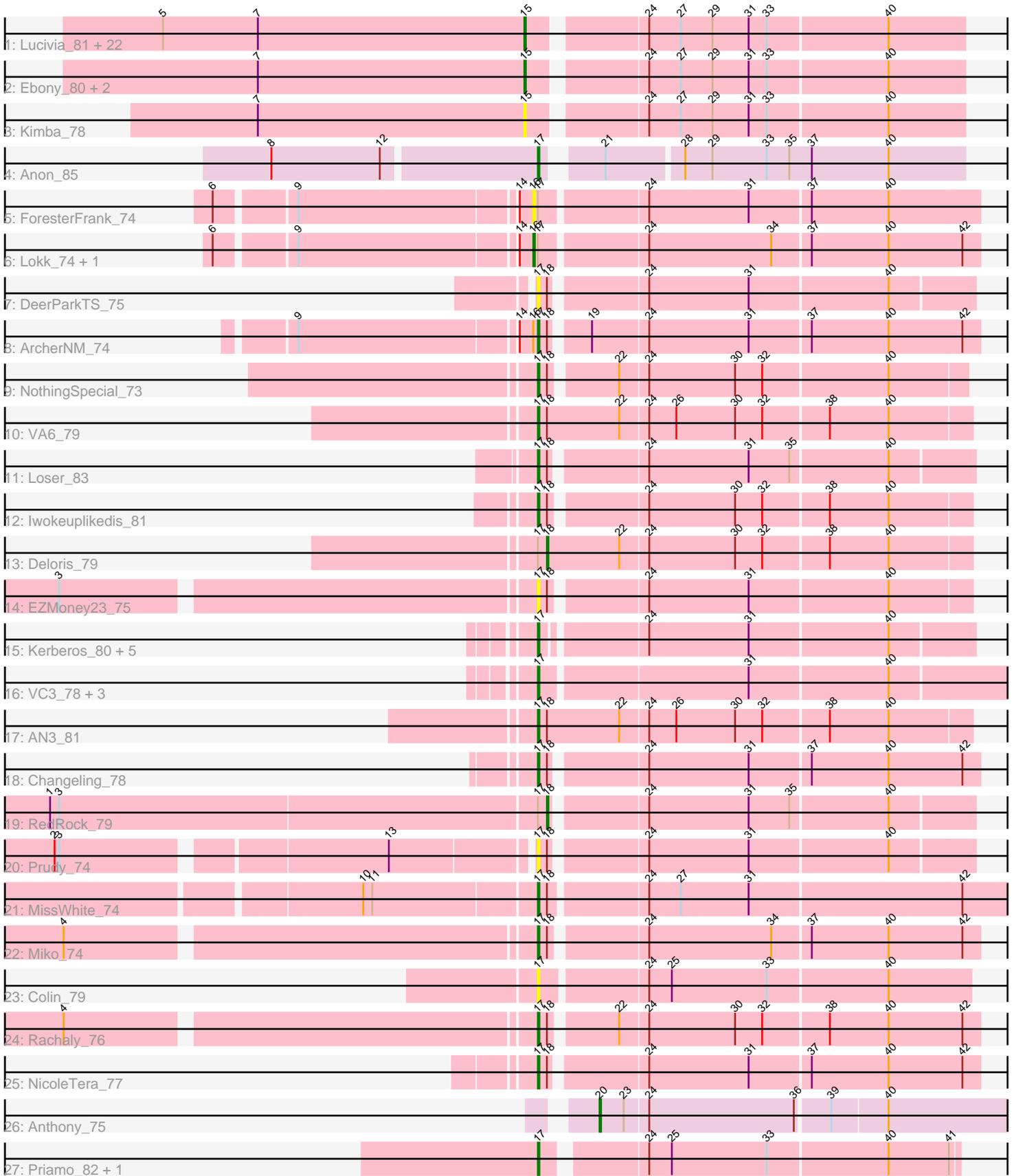


Pham 291180



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 291180 Report

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

Pham number 291180 has 61 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Lucivia_81, Aneem_81, TinyTimmy_79, Wolpertinger_79, Munch_80, Mulciber_78, Flaverint_81, Bud_75, Et2Brutus_79, Gilberta_77, Sham4_76, Mabel_80, Joselito_79, Snape_80, Salz_75, Jabith_79, Orange_80, Hutc2_76, Petersenfast_74, Fibonacci_79, MaCh_80, Timothy_80, Insomnia_79
- Track 2 : Ebony_80, Saskia_77, Bachome_78
- Track 3 : Kimba_78
- Track 4 : Anon_85
- Track 5 : ForesterFrank_74
- Track 6 : Lokk_74, BobSwaget_73
- Track 7 : DeerParkTS_75
- Track 8 : ArcherNM_74
- Track 9 : NothingSpecial_73
- Track 10 : VA6_79
- Track 11 : Loser_83
- Track 12 : Iwokeuplikedis_81
- Track 13 : Deloris_79
- Track 14 : EZMoney23_75
- Track 15 : Kerberos_80, Travvers_80, Pomar16_80, StarStuff_80, Tomathan_80, DBQu4n_80
- Track 16 : VC3_78, AN9_79, C3_72, ANI8_79
- Track 17 : AN3_81
- Track 18 : Changeling_78
- Track 19 : RedRock_79
- Track 20 : Prudy_74
- Track 21 : MissWhite_74
- Track 22 : Miko_74
- Track 23 : Colin_79
- Track 24 : Rachaly_76
- Track 25 : NicoleTera_77
- Track 26 : Anthony_75
- Track 27 : Priamo_82, Blinn1_84

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

The start number called the most often in the published annotations is 15, it was called in 23 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aneem_81, Bachome_78, Bud_75, Ebony_80, Et2Brutus_79, Fibonacci_79, Flaverint_81, Gilberta_77, Hutc2_76, Insomnia_79, Jabith_79, Joselito_79, Kimba_78, Lucivia_81, MaCh_80, Mabel_80, Mulciber_78, Munch_80, Orange_80, Petersenfast_74, Salz_75, Saskia_77, Sham4_76, Snape_80, Timothy_80, TinyTimmy_79, Wolpertinger_79,

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

-

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

- AN3_81, AN9_79, ANI8_79, Anon_85, Anthony_75, ArcherNM_74, Blinn1_84, BobSwaget_73, C3_72, Changeling_78, Colin_79, DBQu4n_80, DeerParkTS_75, Deloris_79, EZMoney23_75, ForesterFrank_74, Iwokeuplikedis_81, Kerberos_80, Lokk_74, Loser_83, Miko_74, MissWhite_74, NicoleTera_77, NothingSpecial_73, Pomar16_80, Priamo_82, Prudy_74, Rachaly_76, RedRock_79, StarStuff_80, Tomathan_80, Travvers_80, VA6_79, VC3_78,

Summary by start number:

Start 15:

- Found in 27 of 61 (44.3%) of genes in pham
- Manual Annotations of this start: 23 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aneem_81 (A11), Bachome_78 (A11), Bud_75 (A11), Ebony_80 (A11), Et2Brutus_79 (A11), Fibonacci_79 (A11), Flaverint_81 (A11), Gilberta_77 (A11), Hutc2_76 (A11), Insomnia_79 (A11), Jabith_79 (A11), Joselito_79 (A11), Kimba_78 (A11), Lucivia_81 (A11), MaCh_80 (A11), Mabel_80 (A11), Mulciber_78 (A11), Munch_80 (A11), Orange_80 (A11), Petersenfast_74 (A11), Salz_75 (A11), Saskia_77 (A11), Sham4_76 (A11), Snape_80 (A11), Timothy_80 (A11), TinyTimmy_79 (A11), Wolpertinger_79 (A11),

Start 16:

- Found in 4 of 61 (6.6%) of genes in pham
- Manual Annotations of this start: 2 of 51
- Called 75.0% of time when present
- Phage (with cluster) where this start called: BobSwaget_73 (A2), ForesterFrank_74 (A2), Lokk_74 (A2),

Start 17:

- Found in 33 of 61 (54.1%) of genes in pham
- Manual Annotations of this start: 23 of 51
- Called 84.8% of time when present
- Phage (with cluster) where this start called: AN3_81 (A2), AN9_79 (A2), ANI8_79 (A2), Anon_85 (A15), ArcherNM_74 (A2), Blinn1_84 (A6), C3_72 (A2), Changeling_78 (A2), Colin_79 (A2), DBQu4n_80 (A2), DeerParkTS_75 (A2), EZMoney23_75 (A2), Iwokeuplikedis_81 (A2), Kerberos_80 (A2), Loser_83 (A2), Miko_74 (A2), MissWhite_74 (A2), NicoleTera_77 (A2), NothingSpecial_73 (A2), Pomar16_80 (A2), Priamo_82 (A6), Prudy_74 (A2), Rachaly_76 (A2), StarStuff_80 (A2), Tomathan_80 (A2), Travvers_80 (A2), VA6_79 (A2), VC3_78 (A2),

Start 18:

- Found in 16 of 61 (26.2%) of genes in pham
- Manual Annotations of this start: 2 of 51
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Deloris_79 (A2), RedRock_79 (A2),

Start 20:

- Found in 1 of 61 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anthony_75 (A20),

Summary by clusters:

There are 5 clusters represented in this pham: A15, A20, A2, A11, A6,

Info for manual annotations of cluster A11:

- Start number 15 was manually annotated 23 times for cluster A11.

Info for manual annotations of cluster A15:

- Start number 17 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A2:

- Start number 16 was manually annotated 2 times for cluster A2.
- Start number 17 was manually annotated 20 times for cluster A2.
- Start number 18 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 20 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A6:

- Start number 17 was manually annotated 2 times for cluster A6.

Gene Information:

Gene: AN3_81 Start: 45387, Stop: 45106, Start Num: 17

Candidate Starts for AN3_81:

(Start: 17 @45387 has 23 MA's), (Start: 18 @45381 has 2 MA's), (22, 45333), (24, 45315), (26, 45297), (30, 45258), (32, 45240), (38, 45198), (40, 45159),

Gene: AN9_79 Start: 45517, Stop: 45221, Start Num: 17

Candidate Starts for AN9_79:

(Start: 17 @45517 has 23 MA's), (31, 45385), (40, 45295),

Gene: ANI8_79 Start: 45517, Stop: 45221, Start Num: 17

Candidate Starts for ANI8_79:

(Start: 17 @45517 has 23 MA's), (31, 45385), (40, 45295),

Gene: Aneem_81 Start: 45984, Stop: 45709, Start Num: 15

Candidate Starts for Aneem_81:

(5, 46224), (7, 46161), (Start: 15 @45984 has 23 MA's), (24, 45915), (27, 45894), (29, 45873), (31, 45849), (33, 45837), (40, 45759),

Gene: Anon_85 Start: 46676, Stop: 46413, Start Num: 17

Candidate Starts for Anon_85:

(8, 46847), (12, 46775), (Start: 17 @46676 has 23 MA's), (21, 46646), (28, 46598), (29, 46580), (33, 46544), (35, 46529), (37, 46514), (40, 46463),

Gene: Anthony_75 Start: 45522, Stop: 45256, Start Num: 20

Candidate Starts for Anthony_75:

(Start: 20 @45522 has 1 MA's), (23, 45507), (24, 45492), (36, 45396), (39, 45375), (40, 45339),

Gene: ArcherNM_74 Start: 46349, Stop: 46071, Start Num: 17

Candidate Starts for ArcherNM_74:

(9, 46499), (14, 46361), (Start: 16 @46352 has 2 MA's), (Start: 17 @46349 has 23 MA's), (Start: 18 @46343 has 2 MA's), (19, 46322), (24, 46286), (31, 46220), (37, 46181), (40, 46130), (42, 46082),

Gene: Bachome_78 Start: 44864, Stop: 44589, Start Num: 15

Candidate Starts for Bachome_78:

(7, 45041), (Start: 15 @44864 has 23 MA's), (24, 44795), (27, 44774), (29, 44753), (31, 44729), (33, 44717), (40, 44639),

Gene: Blinn1_84 Start: 45891, Stop: 45631, Start Num: 17

Candidate Starts for Blinn1_84:

(Start: 17 @45891 has 23 MA's), (24, 45831), (25, 45816), (33, 45753), (40, 45675), (41, 45636),

Gene: BobSwaget_73 Start: 44446, Stop: 44162, Start Num: 16

Candidate Starts for BobSwaget_73:

(6, 44641), (9, 44593), (14, 44455), (Start: 16 @44446 has 2 MA's), (Start: 17 @44443 has 23 MA's), (24, 44377), (34, 44296), (37, 44272), (40, 44221), (42, 44173),

Gene: Bud_75 Start: 44421, Stop: 44146, Start Num: 15

Candidate Starts for Bud_75:

(5, 44661), (7, 44598), (Start: 15 @44421 has 23 MA's), (24, 44352), (27, 44331), (29, 44310), (31, 44286), (33, 44274), (40, 44196),

Gene: C3_72 Start: 45517, Stop: 45221, Start Num: 17

Candidate Starts for C3_72:

(Start: 17 @45517 has 23 MA's), (31, 45385), (40, 45295),

Gene: Changeling_78 Start: 46920, Stop: 46642, Start Num: 17

Candidate Starts for Changeling_78:

(Start: 17 @46920 has 23 MA's), (Start: 18 @46914 has 2 MA's), (24, 46857), (31, 46791), (37, 46752), (40, 46701), (42, 46653),

Gene: Colin_79 Start: 47629, Stop: 47354, Start Num: 17

Candidate Starts for Colin_79:

(Start: 17 @47629 has 23 MA's), (24, 47563), (25, 47548), (33, 47485), (40, 47407),

Gene: DBQu4n_80 Start: 46541, Stop: 46269, Start Num: 17

Candidate Starts for DBQu4n_80:

(Start: 17 @46541 has 23 MA's), (24, 46478), (31, 46412), (40, 46322),

Gene: DeerParkTS_75 Start: 45386, Stop: 45114, Start Num: 17
Candidate Starts for DeerParkTS_75:
(Start: 17 @45386 has 23 MA's), (Start: 18 @45380 has 2 MA's), (24, 45323), (31, 45257), (40, 45167),

Gene: Deloris_79 Start: 46271, Stop: 45996, Start Num: 18
Candidate Starts for Deloris_79:
(Start: 17 @46277 has 23 MA's), (Start: 18 @46271 has 2 MA's), (22, 46223), (24, 46205), (30, 46148),
(32, 46130), (38, 46088), (40, 46049),

Gene: EZMoney23_75 Start: 46037, Stop: 45765, Start Num: 17
Candidate Starts for EZMoney23_75:
(3, 46337), (Start: 17 @46037 has 23 MA's), (Start: 18 @46031 has 2 MA's), (24, 45974), (31, 45908),
(40, 45818),

Gene: Ebony_80 Start: 45555, Stop: 45280, Start Num: 15
Candidate Starts for Ebony_80:
(7, 45732), (Start: 15 @45555 has 23 MA's), (24, 45486), (27, 45465), (29, 45444), (31, 45420), (33,
45408), (40, 45330),

Gene: Et2Brutus_79 Start: 45518, Stop: 45243, Start Num: 15
Candidate Starts for Et2Brutus_79:
(5, 45758), (7, 45695), (Start: 15 @45518 has 23 MA's), (24, 45449), (27, 45428), (29, 45407), (31,
45383), (33, 45371), (40, 45293),

Gene: Fibonacci_79 Start: 45524, Stop: 45249, Start Num: 15
Candidate Starts for Fibonacci_79:
(5, 45764), (7, 45701), (Start: 15 @45524 has 23 MA's), (24, 45455), (27, 45434), (29, 45413), (31,
45389), (33, 45377), (40, 45299),

Gene: Flaverint_81 Start: 45982, Stop: 45707, Start Num: 15
Candidate Starts for Flaverint_81:
(5, 46222), (7, 46159), (Start: 15 @45982 has 23 MA's), (24, 45913), (27, 45892), (29, 45871), (31,
45847), (33, 45835), (40, 45757),

Gene: ForesterFrank_74 Start: 46584, Stop: 46300, Start Num: 16
Candidate Starts for ForesterFrank_74:
(6, 46779), (9, 46731), (14, 46593), (Start: 16 @46584 has 2 MA's), (Start: 17 @46581 has 23 MA's),
(24, 46515), (31, 46449), (37, 46410), (40, 46359),

Gene: Gilberta_77 Start: 44858, Stop: 44583, Start Num: 15
Candidate Starts for Gilberta_77:
(5, 45098), (7, 45035), (Start: 15 @44858 has 23 MA's), (24, 44789), (27, 44768), (29, 44747), (31,
44723), (33, 44711), (40, 44633),

Gene: Hutc2_76 Start: 44408, Stop: 44133, Start Num: 15
Candidate Starts for Hutc2_76:
(5, 44648), (7, 44585), (Start: 15 @44408 has 23 MA's), (24, 44339), (27, 44318), (29, 44297), (31,
44273), (33, 44261), (40, 44183),

Gene: Insomnia_79 Start: 45699, Stop: 45424, Start Num: 15
Candidate Starts for Insomnia_79:
(5, 45939), (7, 45876), (Start: 15 @45699 has 23 MA's), (24, 45630), (27, 45609), (29, 45588), (31,
45564), (33, 45552), (40, 45474),

Gene: Iwokeuplikedis_81 Start: 47056, Stop: 46784, Start Num: 17
Candidate Starts for Iwokeuplikedis_81:
(Start: 17 @47056 has 23 MA's), (Start: 18 @47050 has 2 MA's), (24, 46993), (30, 46936), (32, 46918),
(38, 46876), (40, 46837),

Gene: Jabith_79 Start: 45716, Stop: 45441, Start Num: 15
Candidate Starts for Jabith_79:
(5, 45956), (7, 45893), (Start: 15 @45716 has 23 MA's), (24, 45647), (27, 45626), (29, 45605), (31,
45581), (33, 45569), (40, 45491),

Gene: Joselito_79 Start: 45736, Stop: 45461, Start Num: 15
Candidate Starts for Joselito_79:
(5, 45976), (7, 45913), (Start: 15 @45736 has 23 MA's), (24, 45667), (27, 45646), (29, 45625), (31,
45601), (33, 45589), (40, 45511),

Gene: Kerberos_80 Start: 46561, Stop: 46289, Start Num: 17
Candidate Starts for Kerberos_80:
(Start: 17 @46561 has 23 MA's), (24, 46498), (31, 46432), (40, 46342),

Gene: Kimba_78 Start: 45236, Stop: 44961, Start Num: 15
Candidate Starts for Kimba_78:
(7, 45413), (Start: 15 @45236 has 23 MA's), (24, 45167), (27, 45146), (29, 45125), (31, 45101), (33,
45089), (40, 45011),

Gene: Lokk_74 Start: 45070, Stop: 44786, Start Num: 16
Candidate Starts for Lokk_74:
(6, 45265), (9, 45217), (14, 45079), (Start: 16 @45070 has 2 MA's), (Start: 17 @45067 has 23 MA's),
(24, 45001), (34, 44920), (37, 44896), (40, 44845), (42, 44797),

Gene: Loser_83 Start: 47509, Stop: 47237, Start Num: 17
Candidate Starts for Loser_83:
(Start: 17 @47509 has 23 MA's), (Start: 18 @47503 has 2 MA's), (24, 47446), (31, 47380), (35, 47353),
(40, 47290),

Gene: Lucivia_81 Start: 46015, Stop: 45740, Start Num: 15
Candidate Starts for Lucivia_81:
(5, 46255), (7, 46192), (Start: 15 @46015 has 23 MA's), (24, 45946), (27, 45925), (29, 45904), (31,
45880), (33, 45868), (40, 45790),

Gene: MaCh_80 Start: 45979, Stop: 45704, Start Num: 15
Candidate Starts for MaCh_80:
(5, 46219), (7, 46156), (Start: 15 @45979 has 23 MA's), (24, 45910), (27, 45889), (29, 45868), (31,
45844), (33, 45832), (40, 45754),

Gene: Mabel_80 Start: 45980, Stop: 45705, Start Num: 15
Candidate Starts for Mabel_80:
(5, 46220), (7, 46157), (Start: 15 @45980 has 23 MA's), (24, 45911), (27, 45890), (29, 45869), (31,
45845), (33, 45833), (40, 45755),

Gene: Miko_74 Start: 45841, Stop: 45563, Start Num: 17
Candidate Starts for Miko_74:

(4, 46138), (Start: 17 @45841 has 23 MA's), (Start: 18 @45835 has 2 MA's), (24, 45778), (34, 45697), (37, 45673), (40, 45622), (42, 45574),

Gene: MissWhite_74 Start: 43643, Stop: 43320, Start Num: 17

Candidate Starts for MissWhite_74:

(10, 43754), (11, 43748), (Start: 17 @43643 has 23 MA's), (Start: 18 @43637 has 2 MA's), (24, 43577), (27, 43556), (31, 43511), (42, 43373),

Gene: Mulciber_78 Start: 45521, Stop: 45246, Start Num: 15

Candidate Starts for Mulciber_78:

(5, 45761), (7, 45698), (Start: 15 @45521 has 23 MA's), (24, 45452), (27, 45431), (29, 45410), (31, 45386), (33, 45374), (40, 45296),

Gene: Munch_80 Start: 45984, Stop: 45709, Start Num: 15

Candidate Starts for Munch_80:

(5, 46224), (7, 46161), (Start: 15 @45984 has 23 MA's), (24, 45915), (27, 45894), (29, 45873), (31, 45849), (33, 45837), (40, 45759),

Gene: NicoleTera_77 Start: 46504, Stop: 46226, Start Num: 17

Candidate Starts for NicoleTera_77:

(Start: 17 @46504 has 23 MA's), (Start: 18 @46498 has 2 MA's), (24, 46441), (31, 46375), (37, 46336), (40, 46285), (42, 46237),

Gene: NothingSpecial_73 Start: 46180, Stop: 45911, Start Num: 17

Candidate Starts for NothingSpecial_73:

(Start: 17 @46180 has 23 MA's), (Start: 18 @46174 has 2 MA's), (22, 46135), (24, 46117), (30, 46060), (32, 46042), (40, 45961),

Gene: Orange_80 Start: 45534, Stop: 45259, Start Num: 15

Candidate Starts for Orange_80:

(5, 45774), (7, 45711), (Start: 15 @45534 has 23 MA's), (24, 45465), (27, 45444), (29, 45423), (31, 45399), (33, 45387), (40, 45309),

Gene: Petersenfast_74 Start: 44415, Stop: 44140, Start Num: 15

Candidate Starts for Petersenfast_74:

(5, 44655), (7, 44592), (Start: 15 @44415 has 23 MA's), (24, 44346), (27, 44325), (29, 44304), (31, 44280), (33, 44268), (40, 44190),

Gene: Pomar16_80 Start: 46631, Stop: 46359, Start Num: 17

Candidate Starts for Pomar16_80:

(Start: 17 @46631 has 23 MA's), (24, 46568), (31, 46502), (40, 46412),

Gene: Priamo_82 Start: 45237, Stop: 44977, Start Num: 17

Candidate Starts for Priamo_82:

(Start: 17 @45237 has 23 MA's), (24, 45177), (25, 45162), (33, 45099), (40, 45021), (41, 44982),

Gene: Prudy_74 Start: 46871, Stop: 46599, Start Num: 17

Candidate Starts for Prudy_74:

(2, 47162), (3, 47159), (13, 46958), (Start: 17 @46871 has 23 MA's), (Start: 18 @46865 has 2 MA's), (24, 46808), (31, 46742), (40, 46652),

Gene: Rachaly_76 Start: 45987, Stop: 45709, Start Num: 17

Candidate Starts for Rachaly_76:

(4, 46284), (Start: 17 @45987 has 23 MA's), (Start: 18 @45981 has 2 MA's), (22, 45942), (24, 45924), (30, 45867), (32, 45849), (38, 45807), (40, 45768), (42, 45720),

Gene: RedRock_79 Start: 47115, Stop: 46849, Start Num: 18

Candidate Starts for RedRock_79:

(1, 47439), (3, 47433), (Start: 17 @47121 has 23 MA's), (Start: 18 @47115 has 2 MA's), (24, 47058), (31, 46992), (35, 46965), (40, 46902),

Gene: Salz_75 Start: 44330, Stop: 44055, Start Num: 15

Candidate Starts for Salz_75:

(5, 44570), (7, 44507), (Start: 15 @44330 has 23 MA's), (24, 44261), (27, 44240), (29, 44219), (31, 44195), (33, 44183), (40, 44105),

Gene: Saskia_77 Start: 44878, Stop: 44603, Start Num: 15

Candidate Starts for Saskia_77:

(7, 45055), (Start: 15 @44878 has 23 MA's), (24, 44809), (27, 44788), (29, 44767), (31, 44743), (33, 44731), (40, 44653),

Gene: Sham4_76 Start: 44413, Stop: 44138, Start Num: 15

Candidate Starts for Sham4_76:

(5, 44653), (7, 44590), (Start: 15 @44413 has 23 MA's), (24, 44344), (27, 44323), (29, 44302), (31, 44278), (33, 44266), (40, 44188),

Gene: Snape_80 Start: 45523, Stop: 45248, Start Num: 15

Candidate Starts for Snape_80:

(5, 45763), (7, 45700), (Start: 15 @45523 has 23 MA's), (24, 45454), (27, 45433), (29, 45412), (31, 45388), (33, 45376), (40, 45298),

Gene: StarStuff_80 Start: 46596, Stop: 46324, Start Num: 17

Candidate Starts for StarStuff_80:

(Start: 17 @46596 has 23 MA's), (24, 46533), (31, 46467), (40, 46377),

Gene: Timothy_80 Start: 45500, Stop: 45225, Start Num: 15

Candidate Starts for Timothy_80:

(5, 45740), (7, 45677), (Start: 15 @45500 has 23 MA's), (24, 45431), (27, 45410), (29, 45389), (31, 45365), (33, 45353), (40, 45275),

Gene: TinyTimmy_79 Start: 45229, Stop: 44954, Start Num: 15

Candidate Starts for TinyTimmy_79:

(5, 45469), (7, 45406), (Start: 15 @45229 has 23 MA's), (24, 45160), (27, 45139), (29, 45118), (31, 45094), (33, 45082), (40, 45004),

Gene: Tomathan_80 Start: 46674, Stop: 46402, Start Num: 17

Candidate Starts for Tomathan_80:

(Start: 17 @46674 has 23 MA's), (24, 46611), (31, 46545), (40, 46455),

Gene: Travvers_80 Start: 46591, Stop: 46319, Start Num: 17

Candidate Starts for Travvers_80:

(Start: 17 @46591 has 23 MA's), (24, 46528), (31, 46462), (40, 46372),

Gene: VA6_79 Start: 46565, Stop: 46284, Start Num: 17

Candidate Starts for VA6_79:

(Start: 17 @46565 has 23 MA's), (Start: 18 @46559 has 2 MA's), (22, 46511), (24, 46493), (26, 46475), (30, 46436), (32, 46418), (38, 46376), (40, 46337),

Gene: VC3_78 Start: 45517, Stop: 45221, Start Num: 17

Candidate Starts for VC3_78:

(Start: 17 @45517 has 23 MA's), (31, 45385), (40, 45295),

Gene: Wolpertinger_79 Start: 45532, Stop: 45257, Start Num: 15

Candidate Starts for Wolpertinger_79:

(5, 45772), (7, 45709), (Start: 15 @45532 has 23 MA's), (24, 45463), (27, 45442), (29, 45421), (31, 45397), (33, 45385), (40, 45307),