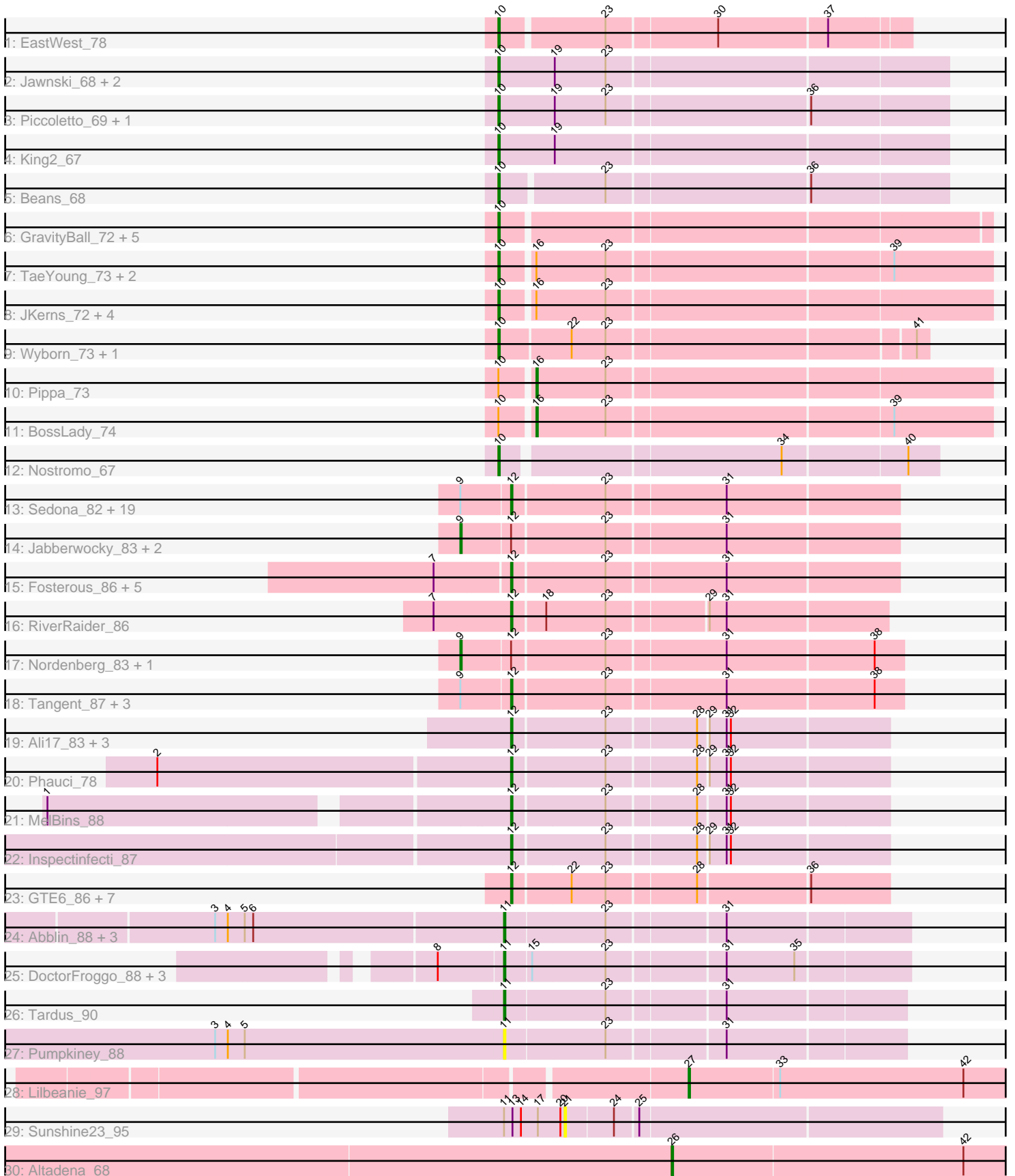


Pham 294620



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 294620 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294620 has 91 members, 8 are drafts.

Phages represented in each track:

- Track 1 : EastWest_78
- Track 2 : Jawnski_68, Brent_69, Franzy_67
- Track 3 : Piccoletto_69, NathanVaag_68
- Track 4 : King2_67
- Track 5 : Beans_68
- Track 6 : GravityBall_72, BigDome_72, Timinator_73, LeeroyJ_73, StevieBAY_73, BarretLemon_72
- Track 7 : TaeYoung_73, Grekaycon_73, Martha_72
- Track 8 : JKerns_72, Shade_72, Sonny_72, Jordan_73, Zartrosa_74
- Track 9 : Wyborn_73, Sicarius2_74
- Track 10 : Pippa_73
- Track 11 : BossLady_74
- Track 12 : Nostromo_67
- Track 13 : Sedona_82, Paries_88, Lennon_84, BobBob_86, Stultus_79, FuegoCuervo_89, Fitzgerald_82, ChadMasterC_83, Angelicage_83, Shivanishola_86, Sanjuju_82, Ailee_82, Baddon_82, Bibwit_82, McKinley_87, Sitar_83, Love_90, Brandonk123_88, Kewpiedoll_85, Affeca_86
- Track 14 : Jabberwocky_83, MoontowerMania_85, Keitabear_82
- Track 15 : Fosterous_86, Kamashten_85, Galadriel_85, McCrothy_83, Thing3_85, Rofo_84
- Track 16 : RiverRaider_86
- Track 17 : Nordenberg_83, Charming_87
- Track 18 : Tangent_87, Vivi2_88, Barsten_87, Geodirt_84
- Track 19 : Ali17_83, Leonard_86, Hans_87, Phinally_86
- Track 20 : Phauci_78
- Track 21 : MelBins_88
- Track 22 : Inspectinfecti_87
- Track 23 : GTE6_86, Chickadee_87, Twonlo_84, RoadKill_84, Tiamoceli_80, Dxdert_82, EdmundFerry_85, Kwekel_87
- Track 24 : Abblin_88, Natkenzie_88, Sampson_90, Scioto_88
- Track 25 : DoctorFroggo_88, Verity_87, Zipp_88, Delrey21_88
- Track 26 : Tardus_90
- Track 27 : Pumpkiney_88
- Track 28 : Lilbeanie_97
- Track 29 : Sunshine23_95
- Track 30 : Altadena_68

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

The start number called the most often in the published annotations is 12, it was called in 44 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Affeca_86, Ailee_82, Ali17_83, Angelicage_83, Baddon_82, Barsten_87, Bibwit_82, BobBob_86, Brandonk123_88, ChadMasterC_83, Chickadee_87, Dexdert_82, EdmundFerry_85, Fitzgerald_82, Fosterous_86, FuegoCuervo_89, GTE6_86, Galadriel_85, Geodirt_84, Hans_87, Inspectinfecti_87, Kamashten_85, Kewpiedoll_85, Kwekel_87, Lennon_84, Leonard_86, Love_90, McCrothy_83, McKinley_87, MelBins_88, Paries_88, Phauci_78, Phinally_86, RiverRaider_86, RoadKill_84, Rofo_84, Sanjuju_82, Sedona_82, Shivanishola_86, Sitar_83, Stultus_79, Tangent_87, Thing3_85, Tiamoceli_80, Twonlo_84, Vivi2_88,

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

- Charming_87, Jabberwocky_83, Keitabear_82, MoontowerMania_85, Nordenberg_83,

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

- Abblin_88, Altadena_68, BarretLemon_72, Beans_68, BigDome_72, BossLady_74, Brent_69, Delrey21_88, DoctorFroggo_88, EastWest_78, Franzy_67, GravityBall_72, Grekaycon_73, JKerns_72, Jawnski_68, Jordan_73, King2_67, LeeroyJ_73, Lilbeanie_97, Martha_72, NathanVaag_68, Natkenzie_88, Nostromo_67, Piccoletto_69, Pippa_73, Pumpkiney_88, Sampson_90, Scioto_88, Shade_72, Sicarius2_74, Sonny_72, StevieBAY_73, Sunshine23_95, TaeYoung_73, Tardus_90, Timinator_73, Verity_87, Wyborn_73, Zartrosa_74, Zipp_88,

Summary by start number:

Start 9:

- Found in 29 of 91 (31.9%) of genes in pham
- Manual Annotations of this start: 5 of 83
- Called 17.2% of time when present
- Phage (with cluster) where this start called: Charming_87 (DE1), Jabberwocky_83 (DE1), Keitabear_82 (DE1), MoontowerMania_85 (DE1), Nordenberg_83 (DE1),

Start 10:

- Found in 27 of 91 (29.7%) of genes in pham
- Manual Annotations of this start: 24 of 83
- Called 92.6% of time when present
- Phage (with cluster) where this start called: BarretLemon_72 (AO2), Beans_68 (AO1), BigDome_72 (AO2), Brent_69 (AO1), EastWest_78 (AO), Franzy_67 (AO1), GravityBall_72 (AO2), Grekaycon_73 (AO2), JKerns_72 (AO2), Jawnski_68 (AO1), Jordan_73 (AO2), King2_67 (AO1), LeeroyJ_73 (AO2), Martha_72 (AO2), NathanVaag_68 (AO1), Nostromo_67 (AO3), Piccoletto_69 (AO1), Shade_72 (AO2), Sicarius2_74 (AO2), Sonny_72 (AO2), StevieBAY_73 (AO2), TaeYoung_73 (AO2), Timinator_73 (AO2), Wyborn_73 (AO2), Zartrosa_74 (AO2),

Start 11:

- Found in 11 of 91 (12.1%) of genes in pham
- Manual Annotations of this start: 6 of 83
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Abblin_88 (DE4), Delrey21_88 (DE4), DoctorFroggo_88 (DE4), Natkenzie_88 (DE4), Pumpkiney_88 (DE4), Sampson_90 (DE4), Scioto_88 (DE4), Tardus_90 (DE4), Verity_87 (DE4), Zipp_88 (DE4),

Start 12:

- Found in 51 of 91 (56.0%) of genes in pham
- Manual Annotations of this start: 44 of 83
- Called 90.2% of time when present
- Phage (with cluster) where this start called: Affeca_86 (DE1), Ailee_82 (DE1), Ali17_83 (DE2), Angelicage_83 (DE1), Baddon_82 (DE1), Barsten_87 (DE1), Bibwit_82 (DE1), BobBob_86 (DE1), Brandonk123_88 (DE1), ChadMasterC_83 (DE1), Chickadee_87 (DE3), Dextert_82 (DE3), EdmundFerry_85 (DE3), Fitzgerald_82 (DE1), Fosterous_86 (DE1), FuegoCuervo_89 (DE1), GTE6_86 (DE3), Galadriel_85 (DE1), Geodirt_84 (DE1), Hans_87 (DE2), Inspectinfecti_87 (DE2), Kamashten_85 (DE1), Kewpiedoll_85 (DE1), Kwekel_87 (DE3), Lennon_84 (DE1), Leonard_86 (DE2), Love_90 (DE1), McCrothy_83 (DE1), McKinley_87 (DE1), MelBins_88 (DE2), Paries_88 (DE1), Phauci_78 (DE2), Phinally_86 (DE2), RiverRaider_86 (DE1), RoadKill_84 (DE3), Rofo_84 (DE1), Sanjuju_82 (DE1), Sedona_82 (DE1), Shivanishola_86 (DE1), Sitar_83 (DE1), Stultus_79 (DE1), Tangent_87 (DE1), Thing3_85 (DE1), Tiamoceli_80 (DE3), Twonlo_84 (DE3), Vivi2_88 (DE1),

Start 16:

- Found in 10 of 91 (11.0%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 20.0% of time when present
- Phage (with cluster) where this start called: BossLady_74 (AO2), Pippa_73 (AO2),

Start 21:

- Found in 1 of 91 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sunshine23_95 (FG),

Start 26:

- Found in 1 of 91 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altadena_68 (FH),

Start 27:

- Found in 1 of 91 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lilbeanie_97 (DE5),

Summary by clusters:

There are 11 clusters represented in this pham: DE1, DE2, DE3, DE4, DE5, AO, AO3, AO2, AO1, FG, FH,

Info for manual annotations of cluster AO:

- Start number 10 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 10 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 10 was manually annotated 15 times for cluster AO2.
- Start number 16 was manually annotated 2 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 10 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster DE1:

- Start number 9 was manually annotated 5 times for cluster DE1.
- Start number 12 was manually annotated 30 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 12 was manually annotated 7 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 12 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 11 was manually annotated 6 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 27 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster FH:

- Start number 26 was manually annotated 1 time for cluster FH.

Gene Information:

Gene: Abblin_88 Start: 58873, Stop: 59145, Start Num: 11

Candidate Starts for Abblin_88:

(3, 58672), (4, 58681), (5, 58693), (6, 58699), (Start: 11 @58873 has 6 MA's), (23, 58942), (31, 59020),

Gene: Affeca_86 Start: 58157, Stop: 58420, Start Num: 12

Candidate Starts for Affeca_86:

(Start: 9 @58124 has 5 MA's), (Start: 12 @58157 has 44 MA's), (23, 58220), (31, 58301),

Gene: Ailee_82 Start: 57328, Stop: 57591, Start Num: 12

Candidate Starts for Ailee_82:

(Start: 9 @57295 has 5 MA's), (Start: 12 @57328 has 44 MA's), (23, 57391), (31, 57472),

Gene: Ali17_83 Start: 57614, Stop: 57865, Start Num: 12

Candidate Starts for Ali17_83:

(Start: 12 @57614 has 44 MA's), (23, 57677), (28, 57737), (29, 57743), (31, 57755), (32, 57758),

Gene: Altadena_68 Start: 43198, Stop: 42947, Start Num: 26

Candidate Starts for Altadena_68:

(Start: 26 @43198 has 1 MA's), (42, 42994),

Gene: Angelicage_83 Start: 58231, Stop: 58494, Start Num: 12

Candidate Starts for Angelicage_83:

(Start: 9 @58198 has 5 MA's), (Start: 12 @58231 has 44 MA's), (23, 58294), (31, 58375),

Gene: Baddon_82 Start: 57243, Stop: 57506, Start Num: 12

Candidate Starts for Baddon_82:

(Start: 9 @57210 has 5 MA's), (Start: 12 @57243 has 44 MA's), (23, 57306), (31, 57387),

Gene: BarretLemon_72 Start: 46543, Stop: 46214, Start Num: 10

Candidate Starts for BarretLemon_72:

(Start: 10 @46543 has 24 MA's),

Gene: Barsten_87 Start: 58499, Stop: 58765, Start Num: 12

Candidate Starts for Barsten_87:

(Start: 9 @58466 has 5 MA's), (Start: 12 @58499 has 44 MA's), (23, 58562), (31, 58643), (38, 58745),

Gene: Beans_68 Start: 45863, Stop: 45561, Start Num: 10

Candidate Starts for Beans_68:

(Start: 10 @45863 has 24 MA's), (23, 45794), (36, 45656),

Gene: Bibwit_82 Start: 56692, Stop: 56955, Start Num: 12

Candidate Starts for Bibwit_82:

(Start: 9 @56659 has 5 MA's), (Start: 12 @56692 has 44 MA's), (23, 56755), (31, 56836),

Gene: BigDome_72 Start: 46718, Stop: 46389, Start Num: 10

Candidate Starts for BigDome_72:

(Start: 10 @46718 has 24 MA's),

Gene: BobBob_86 Start: 57531, Stop: 57794, Start Num: 12

Candidate Starts for BobBob_86:

(Start: 9 @57498 has 5 MA's), (Start: 12 @57531 has 44 MA's), (23, 57594), (31, 57675),

Gene: BossLady_74 Start: 47057, Stop: 46746, Start Num: 16

Candidate Starts for BossLady_74:

(Start: 10 @47078 has 24 MA's), (Start: 16 @47057 has 2 MA's), (23, 47009), (39, 46814),

Gene: Brandonk123_88 Start: 57696, Stop: 57959, Start Num: 12

Candidate Starts for Brandonk123_88:

(Start: 9 @57663 has 5 MA's), (Start: 12 @57696 has 44 MA's), (23, 57759), (31, 57840),

Gene: Brent_69 Start: 46039, Stop: 45731, Start Num: 10

Candidate Starts for Brent_69:

(Start: 10 @46039 has 24 MA's), (19, 46000), (23, 45964),

Gene: ChadMasterC_83 Start: 58686, Stop: 58949, Start Num: 12

Candidate Starts for ChadMasterC_83:

(Start: 9 @58653 has 5 MA's), (Start: 12 @58686 has 44 MA's), (23, 58749), (31, 58830),

Gene: Charming_87 Start: 56965, Stop: 57264, Start Num: 9
Candidate Starts for Charming_87:
(Start: 9 @56965 has 5 MA's), (Start: 12 @56998 has 44 MA's), (23, 57061), (31, 57142), (38, 57244),

Gene: Chickadee_87 Start: 56050, Stop: 56301, Start Num: 12
Candidate Starts for Chickadee_87:
(Start: 12 @56050 has 44 MA's), (22, 56089), (23, 56113), (28, 56173), (36, 56248),

Gene: Delrey21_88 Start: 60349, Stop: 60621, Start Num: 11
Candidate Starts for Delrey21_88:
(8, 60304), (Start: 11 @60349 has 6 MA's), (15, 60367), (23, 60418), (31, 60496), (35, 60544),

Gene: Dexdert_82 Start: 54559, Stop: 54810, Start Num: 12
Candidate Starts for Dexdert_82:
(Start: 12 @54559 has 44 MA's), (22, 54598), (23, 54622), (28, 54682), (36, 54757),

Gene: DoctorFroggo_88 Start: 60349, Stop: 60621, Start Num: 11
Candidate Starts for DoctorFroggo_88:
(8, 60304), (Start: 11 @60349 has 6 MA's), (15, 60367), (23, 60418), (31, 60496), (35, 60544),

Gene: EastWest_78 Start: 46071, Stop: 45799, Start Num: 10
Candidate Starts for EastWest_78:
(Start: 10 @46071 has 24 MA's), (23, 46002), (30, 45927), (37, 45852),

Gene: EdmundFerry_85 Start: 55426, Stop: 55677, Start Num: 12
Candidate Starts for EdmundFerry_85:
(Start: 12 @55426 has 44 MA's), (22, 55465), (23, 55489), (28, 55549), (36, 55624),

Gene: Fitzgerald_82 Start: 57842, Stop: 58105, Start Num: 12
Candidate Starts for Fitzgerald_82:
(Start: 9 @57809 has 5 MA's), (Start: 12 @57842 has 44 MA's), (23, 57905), (31, 57986),

Gene: Fosterous_86 Start: 57990, Stop: 58253, Start Num: 12
Candidate Starts for Fosterous_86:
(7, 57939), (Start: 12 @57990 has 44 MA's), (23, 58053), (31, 58134),

Gene: Franzy_67 Start: 46121, Stop: 45813, Start Num: 10
Candidate Starts for Franzy_67:
(Start: 10 @46121 has 24 MA's), (19, 46082), (23, 46046),

Gene: FuegoCuervo_89 Start: 58028, Stop: 58291, Start Num: 12
Candidate Starts for FuegoCuervo_89:
(Start: 9 @57995 has 5 MA's), (Start: 12 @58028 has 44 MA's), (23, 58091), (31, 58172),

Gene: GTE6_86 Start: 56599, Stop: 56850, Start Num: 12
Candidate Starts for GTE6_86:
(Start: 12 @56599 has 44 MA's), (22, 56638), (23, 56662), (28, 56722), (36, 56797),

Gene: Galadriel_85 Start: 58206, Stop: 58469, Start Num: 12
Candidate Starts for Galadriel_85:
(7, 58155), (Start: 12 @58206 has 44 MA's), (23, 58269), (31, 58350),

Gene: Geodirt_84 Start: 58493, Stop: 58759, Start Num: 12

Candidate Starts for Geodirt_84:

(Start: 9 @58460 has 5 MA's), (Start: 12 @58493 has 44 MA's), (23, 58556), (31, 58637), (38, 58739),

Gene: GravityBall_72 Start: 46734, Stop: 46405, Start Num: 10

Candidate Starts for GravityBall_72:

(Start: 10 @46734 has 24 MA's),

Gene: Grekaycon_73 Start: 46991, Stop: 46659, Start Num: 10

Candidate Starts for Grekaycon_73:

(Start: 10 @46991 has 24 MA's), (Start: 16 @46970 has 2 MA's), (23, 46922), (39, 46727),

Gene: Hans_87 Start: 58571, Stop: 58822, Start Num: 12

Candidate Starts for Hans_87:

(Start: 12 @58571 has 44 MA's), (23, 58634), (28, 58694), (29, 58700), (31, 58712), (32, 58715),

Gene: Inspectinfecti_87 Start: 58519, Stop: 58770, Start Num: 12

Candidate Starts for Inspectinfecti_87:

(Start: 12 @58519 has 44 MA's), (23, 58582), (28, 58642), (29, 58648), (31, 58660), (32, 58663),

Gene: JKerns_72 Start: 46983, Stop: 46651, Start Num: 10

Candidate Starts for JKerns_72:

(Start: 10 @46983 has 24 MA's), (Start: 16 @46962 has 2 MA's), (23, 46914),

Gene: Jabberwocky_83 Start: 58270, Stop: 58566, Start Num: 9

Candidate Starts for Jabberwocky_83:

(Start: 9 @58270 has 5 MA's), (Start: 12 @58303 has 44 MA's), (23, 58366), (31, 58447),

Gene: Jawnski_68 Start: 45564, Stop: 45256, Start Num: 10

Candidate Starts for Jawnski_68:

(Start: 10 @45564 has 24 MA's), (19, 45525), (23, 45489),

Gene: Jordan_73 Start: 47141, Stop: 46809, Start Num: 10

Candidate Starts for Jordan_73:

(Start: 10 @47141 has 24 MA's), (Start: 16 @47120 has 2 MA's), (23, 47072),

Gene: Kamashten_85 Start: 58100, Stop: 58363, Start Num: 12

Candidate Starts for Kamashten_85:

(7, 58049), (Start: 12 @58100 has 44 MA's), (23, 58163), (31, 58244),

Gene: Keitabear_82 Start: 58580, Stop: 58876, Start Num: 9

Candidate Starts for Keitabear_82:

(Start: 9 @58580 has 5 MA's), (Start: 12 @58613 has 44 MA's), (23, 58676), (31, 58757),

Gene: Kewpiedoll_85 Start: 58474, Stop: 58737, Start Num: 12

Candidate Starts for Kewpiedoll_85:

(Start: 9 @58441 has 5 MA's), (Start: 12 @58474 has 44 MA's), (23, 58537), (31, 58618),

Gene: King2_67 Start: 46100, Stop: 45792, Start Num: 10

Candidate Starts for King2_67:

(Start: 10 @46100 has 24 MA's), (19, 46061),

Gene: Kwekel_87 Start: 55963, Stop: 56214, Start Num: 12

Candidate Starts for Kwekel_87:

(Start: 12 @55963 has 44 MA's), (22, 56002), (23, 56026), (28, 56086), (36, 56161),

Gene: LeeroyJ_73 Start: 46660, Stop: 46331, Start Num: 10

Candidate Starts for LeeroyJ_73:

(Start: 10 @46660 has 24 MA's),

Gene: Lennon_84 Start: 59043, Stop: 59306, Start Num: 12

Candidate Starts for Lennon_84:

(Start: 9 @59010 has 5 MA's), (Start: 12 @59043 has 44 MA's), (23, 59106), (31, 59187),

Gene: Leonard_86 Start: 58581, Stop: 58832, Start Num: 12

Candidate Starts for Leonard_86:

(Start: 12 @58581 has 44 MA's), (23, 58644), (28, 58704), (29, 58710), (31, 58722), (32, 58725),

Gene: Lilbeanie_97 Start: 58823, Stop: 59047, Start Num: 27

Candidate Starts for Lilbeanie_97:

(Start: 27 @58823 has 1 MA's), (33, 58886), (42, 59015),

Gene: Love_90 Start: 58854, Stop: 59117, Start Num: 12

Candidate Starts for Love_90:

(Start: 9 @58821 has 5 MA's), (Start: 12 @58854 has 44 MA's), (23, 58917), (31, 58998),

Gene: Martha_72 Start: 46927, Stop: 46595, Start Num: 10

Candidate Starts for Martha_72:

(Start: 10 @46927 has 24 MA's), (Start: 16 @46906 has 2 MA's), (23, 46858), (39, 46663),

Gene: McCrothy_83 Start: 58830, Stop: 59093, Start Num: 12

Candidate Starts for McCrothy_83:

(7, 58779), (Start: 12 @58830 has 44 MA's), (23, 58893), (31, 58974),

Gene: McKinley_87 Start: 57834, Stop: 58097, Start Num: 12

Candidate Starts for McKinley_87:

(Start: 9 @57801 has 5 MA's), (Start: 12 @57834 has 44 MA's), (23, 57897), (31, 57978),

Gene: MelBins_88 Start: 59070, Stop: 59321, Start Num: 12

Candidate Starts for MelBins_88:

(1, 58767), (Start: 12 @59070 has 44 MA's), (23, 59133), (28, 59193), (31, 59211), (32, 59214),

Gene: MoontowerMania_85 Start: 58915, Stop: 59211, Start Num: 9

Candidate Starts for MoontowerMania_85:

(Start: 9 @58915 has 5 MA's), (Start: 12 @58948 has 44 MA's), (23, 59011), (31, 59092),

Gene: NathanVaag_68 Start: 45795, Stop: 45487, Start Num: 10

Candidate Starts for NathanVaag_68:

(Start: 10 @45795 has 24 MA's), (19, 45756), (23, 45720), (36, 45582),

Gene: Natkenzie_88 Start: 58873, Stop: 59145, Start Num: 11

Candidate Starts for Natkenzie_88:

(3, 58672), (4, 58681), (5, 58693), (6, 58699), (Start: 11 @58873 has 6 MA's), (23, 58942), (31, 59020),

Gene: Nordenberg_83 Start: 56540, Stop: 56839, Start Num: 9

Candidate Starts for Nordenberg_83:

(Start: 9 @56540 has 5 MA's), (Start: 12 @56573 has 44 MA's), (23, 56636), (31, 56717), (38, 56819),

Gene: Nostromo_67 Start: 43577, Stop: 43287, Start Num: 10

Candidate Starts for Nostromo_67:

(Start: 10 @43577 has 24 MA's), (34, 43391), (40, 43307),

Gene: Paries_88 Start: 59125, Stop: 59388, Start Num: 12

Candidate Starts for Paries_88:

(Start: 9 @59092 has 5 MA's), (Start: 12 @59125 has 44 MA's), (23, 59188), (31, 59269),

Gene: Phauci_78 Start: 55646, Stop: 55897, Start Num: 12

Candidate Starts for Phauci_78:

(2, 55400), (Start: 12 @55646 has 44 MA's), (23, 55709), (28, 55769), (29, 55775), (31, 55787), (32, 55790),

Gene: Phinally_86 Start: 58578, Stop: 58829, Start Num: 12

Candidate Starts for Phinally_86:

(Start: 12 @58578 has 44 MA's), (23, 58641), (28, 58701), (29, 58707), (31, 58719), (32, 58722),

Gene: Piccoletto_69 Start: 45957, Stop: 45649, Start Num: 10

Candidate Starts for Piccoletto_69:

(Start: 10 @45957 has 24 MA's), (19, 45918), (23, 45882), (36, 45744),

Gene: Pippa_73 Start: 46951, Stop: 46640, Start Num: 16

Candidate Starts for Pippa_73:

(Start: 10 @46972 has 24 MA's), (Start: 16 @46951 has 2 MA's), (23, 46903),

Gene: Pumpkiney_88 Start: 57465, Stop: 57734, Start Num: 11

Candidate Starts for Pumpkiney_88:

(3, 57261), (4, 57270), (5, 57282), (Start: 11 @57465 has 6 MA's), (23, 57534), (31, 57612),

Gene: RiverRaider_86 Start: 55943, Stop: 56194, Start Num: 12

Candidate Starts for RiverRaider_86:

(7, 55889), (Start: 12 @55943 has 44 MA's), (18, 55964), (23, 56006), (29, 56072), (31, 56084),

Gene: RoadKill_84 Start: 55492, Stop: 55743, Start Num: 12

Candidate Starts for RoadKill_84:

(Start: 12 @55492 has 44 MA's), (22, 55531), (23, 55555), (28, 55615), (36, 55690),

Gene: Rofo_84 Start: 57573, Stop: 57836, Start Num: 12

Candidate Starts for Rofo_84:

(7, 57522), (Start: 12 @57573 has 44 MA's), (23, 57636), (31, 57717),

Gene: Sampson_90 Start: 59024, Stop: 59296, Start Num: 11

Candidate Starts for Sampson_90:

(3, 58823), (4, 58832), (5, 58844), (6, 58850), (Start: 11 @59024 has 6 MA's), (23, 59093), (31, 59171),

Gene: Sanjuju_82 Start: 57928, Stop: 58191, Start Num: 12

Candidate Starts for Sanjuju_82:

(Start: 9 @57895 has 5 MA's), (Start: 12 @57928 has 44 MA's), (23, 57991), (31, 58072),

Gene: Scioto_88 Start: 58874, Stop: 59146, Start Num: 11

Candidate Starts for Scioto_88:

(3, 58673), (4, 58682), (5, 58694), (6, 58700), (Start: 11 @58874 has 6 MA's), (23, 58943), (31, 59021),

Gene: Sedona_82 Start: 58425, Stop: 58688, Start Num: 12
Candidate Starts for Sedona_82:
(Start: 9 @58392 has 5 MA's), (Start: 12 @58425 has 44 MA's), (23, 58488), (31, 58569),

Gene: Shade_72 Start: 46747, Stop: 46415, Start Num: 10
Candidate Starts for Shade_72:
(Start: 10 @46747 has 24 MA's), (Start: 16 @46726 has 2 MA's), (23, 46678),

Gene: Shivanishola_86 Start: 56589, Stop: 56852, Start Num: 12
Candidate Starts for Shivanishola_86:
(Start: 9 @56556 has 5 MA's), (Start: 12 @56589 has 44 MA's), (23, 56652), (31, 56733),

Gene: Sicarius2_74 Start: 44932, Stop: 44645, Start Num: 10
Candidate Starts for Sicarius2_74:
(Start: 10 @44932 has 24 MA's), (22, 44884), (23, 44860), (41, 44653),

Gene: Sitar_83 Start: 58447, Stop: 58710, Start Num: 12
Candidate Starts for Sitar_83:
(Start: 9 @58414 has 5 MA's), (Start: 12 @58447 has 44 MA's), (23, 58510), (31, 58591),

Gene: Sonny_72 Start: 46702, Stop: 46370, Start Num: 10
Candidate Starts for Sonny_72:
(Start: 10 @46702 has 24 MA's), (Start: 16 @46681 has 2 MA's), (23, 46633),

Gene: StevieBAY_73 Start: 46953, Stop: 46624, Start Num: 10
Candidate Starts for StevieBAY_73:
(Start: 10 @46953 has 24 MA's),

Gene: Stultus_79 Start: 56719, Stop: 56982, Start Num: 12
Candidate Starts for Stultus_79:
(Start: 9 @56686 has 5 MA's), (Start: 12 @56719 has 44 MA's), (23, 56782), (31, 56863),

Gene: Sunshine23_95 Start: 57525, Stop: 57268, Start Num: 21
Candidate Starts for Sunshine23_95:
(Start: 11 @57567 has 6 MA's), (13, 57561), (14, 57555), (17, 57543), (20, 57528), (21, 57525), (24, 57492), (25, 57477),

Gene: TaeYoung_73 Start: 46899, Stop: 46567, Start Num: 10
Candidate Starts for TaeYoung_73:
(Start: 10 @46899 has 24 MA's), (Start: 16 @46878 has 2 MA's), (23, 46830), (39, 46635),

Gene: Tangent_87 Start: 57279, Stop: 57545, Start Num: 12
Candidate Starts for Tangent_87:
(Start: 9 @57246 has 5 MA's), (Start: 12 @57279 has 44 MA's), (23, 57342), (31, 57423), (38, 57525),

Gene: Tardus_90 Start: 59420, Stop: 59689, Start Num: 11
Candidate Starts for Tardus_90:
(Start: 11 @59420 has 6 MA's), (23, 59489), (31, 59567),

Gene: Thing3_85 Start: 58100, Stop: 58363, Start Num: 12
Candidate Starts for Thing3_85:
(7, 58049), (Start: 12 @58100 has 44 MA's), (23, 58163), (31, 58244),

Gene: Tiamoceli_80 Start: 55382, Stop: 55633, Start Num: 12

Candidate Starts for Tiamoceli_80:

(Start: 12 @55382 has 44 MA's), (22, 55421), (23, 55445), (28, 55505), (36, 55580),

Gene: Timinator_73 Start: 46773, Stop: 46444, Start Num: 10

Candidate Starts for Timinator_73:

(Start: 10 @46773 has 24 MA's),

Gene: Twonlo_84 Start: 56083, Stop: 56334, Start Num: 12

Candidate Starts for Twonlo_84:

(Start: 12 @56083 has 44 MA's), (22, 56122), (23, 56146), (28, 56206), (36, 56281),

Gene: Verity_87 Start: 60121, Stop: 60393, Start Num: 11

Candidate Starts for Verity_87:

(8, 60076), (Start: 11 @60121 has 6 MA's), (15, 60139), (23, 60190), (31, 60268), (35, 60316),

Gene: Vivi2_88 Start: 58335, Stop: 58601, Start Num: 12

Candidate Starts for Vivi2_88:

(Start: 9 @58302 has 5 MA's), (Start: 12 @58335 has 44 MA's), (23, 58398), (31, 58479), (38, 58581),

Gene: Wyborn_73 Start: 45667, Stop: 45380, Start Num: 10

Candidate Starts for Wyborn_73:

(Start: 10 @45667 has 24 MA's), (22, 45619), (23, 45595), (41, 45388),

Gene: Zartrosa_74 Start: 46999, Stop: 46667, Start Num: 10

Candidate Starts for Zartrosa_74:

(Start: 10 @46999 has 24 MA's), (Start: 16 @46978 has 2 MA's), (23, 46930),

Gene: Zipp_88 Start: 60092, Stop: 60364, Start Num: 11

Candidate Starts for Zipp_88:

(8, 60047), (Start: 11 @60092 has 6 MA's), (15, 60110), (23, 60161), (31, 60239), (35, 60287),