



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 287892 Report

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

Pham number 287892 has 64 members, 25 are drafts.

Phages represented in each track:

- Track 1 : Indlovu_69
- Track 2 : LilMcDreamy_70
- Track 3 : LittleMinkey_82
- Track 4 : Apex_69
- Track 5 : Poster_66, ChrisnMich_68, Hally898_66, Lambano_66, Ahwei_66, Nanao_67
- Track 6 : JaguarMi_69, Xincheng_68
- Track 7 : Austelle_68, JoyceMaria_68
- Track 8 : AlanGrant_72
- Track 9 : Renkei_66, LittleDigger_66
- Track 10 : Fortunato_69, RawrgerThat_69
- Track 11 : JAMaL_68
- Track 12 : Nigel_66
- Track 13 : Lolalove_70
- Track 14 : BobbyK_69
- Track 15 : Hydro_69
- Track 16 : Frederick_70
- Track 17 : Mudslide_68
- Track 18 : Epah_66, Antihero_66, GinPorsche_68
- Track 19 : Prince_67
- Track 20 : Fanaw_65
- Track 21 : Cooper_70
- Track 22 : Vincenzo_71
- Track 23 : QueenPie_63
- Track 24 : BrownCNA_70, Waleliano_68
- Track 25 : Zemanar_68, Heath_68
- Track 26 : Mithril_68
- Track 27 : Magpie_66
- Track 28 : VioletZ_70
- Track 29 : Stinger_68
- Track 30 : Hangman_69
- Track 31 : Phelemich_68, Reprobate_70
- Track 32 : DigitDog_72
- Track 33 : KarasumaRum_71, StinkyVeggy_71
- Track 34 : Shenyu_72, Nangang_71
- Track 35 : Mysterious_70
- Track 36 : Serendipitous_70

- Track 37 : Nehemiah_70
- Track 38 : KayaCho_67
- Track 39 : Hosp_065, Jolie1_067
- Track 40 : ForDig_68
- Track 41 : 39HC_069, 40BC_069
- Track 42 : Saguaro_67
- Track 43 : Rinkes_68
- Track 44 : PenguinLover67_69
- Track 45 : CRB2_71
- Track 46 : Quesadilla_70

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

The start number called the most often in the published annotations is 46, it was called in 9 of the 39 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apex_69, BrownCNA_70, Fortunato_69, Hangman_69, Hydro_69, Mudslide_68, RawrgerThat_69, VioletZ_70, Waleliano_68,

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

- Ahwei_66, Antihero_66, Austelle_68, BobbyK_69, ChrisnMich_68, Epah_66, Fanaw_65, Frederick_70, GinPorsche_68, Hally898_66, Heath_68, JAMaL_68, JaguarMi_69, JoyceMaria_68, Lambano_66, LittleDigger_66, Lolalove_70, Magpie_66, Mithril_68, Nanao_67, Nigel_66, Poster_66, Prince_67, QueenPie_63, Renkei_66, Stinger_68, Xincheng_68, Zemanar_68,

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

- 39HC_069, 40BC_069, AlanGrant_72, CRB2_71, Cooper_70, DigitDog_72, ForDig_68, Hosp_065, Indlovu_69, Jolie1_067, KarasumaRum_71, KayaCho_67, LilMcDreamy_70, LittleMinkey_82, Mysterious_70, Nangang_71, Nehemiah_70, PenguinLover67_69, Phelemich_68, Quesadilla_70, Reprobate_70, Rinkes_68, Saguaro_67, Serendipitous_70, Shenyu_72, StinkyVeggy_71, Vincenzo_71,

Summary by start number:

Start 20:

- Found in 40 of 64 (62.5%) of genes in pham
- Manual Annotations of this start: 3 of 39
- Called 7.5% of time when present
- Phage (with cluster) where this start called: Frederick_70 (B4), Nigel_66 (B4), Stinger_68 (B4),

Start 44:

- Found in 1 of 64 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilMcDreamy_70 (B12),

Start 46:

- Found in 37 of 64 (57.8%) of genes in pham
- Manual Annotations of this start: 9 of 39
- Called 24.3% of time when present
- Phage (with cluster) where this start called: Apex_69 (B4), BrownCNA_70 (B4), Fortunato_69 (B4), Hangman_69 (B4), Hydro_69 (B4), Mudslide_68 (B4), RawrgerThat_69 (B4), VioletZ_70 (B4), Waleliano_68 (B4),

Start 47:

- Found in 3 of 64 (4.7%) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 33.3% of time when present
- Phage (with cluster) where this start called: AlanGrant_72 (B4),

Start 48:

- Found in 7 of 64 (10.9%) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Serendipitous_70 (B5),

Start 50:

- Found in 23 of 64 (35.9%) of genes in pham
- Manual Annotations of this start: 8 of 39
- Called 91.3% of time when present
- Phage (with cluster) where this start called: Ahwei_66 (B4), Antihero_66 (B4), BobbyK_69 (B4), ChrisnMich_68 (B4), Epah_66 (B4), Fanaw_65 (B4), GinPorsche_68 (B4), Hally898_66 (B4), Heath_68 (B4), JAMaL_68 (B4), JaguarMi_69 (B4), Lambano_66 (B4), LittleDigger_66 (B4), Lolalove_70 (B4), Magpie_66 (B4), Nanao_67 (B4), Poster_66 (B4), QueenPie_63 (B4), Renkei_66 (B4), Xincheng_68 (B4), Zemanar_68 (B4),

Start 52:

- Found in 1 of 64 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nehemiah_70 (B5),

Start 53:

- Found in 2 of 64 (3.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KarasumaRum_71 (B5), StinkyVeggy_71 (B5),

Start 54:

- Found in 1 of 64 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ForDig_68 (B6),

Start 55:

- Found in 1 of 64 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Rinkes_68 (B9),

Start 56:

- Found in 1 of 64 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LittleMinkey_82 (B13),

Start 59:

- Found in 11 of 64 (17.2%) of genes in pham
- Manual Annotations of this start: 4 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_069 (B6), 40BC_069 (B6), DigitDog_72 (B5), Hosp_065 (B6), Jolie1_067 (B6), KayaCho_67 (B6), Mysterious_70 (B5), Nangang_71 (B5), Phelemich_68 (B5), Reprobate_70 (B5), Shenyu_72 (B5),

Start 60:

- Found in 2 of 64 (3.1%) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Cooper_70 (B4),

Start 61:

- Found in 15 of 64 (23.4%) of genes in pham
- Manual Annotations of this start: 3 of 39
- Called 20.0% of time when present
- Phage (with cluster) where this start called: CRB2_71 (B9), Indlovu_69 (B11), Vincenzo_71 (B4),

Start 66:

- Found in 4 of 64 (6.2%) of genes in pham
- Manual Annotations of this start: 3 of 39
- Called 75.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67_69 (B9), Quesadilla_70 (B9), Saguaro_67 (B7),

Start 69:

- Found in 10 of 64 (15.6%) of genes in pham
- Manual Annotations of this start: 3 of 39
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Austelle_68 (B4), JoyceMaria_68 (B4), Mithril_68 (B4), Prince_67 (B4),

Summary by clusters:

There are 8 clusters represented in this pham: B4, B5, B6, B7, B12, B13, B11, B9,

Info for manual annotations of cluster B11:

- Start number 61 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 44 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B4:

- Start number 20 was manually annotated 3 times for cluster B4.
- Start number 46 was manually annotated 9 times for cluster B4.
- Start number 47 was manually annotated 1 time for cluster B4.
- Start number 50 was manually annotated 8 times for cluster B4.
- Start number 60 was manually annotated 1 time for cluster B4.
- Start number 61 was manually annotated 1 time for cluster B4.
- Start number 69 was manually annotated 3 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 48 was manually annotated 1 time for cluster B5.
- Start number 59 was manually annotated 3 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 54 was manually annotated 1 time for cluster B6.
- Start number 59 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 66 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 55 was manually annotated 1 time for cluster B9.
- Start number 61 was manually annotated 1 time for cluster B9.
- Start number 66 was manually annotated 2 times for cluster B9.

Gene Information:

Gene: 39HC_069 Start: 58780, Stop: 59388, Start Num: 59

Candidate Starts for 39HC_069:

(7, 58525), (13, 58585), (21, 58630), (32, 58675), (Start: 59 @58780 has 4 MA's), (Start: 61 @58801 has 3 MA's), (70, 58849), (91, 58957), (93, 58969), (101, 59062), (102, 59074), (111, 59125), (121, 59188), (139, 59266), (140, 59275), (142, 59380),

Gene: 40BC_069 Start: 58780, Stop: 59388, Start Num: 59

Candidate Starts for 40BC_069:

(7, 58525), (13, 58585), (21, 58630), (32, 58675), (Start: 59 @58780 has 4 MA's), (Start: 61 @58801 has 3 MA's), (70, 58849), (91, 58957), (93, 58969), (101, 59062), (102, 59074), (111, 59125), (121, 59188), (139, 59266), (140, 59275), (142, 59380),

Gene: Ahwei_66 Start: 59056, Stop: 59619, Start Num: 50

Candidate Starts for Ahwei_66:

(19, 58912), (Start: 20 @58918 has 3 MA's), (33, 58984), (Start: 46 @59035 has 9 MA's), (Start: 50 @59056 has 8 MA's), (75, 59176), (76, 59185), (89, 59284), (90, 59290), (94, 59308), (97, 59353), (101, 59398), (102, 59410), (124, 59530), (127, 59545),

Gene: AlanGrant_72 Start: 61390, Stop: 61929, Start Num: 47

Candidate Starts for AlanGrant_72:

(Start: 20 @61264 has 3 MA's), (33, 61330), (41, 61366), (42, 61372), (45, 61381), (Start: 47 @61390 has 1 MA's), (Start: 61 @61456 has 3 MA's), (70, 61504), (75, 61525), (76, 61534), (79, 61582), (97, 61702), (101, 61747), (111, 61816), (120, 61858), (122, 61861), (130, 61894),

Gene: Antihero_66 Start: 59054, Stop: 59617, Start Num: 50

Candidate Starts for Antihero_66:

(19, 58910), (Start: 20 @58916 has 3 MA's), (33, 58982), (Start: 46 @59033 has 9 MA's), (Start: 50 @59054 has 8 MA's), (75, 59174), (76, 59183), (89, 59282), (90, 59288), (94, 59306), (97, 59351), (101, 59396), (102, 59408), (113, 59471), (124, 59528), (127, 59543),

Gene: Apex_69 Start: 60138, Stop: 60722, Start Num: 46

Candidate Starts for Apex_69:

(19, 60015), (Start: 20 @60021 has 3 MA's), (Start: 46 @60138 has 9 MA's), (75, 60279), (76, 60288), (89, 60387), (90, 60393), (94, 60411), (96, 60453), (97, 60456), (101, 60501), (102, 60513), (119, 60612), (124, 60633), (127, 60648), (137, 60699),

Gene: Austelle_68 Start: 60772, Stop: 61239, Start Num: 69

Candidate Starts for Austelle_68:

(19, 60532), (Start: 20 @60538 has 3 MA's), (Start: 46 @60655 has 9 MA's), (Start: 69 @60772 has 3 MA's), (75, 60796), (76, 60805), (89, 60904), (90, 60910), (94, 60928), (96, 60970), (97, 60973), (101, 61018), (102, 61030), (119, 61129), (124, 61150), (127, 61165), (137, 61216),

Gene: BobbyK_69 Start: 59936, Stop: 60499, Start Num: 50

Candidate Starts for BobbyK_69:

(19, 59792), (Start: 20 @59798 has 3 MA's), (Start: 46 @59915 has 9 MA's), (Start: 50 @59936 has 8 MA's), (75, 60056), (76, 60065), (89, 60164), (90, 60170), (94, 60188), (96, 60230), (97, 60233), (101, 60278), (102, 60290), (124, 60410), (127, 60425),

Gene: BrownCNA_70 Start: 60292, Stop: 60873, Start Num: 46

Candidate Starts for BrownCNA_70:

(19, 60169), (Start: 20 @60175 has 3 MA's), (Start: 46 @60292 has 9 MA's), (Start: 69 @60409 has 3 MA's), (75, 60433), (76, 60442), (89, 60541), (90, 60547), (97, 60610), (101, 60655), (102, 60667), (118, 60760), (124, 60784), (126, 60796),

Gene: CRB2_71 Start: 61691, Stop: 62164, Start Num: 61

Candidate Starts for CRB2_71:

(11, 61424), (15, 61463), (24, 61526), (34, 61559), (51, 61649), (Start: 61 @61691 has 3 MA's), (63, 61706), (Start: 66 @61718 has 3 MA's), (70, 61739), (77, 61787), (78, 61814), (90, 61868), (94, 61886), (99, 61949), (124, 62075), (134, 62126),

Gene: ChrisnMich_68 Start: 59038, Stop: 59601, Start Num: 50

Candidate Starts for ChrisnMich_68:

(19, 58894), (Start: 20 @58900 has 3 MA's), (33, 58966), (Start: 46 @59017 has 9 MA's), (Start: 50 @59038 has 8 MA's), (75, 59158), (76, 59167), (89, 59266), (90, 59272), (94, 59290), (97, 59335), (101, 59380), (102, 59392), (124, 59512), (127, 59527),

Gene: Cooper_70 Start: 59759, Stop: 60271, Start Num: 60

Candidate Starts for Cooper_70:

(Start: 20 @59591 has 3 MA's), (37, 59669), (43, 59699), (45, 59705), (Start: 47 @59714 has 1 MA's), (Start: 60 @59759 has 1 MA's), (Start: 61 @59780 has 3 MA's), (65, 59804), (85, 59921), (90, 59963), (92, 59975), (97, 60026), (101, 60071), (102, 60083), (126, 60194), (127, 60197), (137, 60248),

Gene: DigitDog_72 Start: 59928, Stop: 60428, Start Num: 59

Candidate Starts for DigitDog_72:

(11, 59703), (18, 59742), (25, 59796), (38, 59838), (Start: 48 @59886 has 1 MA's), (Start: 59 @59928 has 4 MA's), (80, 60075), (90, 60123), (93, 60138), (94, 60141), (95, 60174), (96, 60183), (101, 60234),

(114, 60309), (132, 60378), (136, 60390),

Gene: Epah_66 Start: 59054, Stop: 59617, Start Num: 50

Candidate Starts for Epah_66:

(19, 58910), (Start: 20 @58916 has 3 MA's), (33, 58982), (Start: 46 @59033 has 9 MA's), (Start: 50 @59054 has 8 MA's), (75, 59174), (76, 59183), (89, 59282), (90, 59288), (94, 59306), (97, 59351), (101, 59396), (102, 59408), (113, 59471), (124, 59528), (127, 59543),

Gene: Fanaw_65 Start: 60090, Stop: 60653, Start Num: 50

Candidate Starts for Fanaw_65:

(19, 59946), (Start: 20 @59952 has 3 MA's), (33, 60018), (Start: 46 @60069 has 9 MA's), (Start: 50 @60090 has 8 MA's), (75, 60210), (76, 60219), (89, 60318), (90, 60324), (96, 60384), (97, 60387), (101, 60432), (102, 60444), (104, 60465), (124, 60564), (127, 60579), (137, 60630),

Gene: ForDig_68 Start: 58743, Stop: 59336, Start Num: 54

Candidate Starts for ForDig_68:

(7, 58476), (18, 58557), (21, 58590), (32, 58635), (Start: 54 @58743 has 1 MA's), (Start: 61 @58782 has 3 MA's), (70, 58830), (90, 58953), (91, 58956), (93, 58968), (101, 59061), (102, 59073), (111, 59124), (121, 59181), (125, 59199), (135, 59226), (142, 59328),

Gene: Fortunato_69 Start: 60068, Stop: 60652, Start Num: 46

Candidate Starts for Fortunato_69:

(19, 59945), (Start: 20 @59951 has 3 MA's), (Start: 46 @60068 has 9 MA's), (Start: 69 @60185 has 3 MA's), (75, 60209), (76, 60218), (89, 60317), (90, 60323), (94, 60341), (96, 60383), (97, 60386), (101, 60431), (102, 60443), (104, 60464), (124, 60563), (127, 60578), (137, 60629),

Gene: Frederick_70 Start: 59898, Stop: 60596, Start Num: 20

Candidate Starts for Frederick_70:

(19, 59892), (Start: 20 @59898 has 3 MA's), (Start: 46 @60015 has 9 MA's), (Start: 69 @60132 has 3 MA's), (75, 60156), (76, 60165), (89, 60264), (90, 60270), (94, 60288), (96, 60330), (97, 60333), (101, 60378), (102, 60390), (124, 60507), (137, 60573),

Gene: GinPorsche_68 Start: 59054, Stop: 59617, Start Num: 50

Candidate Starts for GinPorsche_68:

(19, 58910), (Start: 20 @58916 has 3 MA's), (33, 58982), (Start: 46 @59033 has 9 MA's), (Start: 50 @59054 has 8 MA's), (75, 59174), (76, 59183), (89, 59282), (90, 59288), (94, 59306), (97, 59351), (101, 59396), (102, 59408), (113, 59471), (124, 59528), (127, 59543),

Gene: Hally898_66 Start: 59069, Stop: 59632, Start Num: 50

Candidate Starts for Hally898_66:

(19, 58925), (Start: 20 @58931 has 3 MA's), (33, 58997), (Start: 46 @59048 has 9 MA's), (Start: 50 @59069 has 8 MA's), (75, 59189), (76, 59198), (89, 59297), (90, 59303), (94, 59321), (97, 59366), (101, 59411), (102, 59423), (124, 59543), (127, 59558),

Gene: Hangman_69 Start: 60214, Stop: 60795, Start Num: 46

Candidate Starts for Hangman_69:

(19, 60091), (Start: 20 @60097 has 3 MA's), (Start: 46 @60214 has 9 MA's), (75, 60355), (76, 60364), (89, 60463), (90, 60469), (97, 60532), (101, 60577), (102, 60589), (124, 60706), (137, 60772),

Gene: Heath_68 Start: 59862, Stop: 60422, Start Num: 50

Candidate Starts for Heath_68:

(19, 59718), (Start: 20 @59724 has 3 MA's), (Start: 46 @59841 has 9 MA's), (Start: 50 @59862 has 8 MA's), (75, 59982), (76, 59991), (89, 60090), (90, 60096), (97, 60159), (101, 60204), (102, 60216),

(124, 60333), (137, 60399),

Gene: Hosp_065 Start: 56539, Stop: 57216, Start Num: 59

Candidate Starts for Hosp_065:

(7, 56272), (18, 56353), (21, 56386), (32, 56431), (Start: 59 @56539 has 4 MA's), (Start: 61 @56560 has 3 MA's), (70, 56608), (78, 56683), (90, 56731), (93, 56746), (101, 56839), (102, 56851), (111, 56902), (121, 56959), (142, 57208),

Gene: Hydro_69 Start: 60152, Stop: 60733, Start Num: 46

Candidate Starts for Hydro_69:

(19, 60029), (Start: 20 @60035 has 3 MA's), (Start: 46 @60152 has 9 MA's), (Start: 69 @60269 has 3 MA's), (75, 60293), (76, 60302), (89, 60401), (90, 60407), (97, 60470), (101, 60515), (102, 60527), (124, 60644), (137, 60710),

Gene: Indlovu_69 Start: 59915, Stop: 60454, Start Num: 61

Candidate Starts for Indlovu_69:

(4, 59609), (5, 59615), (14, 59675), (19, 59714), (Start: 61 @59915 has 3 MA's), (70, 59963), (74, 59981), (78, 60038), (90, 60092), (93, 60107), (95, 60143), (96, 60152), (99, 60182), (101, 60200), (110, 60254), (112, 60266), (128, 60344),

Gene: JAMaL_68 Start: 60063, Stop: 60626, Start Num: 50

Candidate Starts for JAMaL_68:

(19, 59919), (Start: 20 @59925 has 3 MA's), (29, 59979), (33, 59991), (Start: 46 @60042 has 9 MA's), (Start: 50 @60063 has 8 MA's), (75, 60183), (76, 60192), (89, 60291), (90, 60297), (94, 60315), (97, 60360), (101, 60405), (102, 60417), (113, 60480), (124, 60537), (127, 60552),

Gene: JaguarMi_69 Start: 61329, Stop: 61889, Start Num: 50

Candidate Starts for JaguarMi_69:

(19, 61182), (Start: 20 @61188 has 3 MA's), (33, 61254), (Start: 46 @61305 has 9 MA's), (Start: 50 @61329 has 8 MA's), (75, 61449), (76, 61458), (89, 61557), (90, 61563), (94, 61581), (96, 61623), (97, 61626), (101, 61671), (102, 61683), (104, 61704), (116, 61767), (118, 61776),

Gene: Jolie1_067 Start: 58667, Stop: 59344, Start Num: 59

Candidate Starts for Jolie1_067:

(7, 58400), (18, 58481), (21, 58514), (32, 58559), (Start: 59 @58667 has 4 MA's), (Start: 61 @58688 has 3 MA's), (70, 58736), (78, 58811), (90, 58859), (93, 58874), (101, 58967), (102, 58979), (111, 59030), (121, 59087), (142, 59336),

Gene: JoyceMaria_68 Start: 60295, Stop: 60762, Start Num: 69

Candidate Starts for JoyceMaria_68:

(19, 60055), (Start: 20 @60061 has 3 MA's), (Start: 46 @60178 has 9 MA's), (Start: 69 @60295 has 3 MA's), (75, 60319), (76, 60328), (89, 60427), (90, 60433), (94, 60451), (96, 60493), (97, 60496), (101, 60541), (102, 60553), (119, 60652), (124, 60673), (127, 60688), (137, 60739),

Gene: KarasumaRum_71 Start: 59737, Stop: 60303, Start Num: 53

Candidate Starts for KarasumaRum_71:

(11, 59521), (18, 59560), (38, 59656), (Start: 48 @59704 has 1 MA's), (53, 59737), (62, 59836), (80, 59950), (83, 59959), (90, 59998), (93, 60013), (94, 60016), (95, 60049), (96, 60058), (101, 60109), (114, 60184), (132, 60253), (136, 60265),

Gene: KayaCho_67 Start: 58637, Stop: 59281, Start Num: 59

Candidate Starts for KayaCho_67:

(7, 58385), (21, 58484), (31, 58523), (Start: 59 @58637 has 4 MA's), (Start: 61 @58658 has 3 MA's), (63, 58673), (64, 58679), (70, 58706), (78, 58781), (90, 58829), (93, 58844), (101, 58937), (102, 58949), (111, 59000), (121, 59057), (133, 59102),

Gene: Lambano_66 Start: 59069, Stop: 59632, Start Num: 50

Candidate Starts for Lambano_66:

(19, 58925), (Start: 20 @58931 has 3 MA's), (33, 58997), (Start: 46 @59048 has 9 MA's), (Start: 50 @59069 has 8 MA's), (75, 59189), (76, 59198), (89, 59297), (90, 59303), (94, 59321), (97, 59366), (101, 59411), (102, 59423), (124, 59543), (127, 59558),

Gene: LilMcDreamy_70 Start: 59640, Stop: 60260, Start Num: 44

Candidate Starts for LilMcDreamy_70:

(1, 59286), (11, 59457), (18, 59502), (22, 59538), (Start: 44 @59640 has 1 MA's), (67, 59748), (70, 59760), (71, 59766), (80, 59835), (82, 59841), (89, 59880), (90, 59886), (93, 59901), (108, 60042),

Gene: LittleDigger_66 Start: 58992, Stop: 59558, Start Num: 50

Candidate Starts for LittleDigger_66:

(19, 58848), (Start: 20 @58854 has 3 MA's), (33, 58920), (Start: 46 @58971 has 9 MA's), (Start: 50 @58992 has 8 MA's), (75, 59112), (76, 59121), (89, 59220), (90, 59226), (94, 59244), (97, 59289), (101, 59334), (102, 59346), (104, 59367), (124, 59469), (127, 59484),

Gene: LittleMinkey_82 Start: 60638, Stop: 61354, Start Num: 56

Candidate Starts for LittleMinkey_82:

(2, 60218), (9, 60368), (10, 60371), (12, 60383), (13, 60404), (28, 60503), (29, 60509), (33, 60521), (35, 60530), (39, 60542), (43, 60569), (49, 60605), (56, 60638), (73, 60773), (81, 60836), (85, 60845), (88, 60857), (90, 60887), (93, 60902), (109, 61043), (115, 61097), (117, 61109), (131, 61175), (134, 61190),

Gene: Lolalove_70 Start: 60244, Stop: 60804, Start Num: 50

Candidate Starts for Lolalove_70:

(19, 60100), (Start: 20 @60106 has 3 MA's), (Start: 46 @60223 has 9 MA's), (Start: 50 @60244 has 8 MA's), (75, 60364), (76, 60373), (89, 60472), (90, 60478), (97, 60541), (101, 60586), (102, 60598), (124, 60715), (126, 60727),

Gene: Magpie_66 Start: 59929, Stop: 60492, Start Num: 50

Candidate Starts for Magpie_66:

(19, 59785), (Start: 20 @59791 has 3 MA's), (Start: 46 @59908 has 9 MA's), (Start: 50 @59929 has 8 MA's), (75, 60049), (76, 60058), (89, 60157), (90, 60163), (94, 60181), (96, 60223), (97, 60226), (101, 60271), (102, 60283), (104, 60304), (119, 60382), (124, 60403), (127, 60418),

Gene: Mithril_68 Start: 60339, Stop: 60803, Start Num: 69

Candidate Starts for Mithril_68:

(19, 60099), (Start: 20 @60105 has 3 MA's), (Start: 46 @60222 has 9 MA's), (Start: 69 @60339 has 3 MA's), (75, 60363), (76, 60372), (89, 60471), (90, 60477), (94, 60495), (97, 60540), (101, 60585), (102, 60597), (104, 60618), (116, 60681), (118, 60690), (124, 60714), (126, 60726),

Gene: Mudslide_68 Start: 60243, Stop: 60824, Start Num: 46

Candidate Starts for Mudslide_68:

(19, 60120), (Start: 20 @60126 has 3 MA's), (Start: 46 @60243 has 9 MA's), (75, 60384), (76, 60393), (89, 60492), (90, 60498), (97, 60561), (101, 60606), (102, 60618), (118, 60711), (124, 60735), (126, 60747),

Gene: Mysterious_70 Start: 59836, Stop: 60333, Start Num: 59

Candidate Starts for Mysterious_70:

(6, 59590), (8, 59599), (11, 59629), (18, 59668), (19, 59686), (21, 59701), (26, 59725), (34, 59749), (38, 59764), (Start: 48 @59800 has 1 MA's), (Start: 59 @59836 has 4 MA's), (78, 59980), (80, 59983), (90, 60019), (93, 60034), (95, 60070), (96, 60079), (101, 60130), (114, 60205), (128, 60250), (136, 60280),

Gene: Nanao_67 Start: 59059, Stop: 59622, Start Num: 50

Candidate Starts for Nanao_67:

(19, 58915), (Start: 20 @58921 has 3 MA's), (33, 58987), (Start: 46 @59038 has 9 MA's), (Start: 50 @59059 has 8 MA's), (75, 59179), (76, 59188), (89, 59287), (90, 59293), (94, 59311), (97, 59356), (101, 59401), (102, 59413), (124, 59533), (127, 59548),

Gene: Nangang_71 Start: 59924, Stop: 60454, Start Num: 59

Candidate Starts for Nangang_71:

(11, 59699), (18, 59738), (25, 59792), (38, 59834), (Start: 48 @59882 has 1 MA's), (Start: 59 @59924 has 4 MA's), (64, 59966), (80, 60071), (90, 60119), (93, 60134), (94, 60137), (95, 60170), (96, 60179), (101, 60230), (114, 60305), (132, 60392), (136, 60404),

Gene: Nehemiah_70 Start: 59668, Stop: 60234, Start Num: 52

Candidate Starts for Nehemiah_70:

(6, 59428), (8, 59437), (11, 59467), (18, 59506), (21, 59539), (25, 59560), (34, 59587), (38, 59602), (52, 59668), (57, 59698), (70, 59806), (71, 59812), (78, 59881), (90, 59923), (93, 59938), (94, 59941), (95, 59974), (96, 59983), (101, 60034), (114, 60109), (132, 60169), (136, 60181),

Gene: Nigel_66 Start: 58741, Stop: 59442, Start Num: 20

Candidate Starts for Nigel_66:

(19, 58735), (Start: 20 @58741 has 3 MA's), (22, 58753), (27, 58786), (33, 58807), (Start: 46 @58858 has 9 MA's), (75, 58996), (76, 59005), (89, 59104), (94, 59128), (97, 59173), (101, 59218), (102, 59230), (105, 59254), (111, 59284), (113, 59293), (124, 59353), (127, 59368),

Gene: PenguinLover67_69 Start: 59425, Stop: 59871, Start Num: 66

Candidate Starts for PenguinLover67_69:

(11, 59146), (16, 59191), (32, 59266), (35, 59278), (Start: 50 @59347 has 8 MA's), (Start: 61 @59398 has 3 MA's), (Start: 66 @59425 has 3 MA's), (70, 59446), (77, 59494), (78, 59521), (90, 59575), (92, 59587), (94, 59593), (99, 59656), (111, 59737), (129, 59809),

Gene: Phelemich_68 Start: 59668, Stop: 60213, Start Num: 59

Candidate Starts for Phelemich_68:

(6, 59422), (8, 59431), (11, 59461), (18, 59500), (21, 59533), (34, 59581), (38, 59596), (Start: 59 @59668 has 4 MA's), (Start: 61 @59689 has 3 MA's), (70, 59737), (72, 59752), (78, 59812), (90, 59869), (93, 59884), (95, 59920), (96, 59929), (101, 59980), (114, 60055), (132, 60148), (136, 60160),

Gene: Poster_66 Start: 59060, Stop: 59623, Start Num: 50

Candidate Starts for Poster_66:

(19, 58916), (Start: 20 @58922 has 3 MA's), (33, 58988), (Start: 46 @59039 has 9 MA's), (Start: 50 @59060 has 8 MA's), (75, 59180), (76, 59189), (89, 59288), (90, 59294), (94, 59312), (97, 59357), (101, 59402), (102, 59414), (124, 59534), (127, 59549),

Gene: Prince_67 Start: 60270, Stop: 60725, Start Num: 69

Candidate Starts for Prince_67:

(19, 60030), (Start: 20 @60036 has 3 MA's), (Start: 46 @60153 has 9 MA's), (Start: 50 @60174 has 8 MA's), (Start: 69 @60270 has 3 MA's), (75, 60294), (76, 60303), (89, 60402), (90, 60408), (94, 60426), (96, 60468), (97, 60471), (101, 60516), (102, 60528), (124, 60636),

Gene: QueenPie_63 Start: 59162, Stop: 59725, Start Num: 50

Candidate Starts for QueenPie_63:

(19, 59018), (Start: 20 @59024 has 3 MA's), (29, 59078), (33, 59090), (Start: 46 @59141 has 9 MA's), (Start: 50 @59162 has 8 MA's), (75, 59282), (76, 59291), (89, 59390), (90, 59396), (96, 59456), (97, 59459), (101, 59504), (102, 59516), (113, 59579), (124, 59636), (127, 59651),

Gene: Quesadilla_70 Start: 59603, Stop: 60055, Start Num: 66

Candidate Starts for Quesadilla_70:

(3, 59162), (11, 59300), (29, 59429), (34, 59444), (36, 59453), (Start: 66 @59603 has 3 MA's), (68, 59621), (86, 59720), (94, 59777), (98, 59825), (99, 59843), (100, 59861), (134, 60017),

Gene: RawrgerThat_69 Start: 60046, Stop: 60630, Start Num: 46

Candidate Starts for RawrgerThat_69:

(19, 59923), (Start: 20 @59929 has 3 MA's), (Start: 46 @60046 has 9 MA's), (Start: 69 @60163 has 3 MA's), (75, 60187), (76, 60196), (89, 60295), (90, 60301), (94, 60319), (96, 60361), (97, 60364), (101, 60409), (102, 60421), (104, 60442), (124, 60541), (127, 60556), (137, 60607),

Gene: Renkei_66 Start: 58986, Stop: 59552, Start Num: 50

Candidate Starts for Renkei_66:

(19, 58842), (Start: 20 @58848 has 3 MA's), (33, 58914), (Start: 46 @58965 has 9 MA's), (Start: 50 @58986 has 8 MA's), (75, 59106), (76, 59115), (89, 59214), (90, 59220), (94, 59238), (97, 59283), (101, 59328), (102, 59340), (104, 59361), (124, 59463), (127, 59478),

Gene: Reprobate_70 Start: 59673, Stop: 60218, Start Num: 59

Candidate Starts for Reprobate_70:

(6, 59427), (8, 59436), (11, 59466), (18, 59505), (21, 59538), (34, 59586), (38, 59601), (Start: 59 @59673 has 4 MA's), (Start: 61 @59694 has 3 MA's), (70, 59742), (72, 59757), (78, 59817), (90, 59874), (93, 59889), (95, 59925), (96, 59934), (101, 59985), (114, 60060), (132, 60153), (136, 60165),

Gene: Rinkes_68 Start: 59532, Stop: 60221, Start Num: 55

Candidate Starts for Rinkes_68:

(11, 59274), (21, 59358), (22, 59361), (23, 59370), (30, 59406), (32, 59412), (Start: 55 @59532 has 1 MA's), (58, 59592), (Start: 60 @59604 has 1 MA's), (Start: 61 @59625 has 3 MA's), (70, 59673), (71, 59679), (78, 59748), (93, 59811), (95, 59847), (96, 59856), (138, 60099), (141, 60183),

Gene: Saguaro_67 Start: 58827, Stop: 59270, Start Num: 66

Candidate Starts for Saguaro_67:

(8, 58491), (14, 58551), (17, 58569), (24, 58626), (40, 58695), (43, 58716), (Start: 66 @58827 has 3 MA's), (84, 58938), (87, 58944), (90, 58965), (92, 58977), (93, 58980), (95, 59016), (103, 59088), (107, 59112),

Gene: Serendipitous_70 Start: 59224, Stop: 59772, Start Num: 48

Candidate Starts for Serendipitous_70:

(11, 59041), (18, 59080), (25, 59134), (Start: 48 @59224 has 1 MA's), (80, 59407), (90, 59446), (93, 59461), (95, 59497), (96, 59506), (101, 59557), (114, 59632), (136, 59734),

Gene: Shenyu_72 Start: 60293, Stop: 60793, Start Num: 59

Candidate Starts for Shenyu_72:

(11, 60068), (18, 60107), (25, 60161), (38, 60203), (Start: 48 @60251 has 1 MA's), (Start: 59 @60293 has 4 MA's), (64, 60335), (80, 60440), (90, 60488), (93, 60503), (94, 60506), (95, 60539), (96, 60548), (101, 60599), (114, 60674), (132, 60743), (136, 60755),

Gene: Stinger_68 Start: 58864, Stop: 59568, Start Num: 20

Candidate Starts for Stinger_68:

(Start: 20 @58864 has 3 MA's), (Start: 46 @58981 has 9 MA's), (75, 59122), (76, 59131), (89, 59230), (90, 59236), (94, 59254), (97, 59299), (101, 59344), (102, 59356), (123, 59473), (124, 59479), (127, 59494),

Gene: StinkyVeggy_71 Start: 59737, Stop: 60303, Start Num: 53

Candidate Starts for StinkyVeggy_71:

(11, 59521), (18, 59560), (38, 59656), (Start: 48 @59704 has 1 MA's), (53, 59737), (62, 59836), (80, 59950), (83, 59959), (90, 59998), (93, 60013), (94, 60016), (95, 60049), (96, 60058), (101, 60109), (114, 60184), (132, 60253), (136, 60265),

Gene: Vincenzo_71 Start: 61486, Stop: 61959, Start Num: 61

Candidate Starts for Vincenzo_71:

(Start: 20 @61294 has 3 MA's), (33, 61360), (41, 61396), (45, 61411), (Start: 47 @61420 has 1 MA's), (Start: 61 @61486 has 3 MA's), (70, 61534), (75, 61555), (76, 61564), (79, 61612), (97, 61732), (105, 61813), (111, 61846), (120, 61888), (122, 61891), (130, 61924),

Gene: VioletZ_70 Start: 60156, Stop: 60719, Start Num: 46

Candidate Starts for VioletZ_70:

(19, 60033), (Start: 20 @60039 has 3 MA's), (Start: 46 @60156 has 9 MA's), (75, 60297), (76, 60306), (94, 60429), (97, 60474), (101, 60519), (102, 60531), (106, 60561),

Gene: Waleliano_68 Start: 60045, Stop: 60626, Start Num: 46

Candidate Starts for Waleliano_68:

(19, 59922), (Start: 20 @59928 has 3 MA's), (Start: 46 @60045 has 9 MA's), (Start: 69 @60162 has 3 MA's), (75, 60186), (76, 60195), (89, 60294), (90, 60300), (97, 60363), (101, 60408), (102, 60420), (118, 60513), (124, 60537), (126, 60549),

Gene: Xincheng_68 Start: 61280, Stop: 61840, Start Num: 50

Candidate Starts for Xincheng_68:

(19, 61133), (Start: 20 @61139 has 3 MA's), (33, 61205), (Start: 46 @61256 has 9 MA's), (Start: 50 @61280 has 8 MA's), (75, 61400), (76, 61409), (89, 61508), (90, 61514), (94, 61532), (96, 61574), (97, 61577), (101, 61622), (102, 61634), (104, 61655), (116, 61718), (118, 61727),

Gene: Zemanar_68 Start: 59964, Stop: 60524, Start Num: 50

Candidate Starts for Zemanar_68:

(19, 59820), (Start: 20 @59826 has 3 MA's), (Start: 46 @59943 has 9 MA's), (Start: 50 @59964 has 8 MA's), (75, 60084), (76, 60093), (89, 60192), (90, 60198), (97, 60261), (101, 60306), (102, 60318), (124, 60435), (137, 60501),