate_59
• Track 27 : Shenyu_60
• Track 28 : Nehemiah_59, Mysterious_58
• Track 29 : Nangang_60, StinkyVeggy_60, KarasumaRum_60
• Track 30 : Baee_61
• Track 31 : Serendipitous_59
• Track 32 : DigitDog_60
• Track 33 : Rich_60

- Track 34 : 39HC_054
- Track 35 : Jolie1_055
- Track 36 : 40BC_054
- Track 37 : KayaCho_54
- Track 38 : ForDig_55
- Track 39 : Hosp_053
- Track 40 : PenguinLover67_58
- Track 41 : Knocker_61
- Track 42 : Quesadilla_60
- Track 43 : Rinkes_58
- Track 44 : CRB2_59
- Track 45 : Funsized_62
- Track 46 : BobRoss2024_57
- Track 47 : AksarBAT_57

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

The start number called the most often in the published annotations is 18, it was called in 23 of the 50 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Ahwei_55, AlanGrant_60, Apex_57, Austelle_57, BobbyK_57, BrownCNA_58, Cooper_57, Fanaw_55, Fortunato_57, Frederick_57, Hangman_56, Heath_55, Hydro_56, JaguarMi_58, JoyceMaria_56, LittleDigger_55, Lolalove_57, Magpie_55, Mithril_56, Mudslide_56, Nanao_55, Nigel_57, Prince_56, RawrgerThat_57, Renkei_55, Stinger_57, Vincenzo_59, VioletZ_58, Waleliano_56, Xincheng_57, Zemanar_57,

Genes that have the "Most Annotated" start but do not call it:
- Antihero_55, ChrisnMich_56, Epah_55, GinPorsche_56, Hally898_55, JAMaL_56, Lambano_55, Poster_55, QueenPie_54,

Genes that do not have the "Most Annotated" start:
- 39HC_054, 40BC_054, Acadian_60, AksarBAT_57, Baee_61, BirdsNest_64, BobRoss2024_57, CRB2_59, DigitDog_60, Donny_61, EastView9101_59, ForDig_55, Funsized_62, Hashim76_64, Hosp_053, Imvubu_54, Indlovu_58, Jolie1_055, KarasumaRum_60, KayaCho_54, Knocker_61, LilMcDreamy_57, LittleMinkey_66, Mysterious_58, Nangang_60, Nehemiah_59, PenguinLover67_58, Phelemich_58, Quesadilla_60, Reccee_60, Reprobate_59, Rich_60, Rinkes_58, Rita130_59, Serendipitous_59, Shenyu_60, SirJeffery_59, StinkyVeggy_60, Suigeneris_61, Zenteno07_65,

Summary by start number:

Start 12:
- Found in 6 of 80 (7.5%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: 39HC_054 (B6), Hosp_053 (B6),

Start 14:
• Found in 2 of 80 (2.5%) of genes in pham
• Manual Annotations of this start: 1 of 50
• Called 50.0% of time when present
• Phage (with cluster) where this start called: LilMcDreamy_57 (B12),

Start 15:
• Found in 13 of 80 (16.2%) of genes in pham
• Manual Annotations of this start: 3 of 50
• Called 69.2% of time when present
• Phage (with cluster) where this start called: Antihero_55 (B4), ChrisnMich_56 (B4), Epah_55 (B4), GinPorsche_56 (B4), Hally898_55 (B4), JAMaL_56 (B4), Lambano_55 (B4), Poster_55 (B4), QueenPie_54 (B4),

Start 17:
• Found in 15 of 80 (18.8%) of genes in pham
• Manual Annotations of this start: 10 of 50
• Called 86.7% of time when present
• Phage (with cluster) where this start called: 40BC_054 (B6), BirdsNest_64 (B13), ForDig_55 (B6), Funsized_62 (B9), Hashim76_64 (B13), Imvubu_54 (B10), Indlovu_58 (B11), Jolie1_055 (B6), KayaCho_54 (B6), Knocker_61 (B9), LittleMinkey_66 (B13), Rinkes_58 (B9), Zenteno07_65 (B13),

Start 18:
• Found in 40 of 80 (50.0%) of genes in pham
• Manual Annotations of this start: 23 of 50
• Called 77.5% of time when present
• Phage (with cluster) where this start called: Ahwei_55 (B4), AlanGrant_60 (B4), Apex_57 (B4), Austelle_57 (B4), BobbyK_57 (B4), BrownCNA_58 (B4), Cooper_57 (B4), Fanaw_55 (B4), Fortunato_57 (B4), Frederick_57 (B4), Hangman_56 (B4), Heath_55 (B4), Hydro_56 (B4), JaguarMi_58 (B4), JoyceMaria_56 (B4), LittleDigger_55 (B4), Lolalove_57 (B4), Magpie_55 (B4), Mithril_56 (B4), Mudslide_56 (B4), Nanao_55 (B4), Nigel_57 (B4), Prince_56 (B4), RawrgerThat_57 (B4), Renkei_55 (B4), Stinger_57 (B4), Vincenzo_59 (B4), VioletZ_58 (B4), Waleliano_56 (B4), Xincheng_57 (B4), Zemanar_57 (B4),

Start 19:
• Found in 21 of 80 (26.2%) of genes in pham
• Manual Annotations of this start: 10 of 50
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acadian_60 (B5), AksarBAT_57 (DR), Baee_61 (B5), BobRoss2024_57 (DR), DigitDog_60 (B5), Donny_61 (B5), EastView9101_59 (B5), KarasumaRum_60 (B5), Mysterious_58 (B5), Nangang_60 (B5), Nehemiah_59 (B5), Phelemich_58 (B5), Reccee_60 (B5), Reprobate_59 (B5), Rich_60 (B5), Rita130_59 (B5), Serendipitous_59 (B5), Shenyu_60 (B5), SirJeffery_59 (B5), StinkyVeggy_60 (B5), Suigeneris_61 (B5),

Start 20:
• Found in 3 of 80 (3.8%) of genes in pham
• Manual Annotations of this start: 3 of 50
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CRB2_59 (B9), PenguinLover67_58 (B9), Quesadilla_60 (B9),

Summary by clusters:

There are 9 clusters represented in this pham: B4, B5, B6, B12, B13, B10, B11, DR, B9,

Info for manual annotations of cluster B10:
•Start number 17 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:
•Start number 17 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:
•Start number 14 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:
•Start number 17 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B4:
•Start number 15 was manually annotated 3 times for cluster B4.
•Start number 18 was manually annotated 23 times for cluster B4.

Info for manual annotations of cluster B5:
•Start number 19 was manually annotated 10 times for cluster B5.

Info for manual annotations of cluster B6:
•Start number 17 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster B9:
•Start number 17 was manually annotated 3 times for cluster B9.
•Start number 20 was manually annotated 3 times for cluster B9.

Gene Information:
Gene: 39HC_054 Start: 53638, Stop: 53117, Start Num: 12
Candidate Starts for 39HC_054:
(10, 53644), (12, 53638), (Start: 17 @53572 has 10 MA's), (25, 53542), (36, 53455), (57, 53323), (59, 53308), (62, 53293), (76, 53215), (83, 53182), (87, 53158), (88, 53152),

Gene: 40BC_054 Start: 53572, Stop: 53117, Start Num: 17
Candidate Starts for 40BC_054:
(10, 53644), (12, 53638), (Start: 17 @53572 has 10 MA's), (25, 53542), (36, 53455), (57, 53323), (59, 53308), (62, 53293), (76, 53215), (83, 53182), (87, 53158), (88, 53152),

Gene: Acadian_60 Start: 55536, Stop: 55105, Start Num: 19
Candidate Starts for Acadian_60:
(Start: 19 @55536 has 10 MA's), (31, 55470), (41, 55395), (44, 55383), (55, 55302), (74, 55200), (87, 55137),

Gene: Ahwei_55 Start: 54713, Stop: 54285, Start Num: 18

Candidate Starts for Ahwei_55:
(Start: 15 @54752 has 3 MA's), (Start: 18 @54713 has 23 MA's), (31, 54635), (36, 54602), (41, 54563), (47, 54515), (48, 54509), (49, 54506), (58, 54455), (81, 54356), (87, 54323),

Gene: AksarBAT_57 Start: 48900, Stop: 48469, Start Num: 19
Candidate Starts for AksarBAT_57:
(Start: 19 @48900 has 10 MA's), (24, 48885), (29, 48843), (39, 48774), (55, 48672), (59, 48651), (67, 48600), (92, 48489),

Gene: AlanGrant_60 Start: 56832, Stop: 56401, Start Num: 18
Candidate Starts for AlanGrant_60:
(8, 57021), (16, 56844), (Start: 18 @56832 has 23 MA's), (27, 56778), (36, 56718), (40, 56694), (41, 56682), (43, 56673), (48, 56628), (52, 56604), (54, 56598), (55, 56592), (57, 56586), (61, 56565), (73, 56496), (81, 56469), (87, 56436),

Gene: Antihero_55 Start: 54750, Stop: 54283, Start Num: 15
Candidate Starts for Antihero_55:
(Start: 15 @54750 has 3 MA's), (Start: 18 @54711 has 23 MA's), (31, 54633), (36, 54600), (41, 54561), (47, 54513), (48, 54507), (49, 54504), (58, 54453), (81, 54354), (87, 54321),

Gene: Apex_57 Start: 55933, Stop: 55505, Start Num: 18
Candidate Starts for Apex_57:
(Start: 18 @55933 has 23 MA's), (31, 55855), (36, 55822), (41, 55783), (47, 55735), (48, 55729), (49, 55726), (81, 55576), (87, 55543),

Gene: Austelle_57 Start: 56389, Stop: 55958, Start Num: 18
Candidate Starts for Austelle_57:
(Start: 18 @56389 has 23 MA's), (40, 56254), (41, 56242), (43, 56233), (45, 56209), (51, 56173), (52, 56164), (54, 56158), (61, 56125), (87, 55996),

Gene: Baee_61 Start: 56597, Stop: 56163, Start Num: 19
Candidate Starts for Baee_61:
(Start: 19 @56597 has 10 MA's), (31, 56531), (41, 56456), (53, 56372), (75, 56258), (87, 56195),

Gene: BirdsNest_64 Start: 55434, Stop: 54970, Start Num: 17
Candidate Starts for BirdsNest_64:
(Start: 17 @55434 has 10 MA's), (25, 55404), (41, 55275), (43, 55266), (51, 55209), (80, 55035),

Gene: BobRoss2024_57 Start: 48242, Stop: 47850, Start Num: 19
Candidate Starts for BobRoss2024_57:
(Start: 19 @48242 has 10 MA's), (24, 48227), (30, 48191), (50, 48047), (59, 47996), (69, 47933),

Gene: BobbyK_57 Start: 55699, Stop: 55268, Start Num: 18
Candidate Starts for BobbyK_57:
(Start: 18 @55699 has 23 MA's), (40, 55564), (41, 55552), (43, 55543), (45, 55519), (51, 55483), (52, 55474), (54, 55468), (61, 55435), (87, 55306),

Gene: BrownCNA_58 Start: 56056, Stop: 55625, Start Num: 18
Candidate Starts for BrownCNA_58:
(Start: 18 @56056 has 23 MA's), (40, 55921), (41, 55909), (43, 55900), (45, 55876), (51, 55840), (52, 55831), (54, 55825), (61, 55792), (87, 55663),

Gene: CRB2_59 Start: 56619, Stop: 56215, Start Num: 20

Candidate Starts for CRB2_59:
(3, 56895), (9, 56781), (Start: 14 @56691 has 1 MA's), (Start: 20 @56619 has 3 MA's), (40, 56499), (55, 56397),

Gene: ChrisnMich_56 Start: 54764, Stop: 54297, Start Num: 15
Candidate Starts for ChrisnMich_56:
(5, 54962), (Start: 15 @54764 has 3 MA's), (Start: 18 @54725 has 23 MA's), (31, 54647), (36, 54614), (47, 54527), (48, 54521), (49, 54518), (81, 54368), (87, 54335),

Gene: Cooper_57 Start: 54888, Stop: 54442, Start Num: 18
Candidate Starts for Cooper_57:
(Start: 18 @54888 has 23 MA's), (31, 54801), (33, 54792), (40, 54741), (41, 54726), (48, 54672), (49, 54669), (81, 54513), (87, 54480),

Gene: DigitDog_60 Start: 55479, Stop: 55048, Start Num: 19
Candidate Starts for DigitDog_60:
(Start: 19 @55479 has 10 MA's), (36, 55377), (37, 55374), (42, 55335), (43, 55329), (50, 55275), (57, 55239), (74, 55143), (87, 55080),

Gene: Donny_61 Start: 55582, Stop: 55151, Start Num: 19
Candidate Starts for Donny_61:
(Start: 19 @55582 has 10 MA's), (31, 55516), (41, 55441), (44, 55429), (55, 55348), (74, 55246), (87, 55183),

Gene: EastView9101_59 Start: 55391, Stop: 54960, Start Num: 19
Candidate Starts for EastView9101_59:
(Start: 19 @55391 has 10 MA's), (31, 55325), (41, 55250), (44, 55238), (55, 55157), (74, 55055), (87, 54992),

Gene: Epah_55 Start: 54750, Stop: 54283, Start Num: 15
Candidate Starts for Epah_55:
(Start: 15 @54750 has 3 MA's), (Start: 18 @54711 has 23 MA's), (31, 54633), (36, 54600), (41, 54561), (47, 54513), (48, 54507), (49, 54504), (58, 54453), (81, 54354), (87, 54321),

Gene: Fanaw_55 Start: 55608, Stop: 55174, Start Num: 18
Candidate Starts for Fanaw_55:
(Start: 18 @55608 has 23 MA's), (31, 55530), (36, 55494), (41, 55455), (46, 55419), (48, 55401), (50, 55395), (55, 55365), (57, 55359), (58, 55347), (64, 55314), (81, 55245), (87, 55212),

Gene: ForDig_55 Start: 53897, Stop: 53439, Start Num: 17
Candidate Starts for ForDig_55:
(1, 54314), (6, 54143), (7, 54116), (12, 53960), (Start: 17 @53897 has 10 MA's), (25, 53867), (36, 53780), (43, 53732), (48, 53690), (55, 53654), (59, 53633), (75, 53543), (87, 53480), (88, 53474),

Gene: Fortunato_57 Start: 55748, Stop: 55314, Start Num: 18
Candidate Starts for Fortunato_57:
(Start: 18 @55748 has 23 MA's), (31, 55670), (36, 55634), (41, 55595), (46, 55559), (48, 55541), (50, 55535), (55, 55505), (57, 55499), (58, 55487), (64, 55454), (81, 55385), (87, 55352),

Gene: Frederick_57 Start: 55642, Stop: 55211, Start Num: 18
Candidate Starts for Frederick_57:
(Start: 18 @55642 has 23 MA's), (40, 55507), (41, 55495), (43, 55486), (45, 55462), (51, 55426), (52, 55417), (54, 55411), (61, 55378), (87, 55249),

Gene: Funsized_62 Start: 57679, Stop: 57218, Start Num: 17
Candidate Starts for Funsized_62:
(Start: 17 @57679 has 10 MA's), (22, 57652), (23, 57649), (28, 57622), (31, 57598), (36, 57562), (57, 57430), (59, 57415), (79, 57298), (80, 57289), (82, 57283), (87, 57253), (89, 57244),

Gene: GinPorsche_56 Start: 54750, Stop: 54283, Start Num: 15
Candidate Starts for GinPorsche_56:
(Start: 15 @54750 has 3 MA's), (Start: 18 @54711 has 23 MA's), (31, 54633), (36, 54600), (41, 54561), (47, 54513), (48, 54507), (49, 54504), (58, 54453), (81, 54354), (87, 54321),

Gene: Hally898_55 Start: 54765, Stop: 54298, Start Num: 15
Candidate Starts for Hally898_55:
(Start: 15 @54765 has 3 MA's), (Start: 18 @54726 has 23 MA's), (31, 54648), (36, 54615), (41, 54576), (47, 54528), (48, 54522), (49, 54519), (58, 54468), (81, 54369), (87, 54336),

Gene: Hangman_56 Start: 55799, Stop: 55368, Start Num: 18
Candidate Starts for Hangman_56:
(Start: 18 @55799 has 23 MA's), (40, 55664), (41, 55652), (43, 55643), (45, 55619), (51, 55583), (52, 55574), (54, 55568), (61, 55535), (87, 55406),

Gene: Hashim76_64 Start: 55719, Stop: 55258, Start Num: 17
Candidate Starts for Hashim76_64:
(13, 55770), (Start: 17 @55719 has 10 MA's), (25, 55689), (34, 55608), (36, 55602), (41, 55563), (43, 55554), (57, 55470),

Gene: Heath_55 Start: 55425, Stop: 54994, Start Num: 18
Candidate Starts for Heath_55:
(Start: 18 @55425 has 23 MA's), (40, 55290), (41, 55278), (43, 55269), (45, 55245), (51, 55209), (52, 55200), (54, 55194), (61, 55161), (87, 55032),

Gene: Hosp_053 Start: 52031, Stop: 51510, Start Num: 12
Candidate Starts for Hosp_053:
(2, 52298), (6, 52214), (7, 52187), (12, 52031), (Start: 17 @51968 has 10 MA's), (25, 51938), (36, 51851), (41, 51812), (43, 51803), (48, 51761), (55, 51725), (59, 51704), (75, 51614), (87, 51551), (88, 51545),

Gene: Hydro_56 Start: 55776, Stop: 55345, Start Num: 18
Candidate Starts for Hydro_56:
(Start: 18 @55776 has 23 MA's), (40, 55641), (41, 55629), (43, 55620), (45, 55596), (51, 55560), (52, 55551), (54, 55545), (61, 55512), (87, 55383),

Gene: Imvubu_54 Start: 53064, Stop: 52585, Start Num: 17
Candidate Starts for Imvubu_54:
(Start: 17 @53064 has 10 MA's), (31, 52989), (51, 52848), (65, 52770), (71, 52725), (77, 52680), (86, 52635), (87, 52629),

Gene: Indlovu_58 Start: 55544, Stop: 55074, Start Num: 17
Candidate Starts for Indlovu_58:
(13, 55601), (Start: 17 @55544 has 10 MA's), (23, 55508), (41, 55370), (59, 55262), (66, 55214), (78, 55148), (87, 55100),

Gene: JAMaL_56 Start: 55857, Stop: 55390, Start Num: 15

Candidate Starts for JAMaL_56:
(Start: 15 @55857 has 3 MA's), (Start: 18 @55818 has 23 MA's), (31, 55740), (36, 55707), (41, 55668), (47, 55620), (48, 55614), (49, 55611), (58, 55560), (81, 55461), (87, 55428),

Gene: JaguarMi_58 Start: 56843, Stop: 56409, Start Num: 18
Candidate Starts for JaguarMi_58:
(Start: 18 @56843 has 23 MA's), (31, 56765), (36, 56729), (41, 56690), (46, 56654), (48, 56636), (50, 56630), (55, 56600), (57, 56594), (58, 56582), (64, 56549), (81, 56480), (85, 56465), (87, 56447),

Gene: Jolie1_055 Start: 53868, Stop: 53410, Start Num: 17
Candidate Starts for Jolie1_055:
(12, 53931), (Start: 17 @53868 has 10 MA's), (25, 53838), (36, 53751), (41, 53712), (43, 53703), (48, 53661), (55, 53625), (59, 53604), (75, 53514), (87, 53451), (88, 53445),

Gene: JoyceMaria_56 Start: 55679, Stop: 55248, Start Num: 18
Candidate Starts for JoyceMaria_56:
(Start: 18 @55679 has 23 MA's), (40, 55544), (41, 55532), (43, 55523), (45, 55499), (51, 55463), (52, 55454), (54, 55448), (61, 55415), (87, 55286),

Gene: KarasumaRum_60 Start: 55658, Stop: 55227, Start Num: 19
Candidate Starts for KarasumaRum_60:
(Start: 19 @55658 has 10 MA's), (31, 55592), (36, 55556), (37, 55553), (41, 55517), (43, 55508), (50, 55454), (55, 55424), (57, 55418), (87, 55259),

Gene: KayaCho_54 Start: 53811, Stop: 53356, Start Num: 17
Candidate Starts for KayaCho_54:
(10, 53886), (12, 53880), (Start: 17 @53811 has 10 MA's), (25, 53781), (36, 53694), (41, 53655), (43, 53646), (57, 53562), (59, 53547), (76, 53454), (83, 53421), (87, 53397), (88, 53391),

Gene: Knocker_61 Start: 57083, Stop: 56619, Start Num: 17
Candidate Starts for Knocker_61:
(11, 57143), (13, 57137), (Start: 17 @57083 has 10 MA's), (31, 57011), (36, 56975), (41, 56936), (55, 56849), (60, 56825), (70, 56747), (75, 56726), (77, 56699), (81, 56681), (87, 56648), (90, 56639),

Gene: Lambano_55 Start: 54765, Stop: 54298, Start Num: 15
Candidate Starts for Lambano_55:
(Start: 15 @54765 has 3 MA's), (Start: 18 @54726 has 23 MA's), (31, 54648), (36, 54615), (41, 54576), (47, 54528), (48, 54522), (49, 54519), (58, 54468), (81, 54369), (87, 54336),

Gene: LilMcDreamy_57 Start: 54942, Stop: 54460, Start Num: 14
Candidate Starts for LilMcDreamy_57:
(Start: 14 @54942 has 1 MA's), (31, 54825), (43, 54738), (55, 54657),

Gene: LittleDigger_55 Start: 54736, Stop: 54308, Start Num: 18
Candidate Starts for LittleDigger_55:
(5, 54973), (Start: 15 @54775 has 3 MA's), (Start: 18 @54736 has 23 MA's), (31, 54658), (36, 54625), (41, 54586), (47, 54538), (48, 54532), (49, 54529), (58, 54478), (81, 54379), (87, 54346),

Gene: LittleMinkey_66 Start: 55495, Stop: 55031, Start Num: 17
Candidate Starts for LittleMinkey_66:
(Start: 17 @55495 has 10 MA's), (25, 55465), (31, 55414), (32, 55405), (41, 55336), (43, 55327), (57, 55243), (90, 55051),

Gene: Lolalove_57 Start: 55756, Stop: 55328, Start Num: 18
Candidate Starts for Lolalove_57:
(Start: 18 @55756 has 23 MA's), (31, 55678), (36, 55645), (41, 55606), (47, 55558), (48, 55552), (49, 55549), (58, 55498), (87, 55366),

Gene: Magpie_55 Start: 55681, Stop: 55247, Start Num: 18
Candidate Starts for Magpie_55:
(Start: 18 @55681 has 23 MA's), (31, 55603), (36, 55567), (41, 55528), (46, 55492), (48, 55474), (50, 55468), (55, 55438), (57, 55432), (58, 55420), (64, 55387), (81, 55318), (87, 55285),

Gene: Mithril_56 Start: 55751, Stop: 55323, Start Num: 18
Candidate Starts for Mithril_56:
(4, 56000), (Start: 18 @55751 has 23 MA's), (31, 55673), (36, 55640), (41, 55601), (46, 55565), (47, 55553), (48, 55547), (49, 55544), (58, 55493), (81, 55394), (87, 55361),

Gene: Mudslide_56 Start: 56021, Stop: 55590, Start Num: 18
Candidate Starts for Mudslide_56:
(Start: 18 @56021 has 23 MA's), (40, 55886), (41, 55874), (43, 55865), (45, 55841), (51, 55805), (52, 55796), (54, 55790), (61, 55757), (87, 55628),

Gene: Mysterious_58 Start: 55658, Stop: 55227, Start Num: 19
Candidate Starts for Mysterious_58:
(Start: 19 @55658 has 10 MA's), (31, 55592), (35, 55559), (36, 55556), (37, 55553), (41, 55517), (43, 55508), (48, 55460), (55, 55424), (81, 55292), (87, 55259),

Gene: Nanao_55 Start: 54716, Stop: 54288, Start Num: 18
Candidate Starts for Nanao_55:
(Start: 15 @54755 has 3 MA's), (Start: 18 @54716 has 23 MA's), (31, 54638), (36, 54605), (41, 54566), (47, 54518), (48, 54512), (49, 54509), (58, 54458), (81, 54359), (87, 54326),

Gene: Nangang_60 Start: 55837, Stop: 55406, Start Num: 19
Candidate Starts for Nangang_60:
(Start: 19 @55837 has 10 MA's), (31, 55771), (36, 55735), (37, 55732), (41, 55696), (43, 55687), (50, 55633), (55, 55603), (57, 55597), (87, 55438),

Gene: Nehemiah_59 Start: 55658, Stop: 55227, Start Num: 19
Candidate Starts for Nehemiah_59:
(Start: 19 @55658 has 10 MA's), (31, 55592), (35, 55559), (36, 55556), (37, 55553), (41, 55517), (43, 55508), (48, 55460), (55, 55424), (81, 55292), (87, 55259),

Gene: Nigel_57 Start: 55086, Stop: 54667, Start Num: 18
Candidate Starts for Nigel_57:
(Start: 18 @55086 has 23 MA's), (31, 55023), (36, 54987), (38, 54978), (40, 54963), (68, 54783), (79, 54750), (81, 54738), (87, 54705),

Gene: PenguinLover67_58 Start: 55676, Stop: 55281, Start Num: 20
Candidate Starts for PenguinLover67_58:
(Start: 20 @55676 has 3 MA's), (36, 55580), (40, 55556), (48, 55490), (55, 55454), (56, 55451), (64, 55406), (72, 55367), (91, 55298),

Gene: Phelemich_58 Start: 55654, Stop: 55223, Start Num: 19
Candidate Starts for Phelemich_58:

(Start: 19 @55654 has 10 MA's), (31, 55588), (35, 55555), (36, 55552), (37, 55549), (41, 55513), (43, 55504), (48, 55456), (55, 55420), (81, 55288), (87, 55255),

Gene: Poster_55 Start: 54756, Stop: 54289, Start Num: 15
Candidate Starts for Poster_55:
(Start: 15 @54756 has 3 MA's), (Start: 18 @54717 has 23 MA's), (31, 54639), (36, 54606), (41, 54567), (47, 54519), (48, 54513), (49, 54510), (58, 54459), (81, 54360), (87, 54327),

Gene: Prince_56 Start: 55934, Stop: 55503, Start Num: 18
Candidate Starts for Prince_56:
(Start: 18 @55934 has 23 MA's), (40, 55799), (41, 55787), (43, 55778), (45, 55754), (51, 55718), (52, 55709), (54, 55703), (61, 55670), (87, 55541),

Gene: QueenPie_54 Start: 55489, Stop: 55007, Start Num: 15
Candidate Starts for QueenPie_54:
(Start: 15 @55489 has 3 MA's), (Start: 18 @55450 has 23 MA's), (31, 55363), (36, 55327), (41, 55288), (46, 55252), (48, 55234), (58, 55180), (64, 55147), (81, 55078), (87, 55045),

Gene: Quesadilla_60 Start: 55946, Stop: 55548, Start Num: 20
Candidate Starts for Quesadilla_60:
(Start: 20 @55946 has 3 MA's), (36, 55850), (40, 55826), (44, 55799), (48, 55760), (55, 55724), (56, 55721), (81, 55607), (91, 55565),

Gene: RawrgerThat_57 Start: 55774, Stop: 55343, Start Num: 18
Candidate Starts for RawrgerThat_57:
(Start: 18 @55774 has 23 MA's), (31, 55696), (36, 55660), (41, 55621), (46, 55588), (48, 55570), (50, 55564), (55, 55534), (57, 55528), (58, 55516), (64, 55483), (81, 55414), (87, 55381),

Gene: Reccee_60 Start: 55665, Stop: 55234, Start Num: 19
Candidate Starts for Reccee_60:
(Start: 19 @55665 has 10 MA's), (31, 55599), (41, 55524), (44, 55512), (55, 55431), (74, 55329), (87, 55266),

Gene: Renkei_55 Start: 54730, Stop: 54302, Start Num: 18
Candidate Starts for Renkei_55:
(5, 54967), (Start: 15 @54769 has 3 MA's), (Start: 18 @54730 has 23 MA's), (31, 54652), (36, 54619), (41, 54580), (47, 54532), (48, 54526), (49, 54523), (58, 54472), (81, 54373), (87, 54340),

Gene: Reprobate_59 Start: 55659, Stop: 55228, Start Num: 19
Candidate Starts for Reprobate_59:
(Start: 19 @55659 has 10 MA's), (31, 55593), (35, 55560), (36, 55557), (37, 55554), (41, 55518), (43, 55509), (48, 55461), (55, 55425), (81, 55293), (87, 55260),

Gene: Rich_60 Start: 56869, Stop: 56435, Start Num: 19
Candidate Starts for Rich_60:
(Start: 19 @56869 has 10 MA's), (31, 56803), (41, 56728), (44, 56716), (53, 56644), (75, 56530), (87, 56467),

Gene: Rinkes_58 Start: 55585, Stop: 55103, Start Num: 17
Candidate Starts for Rinkes_58:
(Start: 17 @55585 has 10 MA's), (21, 55555), (26, 55540), (57, 55330), (63, 55297), (77, 55195), (84, 55165), (87, 55144),

Gene: Rita130_59 Start: 55478, Stop: 55047, Start Num: 19
Candidate Starts for Rita130_59:
(Start: 19 @55478 has 10 MA's), (31, 55412), (41, 55337), (44, 55325), (55, 55244), (74, 55142), (87, 55079),

Gene: Serendipitous_59 Start: 55249, Stop: 54818, Start Num: 19
Candidate Starts for Serendipitous_59:
(Start: 19 @55249 has 10 MA's), (35, 55150), (41, 55108), (43, 55099), (48, 55051), (87, 54850),

Gene: Shenyu_60 Start: 55861, Stop: 55430, Start Num: 19
Candidate Starts for Shenyu_60:
(Start: 19 @55861 has 10 MA's), (31, 55795), (36, 55759), (37, 55756), (41, 55720), (43, 55711), (50, 55657), (74, 55525), (79, 55507), (87, 55462),

Gene: SirJeffery_59 Start: 55613, Stop: 55182, Start Num: 19
Candidate Starts for SirJeffery_59:
(Start: 19 @55613 has 10 MA's), (31, 55547), (41, 55472), (44, 55460), (55, 55379), (74, 55277), (87, 55214),

Gene: Stinger_57 Start: 54647, Stop: 54213, Start Num: 18
Candidate Starts for Stinger_57:
(Start: 18 @54647 has 23 MA's), (31, 54569), (38, 54524), (48, 54440), (64, 54353), (81, 54284), (87, 54251),

Gene: StinkyVeggy_60 Start: 55658, Stop: 55227, Start Num: 19
Candidate Starts for StinkyVeggy_60:
(Start: 19 @55658 has 10 MA's), (31, 55592), (36, 55556), (37, 55553), (41, 55517), (43, 55508), (50, 55454), (55, 55424), (57, 55418), (87, 55259),

Gene: Suigeneris_61 Start: 55734, Stop: 55303, Start Num: 19
Candidate Starts for Suigeneris_61:
(Start: 19 @55734 has 10 MA's), (31, 55668), (41, 55593), (44, 55581), (55, 55500), (74, 55398), (87, 55335),

Gene: Vincenzo_59 Start: 56862, Stop: 56431, Start Num: 18
Candidate Starts for Vincenzo_59:
(8, 57051), (16, 56874), (Start: 18 @56862 has 23 MA's), (27, 56808), (36, 56748), (40, 56724), (41, 56712), (43, 56703), (48, 56658), (52, 56634), (54, 56628), (55, 56622), (57, 56616), (61, 56595), (73, 56526), (81, 56499), (87, 56466),

Gene: VioletZ_58 Start: 55847, Stop: 55419, Start Num: 18
Candidate Starts for VioletZ_58:
(Start: 18 @55847 has 23 MA's), (31, 55769), (36, 55736), (41, 55697), (47, 55649), (48, 55643), (49, 55640), (58, 55589), (81, 55490), (87, 55457),

Gene: Waleliano_56 Start: 55788, Stop: 55357, Start Num: 18
Candidate Starts for Waleliano_56:
(Start: 18 @55788 has 23 MA's), (40, 55653), (41, 55641), (43, 55632), (45, 55608), (51, 55572), (52, 55563), (54, 55557), (61, 55524), (87, 55395),

Gene: Xincheng_57 Start: 56816, Stop: 56382, Start Num: 18
Candidate Starts for Xincheng_57:

(4, 57065), (Start: 18 @56816 has 23 MA's), (31, 56738), (36, 56702), (41, 56663), (46, 56627), (48, 56609), (50, 56603), (55, 56573), (57, 56567), (58, 56555), (64, 56522), (81, 56453), (87, 56420),

Gene: Zemanar_57 Start: 55620, Stop: 55189, Start Num: 18
Candidate Starts for Zemanar_57:
(Start: 18 @55620 has 23 MA's), (40, 55485), (41, 55473), (43, 55464), (45, 55440), (51, 55404), (52, 55395), (54, 55389), (61, 55356), (87, 55227),

Gene: Zenteno07_65 Start: 55334, Stop: 54873, Start Num: 17
Candidate Starts for Zenteno07_65:
(Start: 17 @55334 has 10 MA's), (25, 55304), (34, 55223), (36, 55217), (65, 55034),