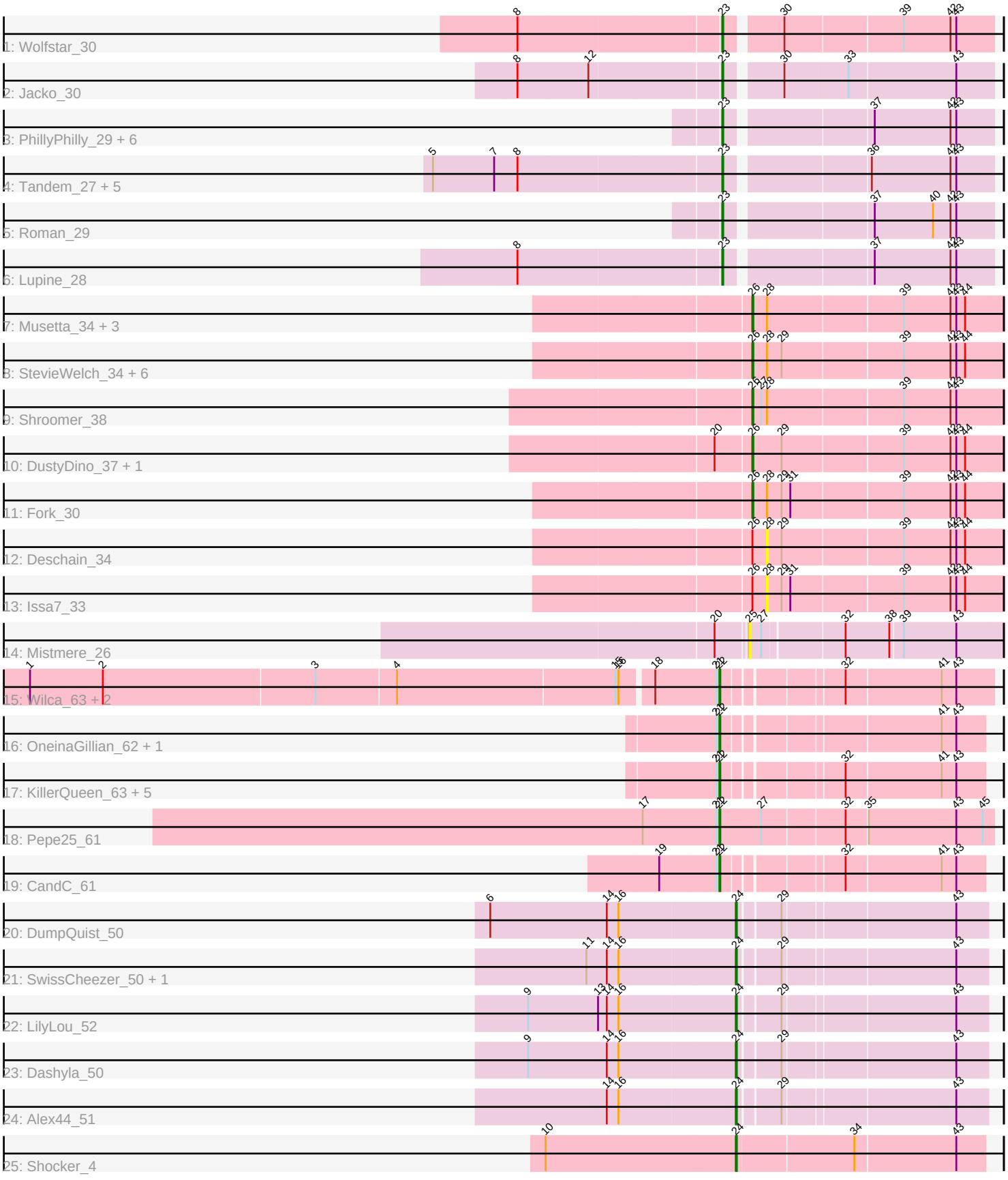
# Pham 347672


1: Wolfstar_30
2: Jacko_30
3: PhillyPhilly_29 + 6
4: Tandem_27 + 5
5: Roman_29
6: Lupine_28
7: Musetta_34 + 3
8: StevieWelch_34 + 6
9: Shroomer_38
10: DustyDino_37 + 1
11: Fork_30
12: Deschain_34
13: Issa7_33
14: Mistmere_26
15: Wilca_63 + 2
16: OneinaGillian_62 + 1
17: KillerQueen_63 + 5
18: Pepe25_61
19: CandC_61
20: DumpQuist_50
21: SwissCheezer_50 + 1
22: LilyLou_52
23: Dashyla_50
24: Alex44_51
25: Shocker_4

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 347672 Report

This analysis was run 11/14/26 on database version 672.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 347672 has 55 members, 7 are drafts.

Phages represented in each track:
- Track 1 : Wolfstar_30
- Track 2 : Jacko_30
- Track 3 : PhillyPhilly_29, Pavlo_28, Solimine_30, Uterion_32, Saradis_30, Hubbs_29, DejaVu_30
- Track 4 : Tandem_27, Platte_27, Alleb_28, Pioneer3_27, OlinDD_27, Hortus1_27
- Track 5 : Roman_29
- Track 6 : Lupine_28
- Track 7 : Musetta_34, Yuma_33, Welcome_35, ASegato_33
- Track 8 : StevieWelch_34, HollowPurple_35, Necrophoxinus_36, Erenyeager_34, SteakFry_36, Lyell_34, Casablancas_35
- Track 9 : Shroomer_38
- Track 10 : DustyDino_37, RunningBrook_35
- Track 11 : Fork_30
- Track 12 : Deschain_34
- Track 13 : Issa7_33
- Track 14 : Mistmere_26
- Track 15 : Wilca_63, BirdInFrench_63, Spiderpig_63
- Track 16 : OneinaGillian_62, Marcie_67
- Track 17 : KillerQueen_63, Romm_64, Tempo_62, Kelcole_60, Fregley_62, RobinRose_64
- Track 18 : Pepe25_61
- Track 19 : CandC_61
- Track 20 : DumpQuist_50
- Track 21 : SwissCheezer_50, ArMaWen_50
- Track 22 : LilyLou_52
- Track 23 : Dashyla_50
- Track 24 : Alex44_51
- Track 25 : Shocker_4

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

The start number called the most often in the published annotations is 26, it was called in 15 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ASegato_33, Casablancas_35, DustyDino_37, Erenyeager_34, Fork_30, HollowPurple_35, Lyell_34, Musetta_34, Necrophoxinus_36, RunningBrook_35, Shroomer_38, SteakFry_36, StevieWelch_34, Welcome_35, Yuma_33,

Genes that have the "Most Annotated" start but do not call it:
• Deschain_34, Issa7_33,

Genes that do not have the "Most Annotated" start:
• Alex44_51, Alleb_28, ArMaWen_50, BirdInFrench_63, CandC_61, Dashyla_50, DejaVu_30, DumpQuist_50, Fregley_62, Hortus1_27, Hubbs_29, Jacko_30, Kelcole_60, KillerQueen_63, LilyLou_52, Lupine_28, Marcie_67, Mistmere_26, OlinDD_27, OneinaGillian_62, Pavlo_28, Pepe25_61, PhillyPhilly_29, Pioneer3_27, Platte_27, RobinRose_64, Roman_29, Romm_64, Saradis_30, Shocker_4, Solimine_30, Spiderpig_63, SwissCheezer_50, Tandem_27, Tempo_62, Uterion_32, Wilca_63, Wolfstar_30,

**Summary by start number:**

Start 22:
• Found in 13 of 55 ( 23.6% ) of genes in pham
• Manual Annotations of this start: 11 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BirdInFrench_63 (EG), CandC_61 (EG), Fregley_62 (EG), Kelcole_60 (EG), KillerQueen_63 (EG), Marcie_67 (EG), OneinaGillian_62 (EG), Pepe25_61 (EG), RobinRose_64 (EG), Romm_64 (EG), Spiderpig_63 (EG), Tempo_62 (EG), Wilca_63 (EG),

Start 23:
• Found in 17 of 55 ( 30.9% ) of genes in pham
• Manual Annotations of this start: 15 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alleb_28 (ED1), DejaVu_30 (ED1), Hortus1_27 (ED1), Hubbs_29 (ED1), Jacko_30 (ED1), Lupine_28 (ED1), OlinDD_27 (ED1), Pavlo_28 (ED1), PhillyPhilly_29 (ED1), Pioneer3_27 (ED1), Platte_27 (ED1), Roman_29 (ED1), Saradis_30 (ED1), Solimine_30 (ED1), Tandem_27 (ED1), Uterion_32 (ED1), Wolfstar_30 (ED),

Start 24:
• Found in 7 of 55 ( 12.7% ) of genes in pham
• Manual Annotations of this start: 7 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alex44_51 (EK1), ArMaWen_50 (EK1), Dashyla_50 (EK1), DumpQuist_50 (EK1), LilyLou_52 (EK1), Shocker_4 (singleton), SwissCheezer_50 (EK1),

Start 25:
• Found in 1 of 55 ( 1.8% ) of genes in pham
• No Manual Annotations of this start.

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mistmere_26 (ED3),

Start 26:
• Found in 17 of 55 ( 30.9% ) of genes in pham
• Manual Annotations of this start: 15 of 48
• Called 88.2% of time when present
• Phage (with cluster) where this start called: ASegato_33 (ED2), Casablancas_35 (ED2), DustyDino_37 (ED2), Erenyeager_34 (ED2), Fork_30 (ED2), HollowPurple_35 (ED2), Lyell_34 (ED2), Musetta_34 (ED2), Necrophoxinus_36 (ED2), RunningBrook_35 (ED2), Shroomer_38 (ED2), SteakFry_36 (ED2), StevieWelch_34 (ED2), Welcome_35 (ED2), Yuma_33 (ED2),

Start 28:
• Found in 15 of 55 ( 27.3% ) of genes in pham
• No Manual Annotations of this start.
• Called 13.3% of time when present
• Phage (with cluster) where this start called: Deschain_34 (ED2), Issa7_33 (ED2),

**Summary by clusters:**

There are 7 clusters represented in this pham: singleton, ED, EG, ED2, ED3, ED1, EK1,

Info for manual annotations of cluster ED:
•Start number 23 was manually annotated 1 time for cluster ED.

Info for manual annotations of cluster ED1:
•Start number 23 was manually annotated 14 times for cluster ED1.

Info for manual annotations of cluster ED2:
•Start number 26 was manually annotated 15 times for cluster ED2.

Info for manual annotations of cluster EG:
•Start number 22 was manually annotated 11 times for cluster EG.

Info for manual annotations of cluster EK1:
•Start number 24 was manually annotated 6 times for cluster EK1.

***Gene Information:***

Gene: ASegato_33 Start: 9624, Stop: 9875, Start Num: 26
Candidate Starts for ASegato_33:
(Start: 26 @9624 has 15 MA's), (28, 9639), (39, 9774), (42, 9822), (43, 9828), (44, 9837),

Gene: Alex44_51 Start: 51379, Stop: 51618, Start Num: 24
Candidate Starts for Alex44_51:
(14, 51250), (16, 51262), (Start: 24 @51379 has 7 MA's), (29, 51418), (43, 51586),

Gene: Alleb_28 Start: 8830, Stop: 9090, Start Num: 23

Candidate Starts for Alleb_28:
(5, 8539), (7, 8602), (8, 8626), (Start: 23 @8830 has 15 MA's), (36, 8965), (42, 9046), (43, 9052),

Gene: ArMaWen_50 Start: 50919, Stop: 51158, Start Num: 24
Candidate Starts for ArMaWen_50:
(11, 50769), (14, 50790), (16, 50802), (Start: 24 @50919 has 7 MA's), (29, 50958), (43, 51126),

Gene: BirdInFrench_63 Start: 42918, Stop: 42661, Start Num: 22
Candidate Starts for BirdInFrench_63:
(1, 43611), (2, 43536), (3, 43320), (4, 43239), (15, 43017), (16, 43014), (18, 42984), (21, 42921), (Start: 22 @42918 has 11 MA's), (32, 42810), (41, 42714), (43, 42699),

Gene: CandC_61 Start: 42136, Stop: 41888, Start Num: 22
Candidate Starts for CandC_61:
(19, 42196), (21, 42139), (Start: 22 @42136 has 11 MA's), (32, 42028), (41, 41932), (43, 41917),

Gene: Casablancas_35 Start: 9707, Stop: 9958, Start Num: 26
Candidate Starts for Casablancas_35:
(Start: 26 @9707 has 15 MA's), (28, 9722), (29, 9737), (39, 9857), (42, 9905), (43, 9911), (44, 9920),

Gene: Dashyla_50 Start: 51053, Stop: 51292, Start Num: 24
Candidate Starts for Dashyla_50:
(9, 50843), (14, 50924), (16, 50936), (Start: 24 @51053 has 7 MA's), (29, 51092), (43, 51260),

Gene: DejaVu_30 Start: 9028, Stop: 9288, Start Num: 23
Candidate Starts for DejaVu_30:
(Start: 23 @9028 has 15 MA's), (37, 9166), (42, 9244), (43, 9250),

Gene: Deschain_34 Start: 10386, Stop: 10622, Start Num: 28
Candidate Starts for Deschain_34:
(Start: 26 @10371 has 15 MA's), (28, 10386), (29, 10401), (39, 10521), (42, 10569), (43, 10575), (44, 10584),

Gene: DumpQuist_50 Start: 50907, Stop: 51146, Start Num: 24
Candidate Starts for DumpQuist_50:
(6, 50658), (14, 50778), (16, 50790), (Start: 24 @50907 has 7 MA's), (29, 50946), (43, 51114),

Gene: DustyDino_37 Start: 10571, Stop: 10822, Start Num: 26
Candidate Starts for DustyDino_37:
(20, 10535), (Start: 26 @10571 has 15 MA's), (29, 10601), (39, 10721), (42, 10769), (43, 10775), (44, 10784),

Gene: Erenyeager_34 Start: 9965, Stop: 10216, Start Num: 26
Candidate Starts for Erenyeager_34:
(Start: 26 @9965 has 15 MA's), (28, 9980), (29, 9995), (39, 10115), (42, 10163), (43, 10169), (44, 10178),

Gene: Fork_30 Start: 9281, Stop: 9532, Start Num: 26
Candidate Starts for Fork_30:
(Start: 26 @9281 has 15 MA's), (28, 9296), (29, 9311), (31, 9320), (39, 9431), (42, 9479), (43, 9485), (44, 9494),

Gene: Fregley_62 Start: 42305, Stop: 42057, Start Num: 22

Candidate Starts for Fregley_62:
(21, 42308), (Start: 22 @42305 has 11 MA's), (32, 42197), (41, 42101), (43, 42086),

Gene: HollowPurple_35 Start: 9821, Stop: 10072, Start Num: 26
Candidate Starts for HollowPurple_35:
(Start: 26 @9821 has 15 MA's), (28, 9836), (29, 9851), (39, 9971), (42, 10019), (43, 10025), (44, 10034),

Gene: Hortus1_27 Start: 8829, Stop: 9089, Start Num: 23
Candidate Starts for Hortus1_27:
(5, 8538), (7, 8601), (8, 8625), (Start: 23 @8829 has 15 MA's), (36, 8964), (42, 9045), (43, 9051),

Gene: Hubbs_29 Start: 9240, Stop: 9500, Start Num: 23
Candidate Starts for Hubbs_29:
(Start: 23 @9240 has 15 MA's), (37, 9378), (42, 9456), (43, 9462),

Gene: Issa7_33 Start: 9290, Stop: 9526, Start Num: 28
Candidate Starts for Issa7_33:
(Start: 26 @9275 has 15 MA's), (28, 9290), (29, 9305), (31, 9314), (39, 9425), (42, 9473), (43, 9479), (44, 9488),

Gene: Jacko_30 Start: 9333, Stop: 9593, Start Num: 23
Candidate Starts for Jacko_30:
(8, 9132), (12, 9204), (Start: 23 @9333 has 15 MA's), (30, 9384), (33, 9447), (43, 9555),

Gene: Kelcole_60 Start: 42364, Stop: 42116, Start Num: 22
Candidate Starts for Kelcole_60:
(21, 42367), (Start: 22 @42364 has 11 MA's), (32, 42256), (41, 42160), (43, 42145),

Gene: KillerQueen_63 Start: 42614, Stop: 42366, Start Num: 22
Candidate Starts for KillerQueen_63:
(21, 42617), (Start: 22 @42614 has 11 MA's), (32, 42506), (41, 42410), (43, 42395),

Gene: LilyLou_52 Start: 51371, Stop: 51610, Start Num: 24
Candidate Starts for LilyLou_52:
(9, 51161), (13, 51233), (14, 51242), (16, 51254), (Start: 24 @51371 has 7 MA's), (29, 51410), (43, 51578),

Gene: Lupine_28 Start: 8912, Stop: 9172, Start Num: 23
Candidate Starts for Lupine_28:
(8, 8711), (Start: 23 @8912 has 15 MA's), (37, 9050), (42, 9128), (43, 9134),

Gene: Lyell_34 Start: 9883, Stop: 10134, Start Num: 26
Candidate Starts for Lyell_34:
(Start: 26 @9883 has 15 MA's), (28, 9898), (29, 9913), (39, 10033), (42, 10081), (43, 10087), (44, 10096),

Gene: Marcie_67 Start: 43263, Stop: 43015, Start Num: 22
Candidate Starts for Marcie_67:
(21, 43266), (Start: 22 @43263 has 11 MA's), (41, 43059), (43, 43044),

Gene: Mistmere_26 Start: 7490, Stop: 7738, Start Num: 25
Candidate Starts for Mistmere_26:

(20, 7460), (25, 7490), (27, 7502), (32, 7580), (38, 7625), (39, 7637), (43, 7691),

Gene: Musetta_34 Start: 9992, Stop: 10243, Start Num: 26
Candidate Starts for Musetta_34:
(Start: 26 @9992 has 15 MA's), (28, 10007), (39, 10142), (42, 10190), (43, 10196), (44, 10205),

Gene: Necrophoxinus_36 Start: 10579, Stop: 10830, Start Num: 26
Candidate Starts for Necrophoxinus_36:
(Start: 26 @10579 has 15 MA's), (28, 10594), (29, 10609), (39, 10729), (42, 10777), (43, 10783), (44, 10792),

Gene: OlinDD_27 Start: 8828, Stop: 9088, Start Num: 23
Candidate Starts for OlinDD_27:
(5, 8537), (7, 8600), (8, 8624), (Start: 23 @8828 has 15 MA's), (36, 8963), (42, 9044), (43, 9050),

Gene: OneinaGillian_62 Start: 42266, Stop: 42018, Start Num: 22
Candidate Starts for OneinaGillian_62:
(21, 42269), (Start: 22 @42266 has 11 MA's), (41, 42062), (43, 42047),

Gene: Pavlo_28 Start: 9187, Stop: 9447, Start Num: 23
Candidate Starts for Pavlo_28:
(Start: 23 @9187 has 15 MA's), (37, 9325), (42, 9403), (43, 9409),

Gene: Pepe25_61 Start: 41821, Stop: 41549, Start Num: 22
Candidate Starts for Pepe25_61:
(17, 41899), (21, 41824), (Start: 22 @41821 has 11 MA's), (27, 41779), (32, 41698), (35, 41677), (43, 41587), (45, 41560),

Gene: PhillyPhilly_29 Start: 9092, Stop: 9352, Start Num: 23
Candidate Starts for PhillyPhilly_29:
(Start: 23 @9092 has 15 MA's), (37, 9230), (42, 9308), (43, 9314),

Gene: Pioneer3_27 Start: 8827, Stop: 9087, Start Num: 23
Candidate Starts for Pioneer3_27:
(5, 8536), (7, 8599), (8, 8623), (Start: 23 @8827 has 15 MA's), (36, 8962), (42, 9043), (43, 9049),

Gene: Platte_27 Start: 8597, Stop: 8857, Start Num: 23
Candidate Starts for Platte_27:
(5, 8306), (7, 8369), (8, 8393), (Start: 23 @8597 has 15 MA's), (36, 8732), (42, 8813), (43, 8819),

Gene: RobinRose_64 Start: 42778, Stop: 42530, Start Num: 22
Candidate Starts for RobinRose_64:
(21, 42781), (Start: 22 @42778 has 11 MA's), (32, 42670), (41, 42574), (43, 42559),

Gene: Roman_29 Start: 9087, Stop: 9347, Start Num: 23
Candidate Starts for Roman_29:
(Start: 23 @9087 has 15 MA's), (37, 9225), (40, 9285), (42, 9303), (43, 9309),

Gene: Romm_64 Start: 42775, Stop: 42527, Start Num: 22
Candidate Starts for Romm_64:
(21, 42778), (Start: 22 @42775 has 11 MA's), (32, 42667), (41, 42571), (43, 42556),

Gene: RunningBrook_35 Start: 10571, Stop: 10822, Start Num: 26

Candidate Starts for RunningBrook_35:
(20, 10535), (Start: 26 @10571 has 15 MA's), (29, 10601), (39, 10721), (42, 10769), (43, 10775), (44, 10784),

Gene: Saradis_30 Start: 9150, Stop: 9410, Start Num: 23
Candidate Starts for Saradis_30:
(Start: 23 @9150 has 15 MA's), (37, 9288), (42, 9366), (43, 9372),

Gene: Shocker_4 Start: 1170, Stop: 1418, Start Num: 24
Candidate Starts for Shocker_4:
(10, 975), (Start: 24 @1170 has 7 MA's), (34, 1287), (43, 1389),

Gene: Shroomer_38 Start: 10099, Stop: 10350, Start Num: 26
Candidate Starts for Shroomer_38:
(Start: 26 @10099 has 15 MA's), (27, 10108), (28, 10114), (39, 10249), (42, 10297), (43, 10303),

Gene: Solimine_30 Start: 9565, Stop: 9825, Start Num: 23
Candidate Starts for Solimine_30:
(Start: 23 @9565 has 15 MA's), (37, 9703), (42, 9781), (43, 9787),

Gene: Spiderpig_63 Start: 42907, Stop: 42650, Start Num: 22
Candidate Starts for Spiderpig_63:
(1, 43600), (2, 43525), (3, 43309), (4, 43228), (15, 43006), (16, 43003), (18, 42973), (21, 42910), (Start: 22 @42907 has 11 MA's), (32, 42799), (41, 42703), (43, 42688),

Gene: SteakFry_36 Start: 9821, Stop: 10072, Start Num: 26
Candidate Starts for SteakFry_36:
(Start: 26 @9821 has 15 MA's), (28, 9836), (29, 9851), (39, 9971), (42, 10019), (43, 10025), (44, 10034),

Gene: StevieWelch_34 Start: 9971, Stop: 10222, Start Num: 26
Candidate Starts for StevieWelch_34:
(Start: 26 @9971 has 15 MA's), (28, 9986), (29, 10001), (39, 10121), (42, 10169), (43, 10175), (44, 10184),

Gene: SwissCheezer_50 Start: 50936, Stop: 51175, Start Num: 24
Candidate Starts for SwissCheezer_50:
(11, 50786), (14, 50807), (16, 50819), (Start: 24 @50936 has 7 MA's), (29, 50975), (43, 51143),

Gene: Tandem_27 Start: 8766, Stop: 9026, Start Num: 23
Candidate Starts for Tandem_27:
(5, 8475), (7, 8538), (8, 8562), (Start: 23 @8766 has 15 MA's), (36, 8901), (42, 8982), (43, 8988),

Gene: Tempo_62 Start: 42643, Stop: 42395, Start Num: 22
Candidate Starts for Tempo_62:
(21, 42646), (Start: 22 @42643 has 11 MA's), (32, 42535), (41, 42439), (43, 42424),

Gene: Uterion_32 Start: 9657, Stop: 9917, Start Num: 23
Candidate Starts for Uterion_32:
(Start: 23 @9657 has 15 MA's), (37, 9795), (42, 9873), (43, 9879),

Gene: Welcome_35 Start: 9988, Stop: 10239, Start Num: 26
Candidate Starts for Welcome_35:

(Start: 26 @9988 has 15 MA's), (28, 10003), (39, 10138), (42, 10186), (43, 10192), (44, 10201),

Gene: Wilca_63 Start: 42918, Stop: 42661, Start Num: 22
Candidate Starts for Wilca_63:
(1, 43611), (2, 43536), (3, 43320), (4, 43239), (15, 43017), (16, 43014), (18, 42984), (21, 42921),
(Start: 22 @42918 has 11 MA's), (32, 42810), (41, 42714), (43, 42699),

Gene: Wolfstar_30 Start: 9600, Stop: 9860, Start Num: 23
Candidate Starts for Wolfstar_30:
(8, 9399), (Start: 23 @9600 has 15 MA's), (30, 9651), (39, 9768), (42, 9816), (43, 9822),

Gene: Yuma_33 Start: 9891, Stop: 10142, Start Num: 26
Candidate Starts for Yuma_33:
(Start: 26 @9891 has 15 MA's), (28, 9906), (39, 10041), (42, 10089), (43, 10095), (44, 10104),