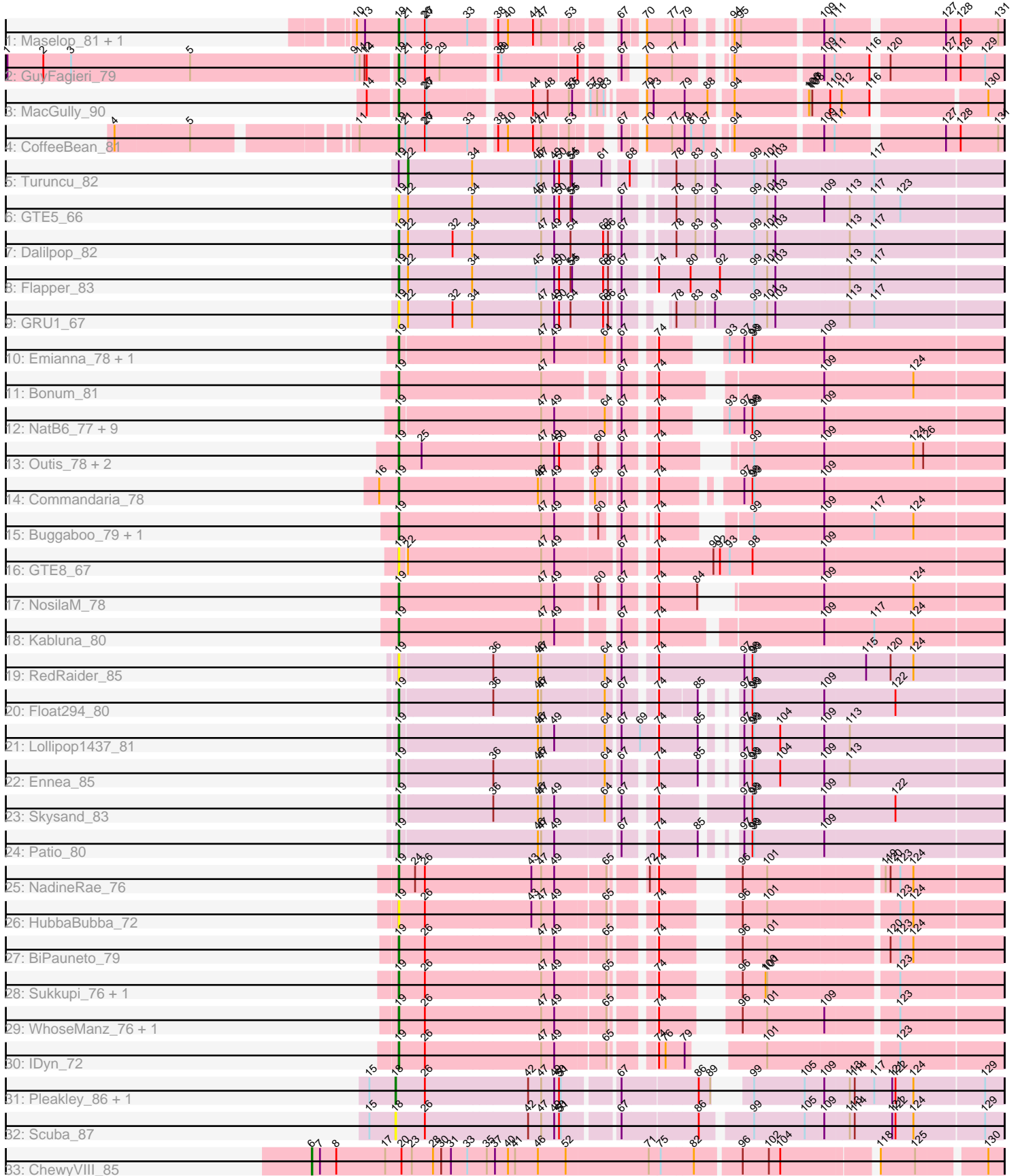


Pham 198144



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 198144 Report

This analysis was run 01/18/25 on database version 583.

Pham number 198144 has 50 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Maselop\_81, Apiary\_81
- Track 2 : GuyFagieri\_79
- Track 3 : MacGully\_90
- Track 4 : CoffeeBean\_81
- Track 5 : Turuncu\_82
- Track 6 : GTE5\_66
- Track 7 : Dalilpop\_82
- Track 8 : Flapper\_83
- Track 9 : GRU1\_67
- Track 10 : Emianna\_78, Kurt\_78
- Track 11 : Bonum\_81
- Track 12 : NatB6\_77, KidneyBean\_77, Wheezy\_77, NovumRegina\_77, GrootJr\_79, Jifall16\_76, Tracker\_77, Arti\_76, Phomeo\_77, Foxboro\_77
- Track 13 : Outis\_78, StarStruck\_78, MerCougar\_80
- Track 14 : Commandaria\_78
- Track 15 : Buggaboo\_79, SuperSulley\_79
- Track 16 : GTE8\_67
- Track 17 : NosilaM\_78
- Track 18 : Kabluna\_80
- Track 19 : RedRaider\_85
- Track 20 : Float294\_80
- Track 21 : Lollipop1437\_81
- Track 22 : Ennea\_85
- Track 23 : Skysand\_83
- Track 24 : Patio\_80
- Track 25 : NadineRae\_76
- Track 26 : HubbaBubba\_72
- Track 27 : BiPauneto\_79
- Track 28 : Sukkupi\_76, Yndexa\_76
- Track 29 : WhoseManz\_76, Marietta\_77
- Track 30 : IDyn\_72
- Track 31 : Pleakley\_86, Fury\_86
- Track 32 : Scuba\_87
- Track 33 : ChewyVIII\_85

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

The start number called the most often in the published annotations is 19, it was called in 39 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apiary\_81, Arti\_76, BiPauneto\_79, Bonum\_81, Buggaboo\_79, CoffeeBean\_81, Commandaria\_78, Dalilpop\_82, Emianna\_78, Ennea\_85, Flapper\_83, Float294\_80, Foxboro\_77, GRU1\_67, GTE5\_66, GTE8\_67, GrootJr\_79, GuyFagieri\_79, HubbaBubba\_72, IDyn\_72, Jifall16\_76, Kabluna\_80, KidneyBean\_77, Kurt\_78, Lollipop1437\_81, MacGully\_90, Marietta\_77, Maselop\_81, MerCougar\_80, NadineRae\_76, NatB6\_77, NosilaM\_78, NovumRegina\_77, Outis\_78, Patio\_80, Phomeo\_77, RedRaider\_85, Skysand\_83, StarStruck\_78, Sukkupi\_76, SuperSulley\_79, Tracker\_77, Wheezy\_77, WhoseManz\_76, Yndexa\_76,

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

- Turuncu\_82,

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

- ChewyVIII\_85, Fury\_86, Pleakley\_86, Scuba\_87,

### **Summary by start number:**

Start 6:

- Found in 1 of 50 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII\_85 (singleton),

Start 18:

- Found in 3 of 50 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fury\_86 (CR5), Pleakley\_86 (CR5), Scuba\_87 (CR5),

Start 19:

- Found in 46 of 50 ( 92.0% ) of genes in pham
- Manual Annotations of this start: 39 of 43
- Called 97.8% of time when present
- Phage (with cluster) where this start called: Apiary\_81 (CR), Arti\_76 (CR2), BiPauneto\_79 (CR4), Bonum\_81 (CR2), Buggaboo\_79 (CR2), CoffeeBean\_81 (CR), Commandaria\_78 (CR2), Dalilpop\_82 (CR1), Emianna\_78 (CR2), Ennea\_85 (CR3), Flapper\_83 (CR1), Float294\_80 (CR3), Foxboro\_77 (CR2), GRU1\_67 (CR1), GTE5\_66 (CR1), GTE8\_67 (CR2), GrootJr\_79 (CR2), GuyFagieri\_79 (CR), HubbaBubba\_72 (CR4), IDyn\_72 (CR4), Jifall16\_76 (CR2), Kabluna\_80 (CR2), KidneyBean\_77 (CR2), Kurt\_78 (CR2), Lollipop1437\_81 (CR3), MacGully\_90 (CR), Marietta\_77 (CR4), Maselop\_81 (CR), MerCougar\_80 (CR2), NadineRae\_76 (CR4), NatB6\_77 (CR2), NosilaM\_78 (CR2), NovumRegina\_77 (CR2), Outis\_78 (CR2), Patio\_80 (CR3), Phomeo\_77 (CR2), RedRaider\_85 (CR3), Skysand\_83 (CR3), StarStruck\_78 (CR2), Sukkupi\_76 (CR4), SuperSulley\_79 (CR2), Tracker\_77 (CR2), Wheezy\_77 (CR2), WhoseManz\_76 (CR4), Yndexa\_76 (CR4),

Start 22:

- Found in 6 of 50 ( 12.0% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Turuncu\_82 (CR1),

### **Summary by clusters:**

There are 7 clusters represented in this pham: CR2, CR3, singleton, CR1, CR4, CR5, CR,

Info for manual annotations of cluster CR:

- Start number 19 was manually annotated 5 times for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 19 was manually annotated 2 times for cluster CR1.
- Start number 22 was manually annotated 1 time for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 19 was manually annotated 20 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 19 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 19 was manually annotated 7 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 18 was manually annotated 2 times for cluster CR5.

### **Gene Information:**

Gene: Apiary\_81 Start: 58059, Stop: 57142, Start Num: 19

Candidate Starts for Apiary\_81:

(10, 58134), (13, 58119), (Start: 19 @58059 has 39 MA's), (21, 58047), (26, 58011), (27, 58008), (33, 57936), (38, 57897), (40, 57879), (44, 57837), (47, 57822), (53, 57777), (67, 57723), (70, 57699), (77, 57657), (79, 57636), (94, 57591), (95, 57579), (109, 57447), (111, 57429), (127, 57246), (128, 57219), (131, 57150),

Gene: Arti\_76 Start: 57808, Stop: 56843, Start Num: 19

Candidate Starts for Arti\_76:

(Start: 19 @57808 has 39 MA's), (47, 57559), (49, 57535), (64, 57451), (67, 57430), (74, 57388), (93, 57322), (97, 57298), (98, 57283), (99, 57280), (109, 57157),

Gene: BiPauneto\_79 Start: 57149, Stop: 56199, Start Num: 19

Candidate Starts for BiPauneto\_79:

(Start: 19 @57149 has 39 MA's), (26, 57104), (47, 56897), (49, 56873), (65, 56786), (74, 56732), (96, 56642), (101, 56597), (120, 56396), (123, 56378), (124, 56354),

Gene: Bonum\_81 Start: 59206, Stop: 58238, Start Num: 19

Candidate Starts for Bonum\_81:

(Start: 19 @59206 has 39 MA's), (47, 58954), (67, 58843), (74, 58801), (109, 58552), (124, 58393),

Gene: Buggaboo\_79 Start: 59745, Stop: 58804, Start Num: 19

Candidate Starts for Buggaboo\_79:

(Start: 19 @59745 has 39 MA's), (47, 59493), (49, 59469), (60, 59406), (67, 59385), (74, 59355), (99, 59241), (109, 59118), (117, 59031), (124, 58959),

Gene: ChewyVIII\_85 Start: 63301, Stop: 62099, Start Num: 6

Candidate Starts for ChewyVIII\_85:

(Start: 6 @63301 has 1 MA's), (7, 63286), (8, 63256), (17, 63166), (20, 63136), (23, 63118), (28, 63079), (30, 63064), (31, 63046), (33, 63016), (35, 62980), (37, 62965), (40, 62941), (41, 62929), (46, 62887), (52, 62836), (71, 62686), (75, 62665), (82, 62608), (96, 62530), (102, 62482), (104, 62461), (118, 62302), (125, 62242), (130, 62128),

Gene: CoffeeBean\_81 Start: 58026, Stop: 57085, Start Num: 19

Candidate Starts for CoffeeBean\_81:

(4, 58488), (5, 58356), (11, 58095), (Start: 19 @58026 has 39 MA's), (21, 58014), (26, 57978), (27, 57975), (33, 57903), (38, 57864), (40, 57846), (44, 57804), (47, 57789), (53, 57744), (67, 57690), (70, 57666), (77, 57624), (79, 57603), (81, 57591), (87, 57570), (94, 57534), (109, 57390), (111, 57372), (127, 57189), (128, 57162), (131, 57093),

Gene: Commandaria\_78 Start: 59237, Stop: 58263, Start Num: 19

Candidate Starts for Commandaria\_78:

(16, 59273), (Start: 19 @59237 has 39 MA's), (46, 58994), (47, 58988), (49, 58964), (58, 58904), (67, 58871), (74, 58829), (97, 58718), (98, 58703), (99, 58700), (109, 58577),

Gene: Dalilpop\_82 Start: 60143, Stop: 59121, Start Num: 19

Candidate Starts for Dalilpop\_82:

(Start: 19 @60143 has 39 MA's), (Start: 22 @60131 has 1 MA's), (32, 60050), (34, 60017), (47, 59894), (49, 59870), (54, 59840), (62, 59783), (66, 59774), (67, 59759), (78, 59693), (83, 59660), (91, 59630), (99, 59558), (101, 59534), (103, 59519), (113, 59393), (117, 59348),

Gene: Emianna\_78 Start: 59489, Stop: 58524, Start Num: 19

Candidate Starts for Emianna\_78:

(Start: 19 @59489 has 39 MA's), (47, 59240), (49, 59216), (64, 59132), (67, 59111), (74, 59069), (93, 59003), (97, 58979), (98, 58964), (99, 58961), (109, 58838),

Gene: Ennea\_85 Start: 60532, Stop: 59570, Start Num: 19

Candidate Starts for Ennea\_85:

(Start: 19 @60532 has 39 MA's), (36, 60373), (46, 60292), (47, 60286), (64, 60178), (67, 60157), (74, 60115), (85, 60049), (97, 60025), (98, 60010), (99, 60007), (104, 59959), (109, 59884), (113, 59842),

Gene: Flapper\_83 Start: 60202, Stop: 59177, Start Num: 19

Candidate Starts for Flapper\_83:

(Start: 19 @60202 has 39 MA's), (Start: 22 @60190 has 1 MA's), (34, 60076), (45, 59965), (49, 59932), (50, 59923), (54, 59902), (55, 59899), (62, 59845), (66, 59836), (67, 59821), (74, 59779), (80, 59725), (92, 59674), (99, 59614), (101, 59590), (103, 59575), (113, 59449), (117, 59404),

Gene: Float294\_80 Start: 60434, Stop: 59475, Start Num: 19

Candidate Starts for Float294\_80:

(Start: 19 @60434 has 39 MA's), (36, 60275), (46, 60194), (47, 60188), (64, 60080), (67, 60059), (74, 60017), (85, 59954), (97, 59930), (98, 59915), (99, 59912), (109, 59789), (122, 59663),

Gene: Foxboro\_77 Start: 59231, Stop: 58266, Start Num: 19

Candidate Starts for Foxboro\_77:

(Start: 19 @59231 has 39 MA's), (47, 58982), (49, 58958), (64, 58874), (67, 58853), (74, 58811), (93, 58745), (97, 58721), (98, 58706), (99, 58703), (109, 58580),

Gene: Fury\_86 Start: 57934, Stop: 56957, Start Num: 18

Candidate Starts for Fury\_86:

(15, 57982), (Start: 18 @57934 has 2 MA's), (26, 57883), (42, 57703), (47, 57679), (49, 57655), (50, 57646), (51, 57643), (67, 57562), (86, 57433), (89, 57412), (99, 57391), (105, 57301), (109, 57271), (113, 57229), (114, 57220), (117, 57184), (121, 57151), (122, 57145), (124, 57112), (129, 56989),

Gene: GRU1\_67 Start: 51605, Stop: 50610, Start Num: 19

Candidate Starts for GRU1\_67:

(Start: 19 @51605 has 39 MA's), (Start: 22 @51593 has 1 MA's), (32, 51512), (34, 51479), (47, 51359), (49, 51335), (50, 51326), (54, 51305), (62, 51248), (66, 51239), (67, 51224), (78, 51182), (83, 51149), (91, 51119), (99, 51047), (101, 51023), (103, 51008), (113, 50882), (117, 50837),

Gene: GTE5\_66 Start: 52365, Stop: 51349, Start Num: 19

Candidate Starts for GTE5\_66:

(Start: 19 @52365 has 39 MA's), (Start: 22 @52353 has 1 MA's), (34, 52239), (45, 52128), (47, 52119), (49, 52095), (50, 52086), (54, 52065), (55, 52062), (67, 51987), (78, 51921), (83, 51888), (91, 51858), (99, 51786), (101, 51762), (103, 51747), (109, 51663), (113, 51621), (117, 51576), (123, 51528),

Gene: GTE8\_67 Start: 52721, Stop: 51696, Start Num: 19

Candidate Starts for GTE8\_67:

(Start: 19 @52721 has 39 MA's), (Start: 22 @52712 has 1 MA's), (47, 52475), (49, 52451), (67, 52346), (74, 52304), (90, 52208), (92, 52196), (93, 52178), (98, 52136), (109, 52010),

Gene: GrootJr\_79 Start: 58405, Stop: 57440, Start Num: 19

Candidate Starts for GrootJr\_79:

(Start: 19 @58405 has 39 MA's), (47, 58156), (49, 58132), (64, 58048), (67, 58027), (74, 57985), (93, 57919), (97, 57895), (98, 57880), (99, 57877), (109, 57754),

Gene: GuyFagieri\_79 Start: 57841, Stop: 56942, Start Num: 19

Candidate Starts for GuyFagieri\_79:

(1, 58549), (2, 58483), (3, 58432), (5, 58213), (9, 57910), (11, 57901), (12, 57892), (14, 57889), (Start: 19 @57841 has 39 MA's), (21, 57829), (26, 57793), (29, 57766), (38, 57679), (39, 57673), (56, 57547), (67, 57505), (70, 57493), (77, 57448), (94, 57385), (109, 57247), (111, 57229), (116, 57166), (120, 57148), (127, 57046), (128, 57019), (129, 56974),

Gene: HubbaBubba\_72 Start: 53779, Stop: 52829, Start Num: 19

Candidate Starts for HubbaBubba\_72:

(Start: 19 @53779 has 39 MA's), (26, 53734), (43, 53545), (47, 53527), (49, 53503), (65, 53416), (74, 53362), (96, 53272), (101, 53227), (123, 53008), (124, 52984),

Gene: IDyn\_72 Start: 54160, Stop: 53222, Start Num: 19

Candidate Starts for IDyn\_72:

(Start: 19 @54160 has 39 MA's), (26, 54115), (47, 53908), (49, 53884), (65, 53797), (74, 53743), (76, 53731), (79, 53701), (101, 53620), (123, 53401),

Gene: Jifall16\_76 Start: 58724, Stop: 57759, Start Num: 19

Candidate Starts for Jifall16\_76:

(Start: 19 @58724 has 39 MA's), (47, 58475), (49, 58451), (64, 58367), (67, 58346), (74, 58304), (93, 58238), (97, 58214), (98, 58199), (99, 58196), (109, 58073),

Gene: Kabluna\_80 Start: 58556, Stop: 57576, Start Num: 19

Candidate Starts for Kabluna\_80:

(Start: 19 @58556 has 39 MA's), (47, 58304), (49, 58280), (67, 58193), (74, 58151), (109, 57890), (117, 57803), (124, 57731),

Gene: KidneyBean\_77 Start: 58848, Stop: 57883, Start Num: 19

Candidate Starts for KidneyBean\_77:

(Start: 19 @58848 has 39 MA's), (47, 58599), (49, 58575), (64, 58491), (67, 58470), (74, 58428), (93, 58362), (97, 58338), (98, 58323), (99, 58320), (109, 58197),

Gene: Kurt\_78 Start: 59504, Stop: 58539, Start Num: 19

Candidate Starts for Kurt\_78:

(Start: 19 @59504 has 39 MA's), (47, 59255), (49, 59231), (64, 59147), (67, 59126), (74, 59084), (93, 59018), (97, 58994), (98, 58979), (99, 58976), (109, 58853),

Gene: Lollipop1437\_81 Start: 60229, Stop: 59249, Start Num: 19

Candidate Starts for Lollipop1437\_81:

(Start: 19 @60229 has 39 MA's), (46, 59989), (47, 59983), (49, 59959), (64, 59875), (67, 59854), (69, 59824), (74, 59794), (85, 59728), (97, 59704), (98, 59689), (99, 59686), (104, 59638), (109, 59563), (113, 59521),

Gene: MacGully\_90 Start: 61263, Stop: 60304, Start Num: 19

Candidate Starts for MacGully\_90:

(14, 61311), (Start: 19 @61263 has 39 MA's), (26, 61218), (27, 61215), (44, 61050), (48, 61023), (53, 60984), (55, 60978), (57, 60954), (59, 60942), (63, 60930), (70, 60888), (73, 60876), (79, 60825), (88, 60783), (94, 60747), (106, 60624), (107, 60621), (108, 60618), (110, 60588), (112, 60567), (116, 60516), (130, 60330),

Gene: Marietta\_77 Start: 55041, Stop: 54091, Start Num: 19

Candidate Starts for Marietta\_77:

(Start: 19 @55041 has 39 MA's), (26, 54996), (47, 54789), (49, 54765), (65, 54678), (74, 54624), (96, 54534), (101, 54489), (109, 54390), (123, 54270),

Gene: Maselop\_81 Start: 58078, Stop: 57161, Start Num: 19

Candidate Starts for Maselop\_81:

(10, 58153), (13, 58138), (Start: 19 @58078 has 39 MA's), (21, 58066), (26, 58030), (27, 58027), (33, 57955), (38, 57916), (40, 57898), (44, 57856), (47, 57841), (53, 57796), (67, 57742), (70, 57718), (77, 57676), (79, 57655), (94, 57610), (95, 57598), (109, 57466), (111, 57448), (127, 57265), (128, 57238), (131, 57169),

Gene: MerCougar\_80 Start: 60190, Stop: 59258, Start Num: 19

Candidate Starts for MerCougar\_80:

(Start: 19 @60190 has 39 MA's), (25, 60151), (47, 59938), (49, 59914), (50, 59905), (60, 59851), (67, 59830), (74, 59788), (99, 59695), (109, 59572), (124, 59413), (126, 59395),

Gene: NadineRae\_76 Start: 54655, Stop: 53702, Start Num: 19

Candidate Starts for NadineRae\_76:

(Start: 19 @54655 has 39 MA's), (24, 54628), (26, 54610), (43, 54421), (47, 54403), (49, 54379), (65, 54289), (72, 54247), (74, 54235), (96, 54145), (101, 54100), (119, 53908), (120, 53899), (123, 53881), (124, 53857),

Gene: NatB6\_77 Start: 58124, Stop: 57159, Start Num: 19

Candidate Starts for NatB6\_77:

(Start: 19 @58124 has 39 MA's), (47, 57875), (49, 57851), (64, 57767), (67, 57746), (74, 57704), (93, 57638), (97, 57614), (98, 57599), (99, 57596), (109, 57473),

Gene: NosilaM\_78 Start: 58816, Stop: 57878, Start Num: 19

Candidate Starts for NosilaM\_78:

(Start: 19 @58816 has 39 MA's), (47, 58564), (49, 58540), (60, 58474), (67, 58453), (74, 58411), (84, 58345), (109, 58192), (124, 58033),

Gene: NovumRegina\_77 Start: 58404, Stop: 57439, Start Num: 19

Candidate Starts for NovumRegina\_77:

(Start: 19 @58404 has 39 MA's), (47, 58155), (49, 58131), (64, 58047), (67, 58026), (74, 57984), (93, 57918), (97, 57894), (98, 57879), (99, 57876), (109, 57753),

Gene: Outis\_78 Start: 59294, Stop: 58350, Start Num: 19

Candidate Starts for Outis\_78:

(Start: 19 @59294 has 39 MA's), (25, 59255), (47, 59042), (49, 59018), (50, 59009), (60, 58955), (67, 58934), (74, 58892), (99, 58787), (109, 58664), (124, 58505), (126, 58487),

Gene: Patio\_80 Start: 59422, Stop: 58460, Start Num: 19

Candidate Starts for Patio\_80:

(Start: 19 @59422 has 39 MA's), (46, 59182), (47, 59176), (49, 59152), (67, 59047), (74, 59005), (85, 58939), (97, 58915), (98, 58900), (99, 58897), (109, 58774),

Gene: Phomeo\_77 Start: 58720, Stop: 57755, Start Num: 19

Candidate Starts for Phomeo\_77:

(Start: 19 @58720 has 39 MA's), (47, 58471), (49, 58447), (64, 58363), (67, 58342), (74, 58300), (93, 58234), (97, 58210), (98, 58195), (99, 58192), (109, 58069),

Gene: Pleakley\_86 Start: 57935, Stop: 56958, Start Num: 18

Candidate Starts for Pleakley\_86:

(15, 57983), (Start: 18 @57935 has 2 MA's), (26, 57884), (42, 57704), (47, 57680), (49, 57656), (50, 57647), (51, 57644), (67, 57563), (86, 57434), (89, 57413), (99, 57392), (105, 57302), (109, 57272), (113, 57230), (114, 57221), (117, 57185), (121, 57152), (122, 57146), (124, 57113), (129, 56990),

Gene: RedRaider\_85 Start: 61635, Stop: 60610, Start Num: 19

Candidate Starts for RedRaider\_85:

(Start: 19 @61635 has 39 MA's), (36, 61476), (46, 61395), (47, 61389), (64, 61281), (67, 61260), (74, 61218), (97, 61065), (98, 61050), (99, 61047), (115, 60852), (120, 60807), (124, 60765),

Gene: Scuba\_87 Start: 58046, Stop: 57030, Start Num: 18

Candidate Starts for Scuba\_87:

(15, 58094), (Start: 18 @58046 has 2 MA's), (26, 57995), (42, 57815), (47, 57791), (49, 57767), (50, 57758), (51, 57755), (67, 57674), (86, 57545), (99, 57464), (105, 57374), (109, 57344), (113, 57302), (114, 57293), (121, 57224), (122, 57218), (124, 57185), (129, 57062),

Gene: Skysand\_83 Start: 60348, Stop: 59341, Start Num: 19

Candidate Starts for Skysand\_83:

(Start: 19 @60348 has 39 MA's), (36, 60189), (46, 60108), (47, 60102), (49, 60078), (64, 59994), (67, 59973), (74, 59931), (97, 59796), (98, 59781), (99, 59778), (109, 59655), (122, 59529),



Gene: StarStruck\_78 Start: 59294, Stop: 58350, Start Num: 19

Candidate Starts for StarStruck\_78:

(Start: 19 @59294 has 39 MA's), (25, 59255), (47, 59042), (49, 59018), (50, 59009), (60, 58955), (67, 58934), (74, 58892), (99, 58787), (109, 58664), (124, 58505), (126, 58487),

Gene: Sukkupi\_76 Start: 56690, Stop: 55740, Start Num: 19

Candidate Starts for Sukkupi\_76:

(Start: 19 @56690 has 39 MA's), (26, 56645), (47, 56438), (49, 56414), (65, 56327), (74, 56273), (96, 56183), (100, 56141), (101, 56138), (123, 55919),

Gene: SuperSulley\_79 Start: 59745, Stop: 58804, Start Num: 19

Candidate Starts for SuperSulley\_79:

(Start: 19 @59745 has 39 MA's), (47, 59493), (49, 59469), (60, 59406), (67, 59385), (74, 59355), (99, 59241), (109, 59118), (117, 59031), (124, 58959),

Gene: Tracker\_77 Start: 57860, Stop: 56895, Start Num: 19

Candidate Starts for Tracker\_77:

(Start: 19 @57860 has 39 MA's), (47, 57611), (49, 57587), (64, 57503), (67, 57482), (74, 57440), (93, 57374), (97, 57350), (98, 57335), (99, 57332), (109, 57209),

Gene: Turuncu\_82 Start: 59576, Stop: 58596, Start Num: 22

Candidate Starts for Turuncu\_82:

(Start: 19 @59588 has 39 MA's), (Start: 22 @59576 has 1 MA's), (34, 59462), (45, 59351), (47, 59342), (49, 59318), (50, 59309), (54, 59288), (55, 59285), (61, 59240), (68, 59210), (78, 59168), (83, 59135), (91, 59105), (99, 59033), (101, 59009), (103, 58994), (117, 58823),

Gene: Wheezy\_77 Start: 58079, Stop: 57114, Start Num: 19

Candidate Starts for Wheezy\_77:

(Start: 19 @58079 has 39 MA's), (47, 57830), (49, 57806), (64, 57722), (67, 57701), (74, 57659), (93, 57593), (97, 57569), (98, 57554), (99, 57551), (109, 57428),

Gene: WhoseManz\_76 Start: 54708, Stop: 53758, Start Num: 19

Candidate Starts for WhoseManz\_76:

(Start: 19 @54708 has 39 MA's), (26, 54663), (47, 54456), (49, 54432), (65, 54345), (74, 54291), (96, 54201), (101, 54156), (109, 54057), (123, 53937),

Gene: Yndexa\_76 Start: 56690, Stop: 55740, Start Num: 19

Candidate Starts for Yndexa\_76:

(Start: 19 @56690 has 39 MA's), (26, 56645), (47, 56438), (49, 56414), (65, 56327), (74, 56273), (96, 56183), (100, 56141), (101, 56138), (123, 55919),