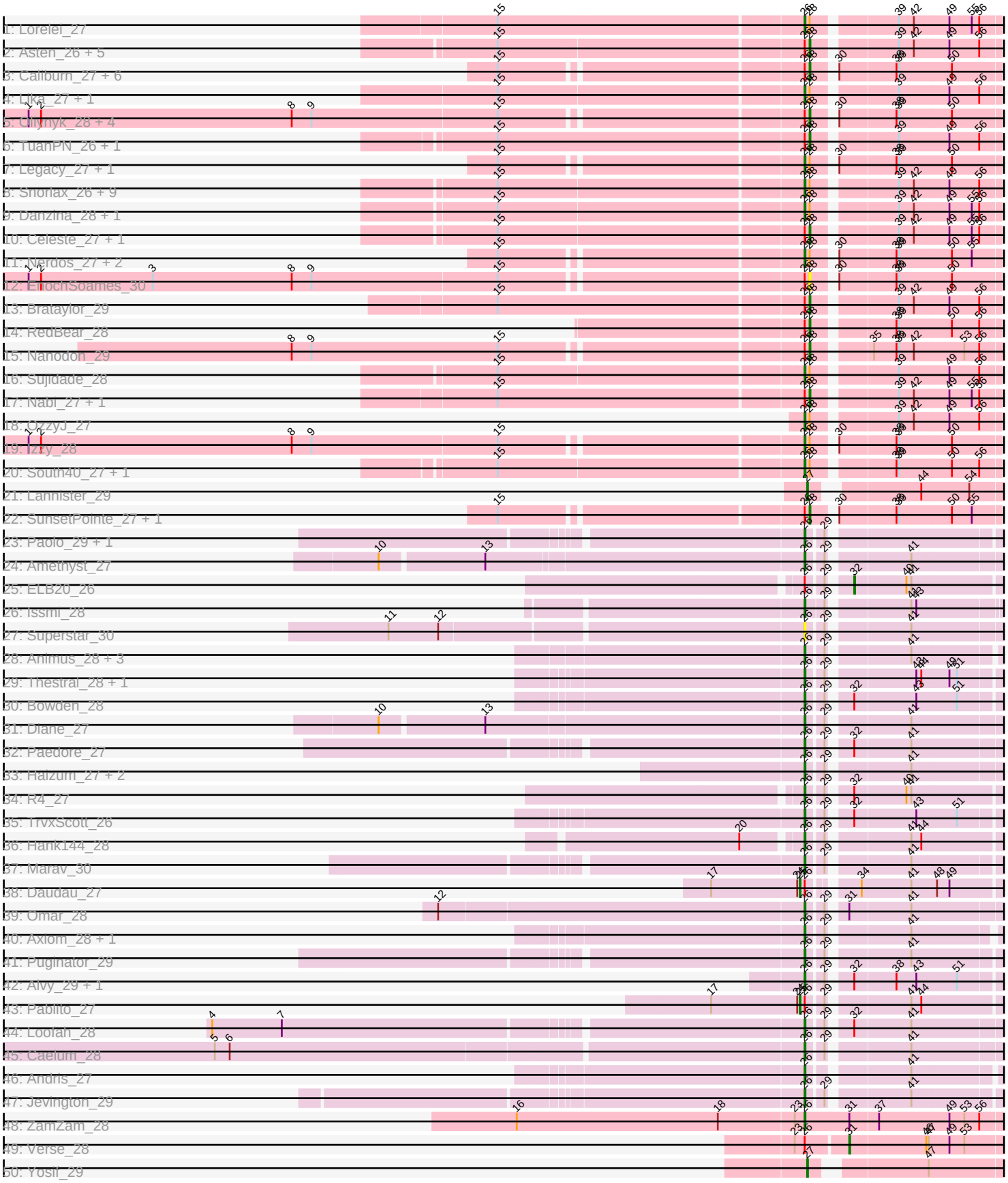
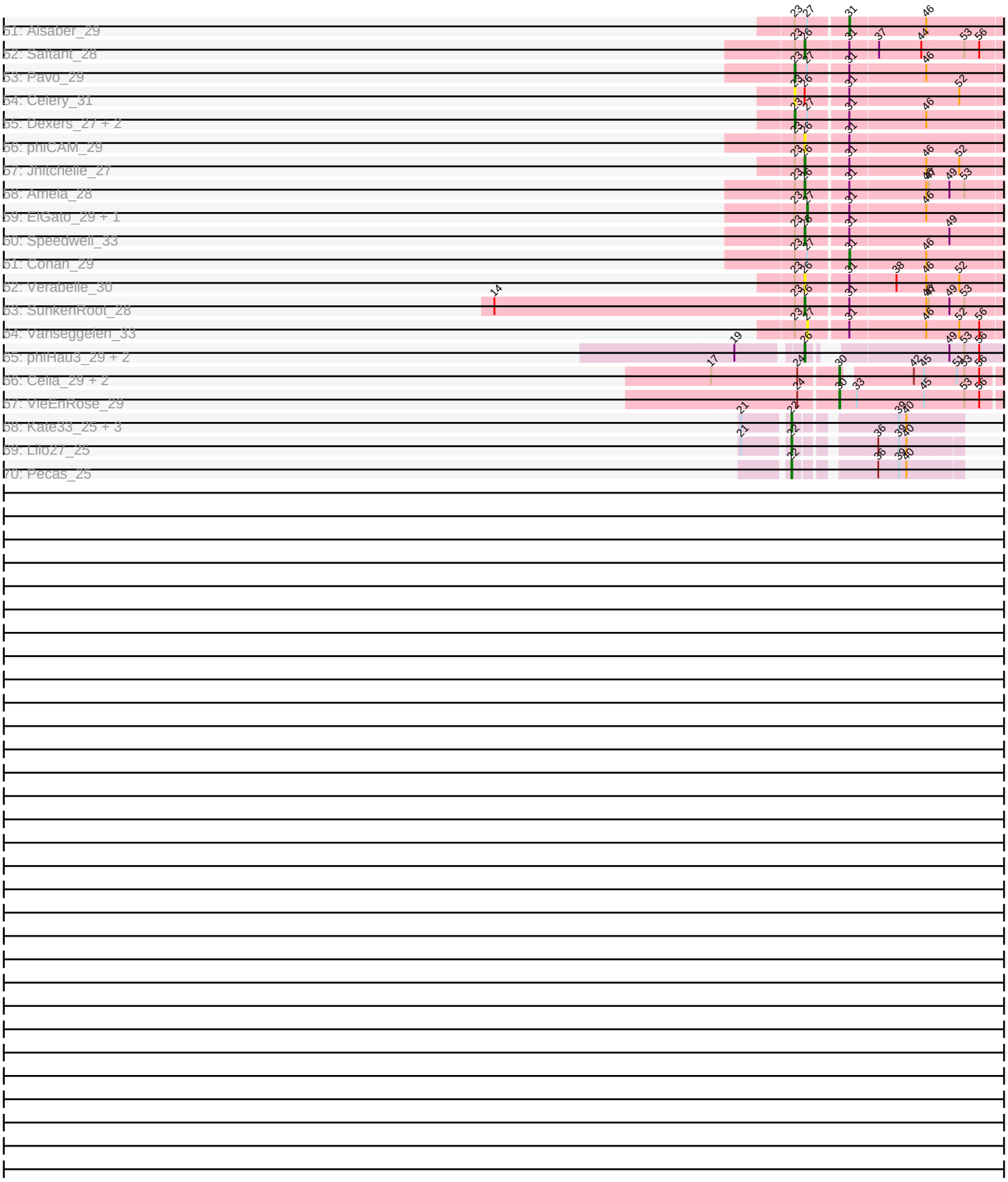
Pham 347395


1: Lorelei_27
2: Asten_26 + 5
3: Calburn_27 + 6
4: Lika_27 + 1
5: Chynyk_28 + 4
6: TuanPN_26 + 1
7: Legacy_27 + 1
8: Shoriax_26 + 9
9: Danzina_28 + 1
10: Celeste_27 + 1
11: Nerdos_27 + 2
12: EnochSoames_30
13: Brataylor_29
14: RedBear_28
15: Nanodon_29
16: Sujidade_28
17: Nabi_27 + 1
18: OzzyJ_27
19: Izzy_28
20: South40_27 + 1
21: Lannister_29
22: SunsetPointe_27 + 1
23: Paolo_29 + 1
24: Amethyst_27
25: ELB20_26
26: Issmi_28
27: Superstar_30
28: Animus_28 + 3
29: Thestral_28 + 1
30: Bowden_28
31: Diane_27
32: Paedore_27
33: Halzum_27 + 2
34: R4_27
35: TrvxScott_26
36: Hank144_28
37: Marav_30
38: Daudau_27
39: Omar_28
40: Axiom_28 + 1
41: Puginator_29
42: Alvy_29 + 1
43: Pablito_27
44: Loolah_28
45: Caelum_28
46: Andris_27
47: Jevington_29
48: ZamZam_28
49: Verse_28
50: Yosif_29

Pham 347395


51: Alsaber_29
52: Saltant_28
53: Pavo_29
54: Celery_31
55: Dexers_27 + 2
56: phiCAM_29
57: Jnitchelle_27
58: Amela_28
59: ElGato_29 + 1
60: Speedwell_33
61: Conan_29
62: Verabelle_30
63: SunkenRoot_28
64: Vanseggelen_33
65: phiHau3_29 + 2
66: Celia_29 + 2
67: VieEnRose_29
68: Kate33_25 + 3
69: Lilo27_25
70: Pecas_25

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 347395 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 347395 has 123 members, 7 are drafts.

Phages represented in each track:
• Track 1 : Lorelei_27
• Track 2 : Asten_26, Toma_27, Maneekul_26, Yasdnil_26, Goby_27, Emaanora_28
• Track 3 : Caliburn_27, BeardedLady_28, Leviticus_27, Aaronocolus_27, Phettuccine_27, Hydra_29, Ozzie_27
• Track 4 : Lika_27, Godpower_28
• Track 5 : Oliynyk_28, Jash_28, BryanRecycles_28, Eddasa_28, Rusticus_28
• Track 6 : TuanPN_26, Ejemplo_26
• Track 7 : Legacy_27, Unstoppable_27
• Track 8 : Snorlax_26, Hippo_26, Werner_26, Dwayne_26, SarahRose_26, BarryBee_28, TagePhighter_27, Whatever_26, Chucky_26, Triste_26
• Track 9 : Danzina_28, Zemlya_28
• Track 10 : Celeste_27, Dattran_28
• Track 11 : Nerdos_27, Indigo_26, Esperer_27
• Track 12 : EnochSoames_30
• Track 13 : Brataylor_29
• Track 14 : RedBear_28
• Track 15 : Nanodon_29
• Track 16 : Sujidade_28
• Track 17 : Nabi_27, Rana_27
• Track 18 : OzzyJ_27
• Track 19 : Izzy_28
• Track 20 : South40_27, Katalie_27
• Track 21 : Lannister_29
• Track 22 : SunsetPointe_27, Bovely_27
• Track 23 : Paolo_29, Zainub_29
• Track 24 : Amethyst_27
• Track 25 : ELB20_26
• Track 26 : Issmi_28
• Track 27 : Superstar_30
• Track 28 : Animus_28, SqueakyClean_28, GirlDinner_27, Janus_28
• Track 29 : Thestral_28, TinaBelcher_27
• Track 30 : Bowden_28
• Track 31 : Diane_27

• Track 32 : Paedore_27
• Track 33 : Haizum_27, Nishikigoi_27, Tefunt_27
• Track 34 : R4_27
• Track 35 : TrvxScott_26
• Track 36 : Hank144_28
• Track 37 : Marav_30
• Track 38 : Daudau_27
• Track 39 : Omar_28
• Track 40 : Axiom_28, Triumph_29
• Track 41 : Puginator_29
• Track 42 : Alvy_29, BartholomewSD_29
• Track 43 : Pablito_27
• Track 44 : Loofah_28
• Track 45 : Caelum_28
• Track 46 : Andris_27
• Track 47 : Jevington_29
• Track 48 : ZamZam_28
• Track 49 : Verse_28
• Track 50 : Yosif_29
• Track 51 : Alsaber_29
• Track 52 : Saftant_28
• Track 53 : Pavo_29
• Track 54 : Celery_31
• Track 55 : Dexers_27, Kaine_28, Sudan_28
• Track 56 : phiCAM_29
• Track 57 : Jhitchelle_27
• Track 58 : Amela_28
• Track 59 : ElGato_29, Provolone_29
• Track 60 : Speedwell_33
• Track 61 : Conan_29
• Track 62 : Verabelle_30
• Track 63 : SunkenRoot_28
• Track 64 : Vanseggelen_33
• Track 65 : phiHau3_29, BroPlease_28, GreenWeasel_29
• Track 66 : Celia_29, Urza_29, Itza_29
• Track 67 : VieEnRose_29
• Track 68 : Kate33_25, Finalfrontier_26, Grist_25, BabyDaisy_26
• Track 69 : Lilo27_25
• Track 70 : Pecas_25

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 64 of the 116 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alvy_29, Amela_28, Amethyst_27, Andris_27, Animus_28, Axiom_28, BarryBee_28, BartholomewSD_29, Bowden_28, BroPlease_28, Caelum_28, Chucky_26, Danzina_28, Diane_27, Dwayne_26, Esperer_27, GirlDinner_27, Godpower_28, GreenWeasel_29, Haizum_27, Hank144_28, Hippo_26, Indigo_26, Issmi_28,

Izzy_28, Janus_28, Jevington_29, Jhitchelle_27, Katalie_27, Legacy_27, Lika_27, Loofah_28, Lorelei_27, Marav_30, Nerdos_27, Nishikigoi_27, Omar_28, OzzyJ_27, Paedore_27, Paolo_29, Puginator_29, R4_27, Saftant_28, SarahRose_26, Snorlax_26, South40_27, Speedwell_33, SqueakyClean_28, Sujidade_28, SunkenRoot_28, Superstar_30, TagePhighter_27, Tefunt_27, Thestral_28, TinaBelcher_27, Triste_26, Triumph_29, TrvxScott_26, Unstoppable_27, Verabelle_30, Werner_26, Whatever_26, Zainub_29, ZamZam_28, Zemlya_28, phiCAM_29, phiHau3_29,

Genes that have the "Most Annotated" start but do not call it:
• Aaronocolus_27, Asten_26, BeardedLady_28, Bovely_27, Brataylor_29, BryanRecycles_28, Caliburn_27, Celery_31, Celeste_27, Dattran_28, Daudau_27, ELB20_26, Eddasa_28, Ejemplo_26, Emaanora_28, EnochSoames_30, Goby_27, Hydra_29, Jash_28, Leviticus_27, Maneekul_26, Nabi_27, Nanodon_29, Oliynyk_28, Ozzie_27, Pablito_27, Phettuccine_27, Rana_27, RedBear_28, Rusticus_28, SunsetPointe_27, Toma_27, TuanPN_26, Verse_28, Yasdnil_26,

Genes that do not have the "Most Annotated" start:
• Alsaber_29, BabyDaisy_26, Celia_29, Conan_29, Dexers_27, ElGato_29, Finalfrontier_26, Grist_25, Itza_29, Kaine_28, Kate33_25, Lannister_29, Lilo27_25, Pavo_29, Pecas_25, Provolone_29, Sudan_28, Urza_29, Vanseggelen_33, VieEnRose_29, Yosif_29,

Summary by start number:

Start 22:
• Found in 6 of 123 (4.9%) of genes in pham
• Manual Annotations of this start: 5 of 116
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BabyDaisy_26 (EB), Finalfrontier_26 (EB), Grist_25 (EB), Kate33_25 (EB), Lilo27_25 (EB), Pecas_25 (EB),

Start 23:
• Found in 19 of 123 (15.4%) of genes in pham
• Manual Annotations of this start: 4 of 116
• Called 26.3% of time when present
• Phage (with cluster) where this start called: Celery_31 (BD3), Dexers_27 (BD3), Kaine_28 (BD3), Pavo_29 (BD3), Sudan_28 (BD3),

Start 25:
• Found in 2 of 123 (1.6%) of genes in pham
• Manual Annotations of this start: 2 of 116
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Daudau_27 (BD2), Pablito_27 (BD2),

Start 26:
• Found in 102 of 123 (82.9%) of genes in pham
• Manual Annotations of this start: 64 of 116
• Called 65.7% of time when present
• Phage (with cluster) where this start called: Alvy_29 (BD2), Amela_28 (BD3), Amethyst_27 (BD2), Andris_27 (BD2), Animus_28 (BD2), Axiom_28 (BD2), BarryBee_28 (BD1), BartholomewSD_29 (BD2), Bowden_28 (BD2), BroPlease_28 (BD4), Caelum_28 (BD2), Chucky_26 (BD1), Danzina_28 (BD1), Diane_27 (BD2),

Dwayne_26 (BD1), Esperer_27 (BD1), GirlDinner_27 (BD2), Godpower_28 (BD1), GreenWeasel_29 (BD4), Haizum_27 (BD2), Hank144_28 (BD2), Hippo_26 (BD1), Indigo_26 (BD1), Issmi_28 (BD2), Izzy_28 (BD1), Janus_28 (BD2), Jevington_29 (BD2), Jhitchelle_27 (BD3), Katalie_27 (BD1), Legacy_27 (BD1), Lika_27 (BD1), Loofah_28 (BD2), Lorelei_27 (BD1), Marav_30 (BD2), Nerdos_27 (BD1), Nishikigoi_27 (BD2), Omar_28 (BD2), OzzyJ_27 (BD1), Paedore_27 (BD2), Paolo_29 (BD2), Puginator_29 (BD2), R4_27 (BD2), Saftant_28 (BD3), SarahRose_26 (BD1), Snorlax_26 (BD1), South40_27 (BD1), Speedwell_33 (BD3), SqueakyClean_28 (BD2), Sujidade_28 (BD1), SunkenRoot_28 (BD3), Superstar_30 (BD2), TagePhighter_27 (BD1), Tefunt_27 (BD2), Thestral_28 (BD2), TinaBelcher_27 (BD2), Triste_26 (BD1), Triumph_29 (BD2), TrvxScott_26 (BD2), Unstoppable_27 (BD1), Verabelle_30 (BD3), Werner_26 (BD1), Whatever_26 (BD1), Zainub_29 (BD2), ZamZam_28 (BD3), Zemlya_28 (BD1), phiCAM_29 (BD3), phiHau3_29 (BD4),

Start 27:
• Found in 11 of 123 (8.9%) of genes in pham
• Manual Annotations of this start: 4 of 116
• Called 45.5% of time when present
• Phage (with cluster) where this start called: ElGato_29 (BD3), Lannister_29 (BD1), Provolone_29 (BD3), Vanseggelen_33 (BD3), Yosif_29 (BD3),

Start 28:
• Found in 55 of 123 (44.7%) of genes in pham
• Manual Annotations of this start: 29 of 116
• Called 54.5% of time when present
• Phage (with cluster) where this start called: Aaronocolus_27 (BD1), Asten_26 (BD1), BeardedLady_28 (BD1), Bovely_27 (BD1), Brataylor_29 (BD1), BryanRecycles_28 (BD1), Caliburn_27 (BD1), Celeste_27 (BD1), Dattran_28 (BD1), Eddasa_28 (BD1), Ejemplo_26 (BD1), Emaanora_28 (BD1), EnochSoames_30 (BD1), Goby_27 (BD1), Hydra_29 (BD1), Jash_28 (BD1), Leviticus_27 (BD1), Maneekul_26 (BD1), Nabi_27 (BD1), Nanodon_29 (BD1), Oliynyk_28 (BD1), Ozzie_27 (BD1), Phettuccine_27 (BD1), Rana_27 (BD1), RedBear_28 (BD1), Rusticus_28 (BD1), SunsetPointe_27 (BD1), Toma_27 (BD1), TuanPN_26 (BD1), Yasdnil_26 (BD1),

Start 30:
• Found in 25 of 123 (20.3%) of genes in pham
• Manual Annotations of this start: 4 of 116
• Called 16.0% of time when present
• Phage (with cluster) where this start called: Celia_29 (BD6), Itza_29 (BD6), Urza_29 (BD6), VieEnRose_29 (BD6),

Start 31:
• Found in 20 of 123 (16.3%) of genes in pham
• Manual Annotations of this start: 3 of 116
• Called 15.0% of time when present
• Phage (with cluster) where this start called: Alsaber_29 (BD3), Conan_29 (BD3), Verse_28 (BD3),

Start 32:
• Found in 8 of 123 (6.5%) of genes in pham
• Manual Annotations of this start: 1 of 116
• Called 12.5% of time when present
• Phage (with cluster) where this start called: ELB20_26 (BD2),

Summary by clusters:

There are 6 clusters represented in this pham: EB, BD4, BD6, BD1, BD3, BD2,

Info for manual annotations of cluster BD1:
•Start number 26 was manually annotated 25 times for cluster BD1.
•Start number 27 was manually annotated 1 time for cluster BD1.
•Start number 28 was manually annotated 29 times for cluster BD1.

Info for manual annotations of cluster BD2:
•Start number 25 was manually annotated 2 times for cluster BD2.
•Start number 26 was manually annotated 30 times for cluster BD2.
•Start number 32 was manually annotated 1 time for cluster BD2.

Info for manual annotations of cluster BD3:
•Start number 23 was manually annotated 4 times for cluster BD3.
•Start number 26 was manually annotated 6 times for cluster BD3.
•Start number 27 was manually annotated 3 times for cluster BD3.
•Start number 31 was manually annotated 3 times for cluster BD3.

Info for manual annotations of cluster BD4:
•Start number 26 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:
•Start number 30 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster EB:
•Start number 22 was manually annotated 5 times for cluster EB.

Gene Information:

Gene: Aaronocolus_27 Start: 21931, Stop: 22191, Start Num: 28
Candidate Starts for Aaronocolus_27:
(15, 21580), (Start: 26 @21925 has 64 MA's), (Start: 28 @21931 has 29 MA's), (Start: 30 @21952 has 4 MA's), (38, 22018), (39, 22021), (50, 22084),

Gene: Alsaber_29 Start: 23589, Stop: 23822, Start Num: 31
Candidate Starts for Alsaber_29:
(Start: 23 @23529 has 4 MA's), (Start: 27 @23544 has 4 MA's), (Start: 31 @23589 has 3 MA's), (46, 23679),

Gene: Alvy_29 Start: 22860, Stop: 23069, Start Num: 26
Candidate Starts for Alvy_29:
(Start: 26 @22860 has 64 MA's), (29, 22878), (Start: 32 @22899 has 1 MA's), (38, 22947), (43, 22971), (51, 23019),

Gene: Amela_28 Start: 24358, Stop: 24642, Start Num: 26
Candidate Starts for Amela_28:
(Start: 23 @24346 has 4 MA's), (Start: 26 @24358 has 64 MA's), (Start: 31 @24406 has 3 MA's), (46, 24496), (47, 24499), (49, 24523), (53, 24541),

Gene: Amethyst_27 Start: 22528, Stop: 22740, Start Num: 26
Candidate Starts for Amethyst_27:
(10, 22036), (13, 22156), (Start: 26 @22528 has 64 MA's), (29, 22546), (41, 22633),

Gene: Andris_27 Start: 22516, Stop: 22728, Start Num: 26
Candidate Starts for Andris_27:
(Start: 26 @22516 has 64 MA's), (41, 22621),

Gene: Animus_28 Start: 22858, Stop: 23064, Start Num: 26
Candidate Starts for Animus_28:
(Start: 26 @22858 has 64 MA's), (29, 22876), (41, 22963),

Gene: Asten_26 Start: 22171, Stop: 22434, Start Num: 28
Candidate Starts for Asten_26:
(15, 21811), (Start: 26 @22165 has 64 MA's), (Start: 28 @22171 has 29 MA's), (39, 22261), (42, 22279), (49, 22321), (56, 22357),

Gene: Axiom_28 Start: 22683, Stop: 22886, Start Num: 26
Candidate Starts for Axiom_28:
(Start: 26 @22683 has 64 MA's), (29, 22701), (41, 22788),

Gene: BabyDaisy_26 Start: 19813, Stop: 19992, Start Num: 22
Candidate Starts for BabyDaisy_26:
(21, 19762), (Start: 22 @19813 has 5 MA's), (39, 19915), (40, 19924),

Gene: BarryBee_28 Start: 22175, Stop: 22444, Start Num: 26
Candidate Starts for BarryBee_28:
(15, 21821), (Start: 26 @22175 has 64 MA's), (Start: 28 @22181 has 29 MA's), (39, 22271), (42, 22289), (49, 22331), (56, 22367),

Gene: BartholomewSD_29 Start: 22860, Stop: 23069, Start Num: 26
Candidate Starts for BartholomewSD_29:
(Start: 26 @22860 has 64 MA's), (29, 22878), (Start: 32 @22899 has 1 MA's), (38, 22947), (43, 22971), (51, 23019),

Gene: BeardedLady_28 Start: 22184, Stop: 22444, Start Num: 28
Candidate Starts for BeardedLady_28:
(15, 21833), (Start: 26 @22178 has 64 MA's), (Start: 28 @22184 has 29 MA's), (Start: 30 @22205 has 4 MA's), (38, 22271), (39, 22274), (50, 22337),

Gene: Bovely_27 Start: 21937, Stop: 22197, Start Num: 28
Candidate Starts for Bovely_27:
(15, 21586), (Start: 26 @21931 has 64 MA's), (Start: 28 @21937 has 29 MA's), (Start: 30 @21958 has 4 MA's), (38, 22024), (39, 22027), (50, 22090), (55, 22114),

Gene: Bowden_28 Start: 22785, Stop: 22994, Start Num: 26
Candidate Starts for Bowden_28:
(Start: 26 @22785 has 64 MA's), (29, 22803), (Start: 32 @22824 has 1 MA's), (43, 22896), (51, 22944),

Gene: Brataylor_29 Start: 23190, Stop: 23453, Start Num: 28
Candidate Starts for Brataylor_29:

(15, 22827), (Start: 26 @23184 has 64 MA's), (Start: 28 @23190 has 29 MA's), (39, 23280), (42, 23298), (49, 23340), (56, 23376),

Gene: BroPlease_28 Start: 22457, Stop: 22663, Start Num: 26
Candidate Starts for BroPlease_28:
(19, 22388), (Start: 26 @22457 has 64 MA's), (49, 22595), (53, 22613), (56, 22631),

Gene: BryanRecycles_28 Start: 22288, Stop: 22548, Start Num: 28
Candidate Starts for BryanRecycles_28:
(1, 21373), (2, 21388), (8, 21691), (9, 21715), (15, 21937), (Start: 26 @22282 has 64 MA's), (Start: 28 @22288 has 29 MA's), (Start: 30 @22309 has 4 MA's), (38, 22375), (39, 22378), (50, 22441),

Gene: Caelum_28 Start: 22499, Stop: 22711, Start Num: 26
Candidate Starts for Caelum_28:
(5, 21806), (6, 21824), (Start: 26 @22499 has 64 MA's), (29, 22517), (41, 22604),

Gene: Caliburn_27 Start: 21914, Stop: 22174, Start Num: 28
Candidate Starts for Caliburn_27:
(15, 21563), (Start: 26 @21908 has 64 MA's), (Start: 28 @21914 has 29 MA's), (Start: 30 @21935 has 4 MA's), (38, 22001), (39, 22004), (50, 22067),

Gene: Celery_31 Start: 23463, Stop: 23756, Start Num: 23
Candidate Starts for Celery_31:
(Start: 23 @23463 has 4 MA's), (Start: 26 @23475 has 64 MA's), (Start: 31 @23523 has 3 MA's), (52, 23652),

Gene: Celeste_27 Start: 22637, Stop: 22900, Start Num: 28
Candidate Starts for Celeste_27:
(15, 22277), (Start: 26 @22631 has 64 MA's), (Start: 28 @22637 has 29 MA's), (39, 22727), (42, 22745), (49, 22787), (55, 22814), (56, 22823),

Gene: Celia_29 Start: 23000, Stop: 23194, Start Num: 30
Candidate Starts for Celia_29:
(17, 22868), (24, 22970), (Start: 30 @23000 has 4 MA's), (42, 23075), (45, 23087), (51, 23126), (53, 23135), (56, 23153),

Gene: Chucky_26 Start: 22179, Stop: 22448, Start Num: 26
Candidate Starts for Chucky_26:
(15, 21825), (Start: 26 @22179 has 64 MA's), (Start: 28 @22185 has 29 MA's), (39, 22275), (42, 22293), (49, 22335), (56, 22371),

Gene: Conan_29 Start: 23488, Stop: 23721, Start Num: 31
Candidate Starts for Conan_29:
(Start: 23 @23428 has 4 MA's), (Start: 27 @23443 has 4 MA's), (Start: 31 @23488 has 3 MA's), (46, 23578),

Gene: Danzina_28 Start: 22932, Stop: 23201, Start Num: 26
Candidate Starts for Danzina_28:
(15, 22578), (Start: 26 @22932 has 64 MA's), (Start: 28 @22938 has 29 MA's), (39, 23028), (42, 23046), (49, 23088), (55, 23115), (56, 23124),

Gene: Dattran_28 Start: 22747, Stop: 23010, Start Num: 28
Candidate Starts for Dattran_28:

(15, 22387), (Start: 26 @22741 has 64 MA's), (Start: 28 @22747 has 29 MA's), (39, 22837), (42, 22855), (49, 22897), (55, 22924), (56, 22933),

Gene: Daudau_27 Start: 22524, Stop: 22754, Start Num: 25
Candidate Starts for Daudau_27:
(17, 22419), (24, 22521), (Start: 25 @22524 has 2 MA's), (Start: 26 @22530 has 64 MA's), (34, 22575), (41, 22635), (48, 22665), (49, 22680),

Gene: Dexers_27 Start: 23450, Stop: 23743, Start Num: 23
Candidate Starts for Dexers_27:
(Start: 23 @23450 has 4 MA's), (Start: 27 @23465 has 4 MA's), (Start: 31 @23510 has 3 MA's), (46, 23600),

Gene: Diane_27 Start: 22864, Stop: 23076, Start Num: 26
Candidate Starts for Diane_27:
(10, 22369), (13, 22489), (Start: 26 @22864 has 64 MA's), (29, 22882), (41, 22969),

Gene: Dwayne_26 Start: 22166, Stop: 22435, Start Num: 26
Candidate Starts for Dwayne_26:
(15, 21812), (Start: 26 @22166 has 64 MA's), (Start: 28 @22172 has 29 MA's), (39, 22262), (42, 22280), (49, 22322), (56, 22358),

Gene: ELB20_26 Start: 22980, Stop: 23153, Start Num: 32
Candidate Starts for ELB20_26:
(Start: 26 @22941 has 64 MA's), (29, 22959), (Start: 32 @22980 has 1 MA's), (40, 23040), (41, 23046),

Gene: Eddasa_28 Start: 22288, Stop: 22548, Start Num: 28
Candidate Starts for Eddasa_28:
(1, 21373), (2, 21388), (8, 21691), (9, 21715), (15, 21937), (Start: 26 @22282 has 64 MA's), (Start: 28 @22288 has 29 MA's), (Start: 30 @22309 has 4 MA's), (38, 22375), (39, 22378), (50, 22441),

Gene: Ejemplo_26 Start: 22207, Stop: 22467, Start Num: 28
Candidate Starts for Ejemplo_26:
(15, 21844), (Start: 26 @22201 has 64 MA's), (Start: 28 @22207 has 29 MA's), (39, 22297), (49, 22357), (56, 22393),

Gene: ElGato_29 Start: 23103, Stop: 23381, Start Num: 27
Candidate Starts for ElGato_29:
(Start: 23 @23088 has 4 MA's), (Start: 27 @23103 has 4 MA's), (Start: 31 @23148 has 3 MA's), (46, 23238),

Gene: Emaanora_28 Start: 22130, Stop: 22393, Start Num: 28
Candidate Starts for Emaanora_28:
(15, 21770), (Start: 26 @22124 has 64 MA's), (Start: 28 @22130 has 29 MA's), (39, 22220), (42, 22238), (49, 22280), (56, 22316),

Gene: EnochSoames_30 Start: 22283, Stop: 22543, Start Num: 28
Candidate Starts for EnochSoames_30:
(1, 21368), (2, 21383), (3, 21518), (8, 21686), (9, 21710), (15, 21932), (Start: 26 @22277 has 64 MA's), (Start: 28 @22283 has 29 MA's), (Start: 30 @22304 has 4 MA's), (38, 22370), (39, 22373), (50, 22436),

Gene: Esperer_27 Start: 21744, Stop: 22010, Start Num: 26

Candidate Starts for Esperer_27:
(15, 21399), (Start: 26 @21744 has 64 MA's), (Start: 28 @21750 has 29 MA's), (Start: 30 @21771 has 4 MA's), (38, 21837), (39, 21840), (50, 21903), (55, 21927),

Gene: Finalfrontier_26 Start: 20179, Stop: 20358, Start Num: 22
Candidate Starts for Finalfrontier_26:
(21, 20128), (Start: 22 @20179 has 5 MA's), (39, 20281), (40, 20290),

Gene: GirlDinner_27 Start: 22520, Stop: 22726, Start Num: 26
Candidate Starts for GirlDinner_27:
(Start: 26 @22520 has 64 MA's), (29, 22538), (41, 22625),

Gene: Goby_27 Start: 22752, Stop: 23015, Start Num: 28
Candidate Starts for Goby_27:
(15, 22392), (Start: 26 @22746 has 64 MA's), (Start: 28 @22752 has 29 MA's), (39, 22842), (42, 22860), (49, 22902), (56, 22938),

Gene: Godpower_28 Start: 22745, Stop: 23014, Start Num: 26
Candidate Starts for Godpower_28:
(15, 22391), (Start: 26 @22745 has 64 MA's), (Start: 28 @22751 has 29 MA's), (39, 22841), (49, 22901), (56, 22937),

Gene: GreenWeasel_29 Start: 22466, Stop: 22672, Start Num: 26
Candidate Starts for GreenWeasel_29:
(19, 22397), (Start: 26 @22466 has 64 MA's), (49, 22604), (53, 22622), (56, 22640),

Gene: Grist_25 Start: 19637, Stop: 19816, Start Num: 22
Candidate Starts for Grist_25:
(21, 19586), (Start: 22 @19637 has 5 MA's), (39, 19739), (40, 19748),

Gene: Haizum_27 Start: 22538, Stop: 22750, Start Num: 26
Candidate Starts for Haizum_27:
(Start: 26 @22538 has 64 MA's), (29, 22556), (41, 22643),

Gene: Hank144_28 Start: 22954, Stop: 23166, Start Num: 26
Candidate Starts for Hank144_28:
(20, 22891), (Start: 26 @22954 has 64 MA's), (29, 22972), (41, 23059), (44, 23071),

Gene: Hippo_26 Start: 22175, Stop: 22444, Start Num: 26
Candidate Starts for Hippo_26:
(15, 21821), (Start: 26 @22175 has 64 MA's), (Start: 28 @22181 has 29 MA's), (39, 22271), (42, 22289), (49, 22331), (56, 22367),

Gene: Hydra_29 Start: 22462, Stop: 22722, Start Num: 28
Candidate Starts for Hydra_29:
(15, 22111), (Start: 26 @22456 has 64 MA's), (Start: 28 @22462 has 29 MA's), (Start: 30 @22483 has 4 MA's), (38, 22549), (39, 22552), (50, 22615),

Gene: Indigo_26 Start: 21924, Stop: 22190, Start Num: 26
Candidate Starts for Indigo_26:
(15, 21579), (Start: 26 @21924 has 64 MA's), (Start: 28 @21930 has 29 MA's), (Start: 30 @21951 has 4 MA's), (38, 22017), (39, 22020), (50, 22083), (55, 22107),

Gene: Issmi_28 Start: 23141, Stop: 23353, Start Num: 26
Candidate Starts for Issmi_28:
(Start: 26 @23141 has 64 MA's), (29, 23162), (41, 23249), (43, 23255),

Gene: Itza_29 Start: 22914, Stop: 23108, Start Num: 30
Candidate Starts for Itza_29:
(17, 22782), (24, 22884), (Start: 30 @22914 has 4 MA's), (42, 22989), (45, 23001), (51, 23040), (53, 23049), (56, 23067),

Gene: Izzy_28 Start: 22329, Stop: 22595, Start Num: 26
Candidate Starts for Izzy_28:
(1, 21420), (2, 21435), (8, 21738), (9, 21762), (15, 21984), (Start: 26 @22329 has 64 MA's), (Start: 28 @22335 has 29 MA's), (Start: 30 @22356 has 4 MA's), (38, 22422), (39, 22425), (50, 22488),

Gene: Janus_28 Start: 22858, Stop: 23064, Start Num: 26
Candidate Starts for Janus_28:
(Start: 26 @22858 has 64 MA's), (29, 22876), (41, 22963),

Gene: Jash_28 Start: 22288, Stop: 22548, Start Num: 28
Candidate Starts for Jash_28:
(1, 21373), (2, 21388), (8, 21691), (9, 21715), (15, 21937), (Start: 26 @22282 has 64 MA's), (Start: 28 @22288 has 29 MA's), (Start: 30 @22309 has 4 MA's), (38, 22375), (39, 22378), (50, 22441),

Gene: Jevington_29 Start: 23193, Stop: 23402, Start Num: 26
Candidate Starts for Jevington_29:
(Start: 26 @23193 has 64 MA's), (29, 23211), (41, 23298),

Gene: Jhitchelle_27 Start: 23035, Stop: 23316, Start Num: 26
Candidate Starts for Jhitchelle_27:
(Start: 23 @23023 has 4 MA's), (Start: 26 @23035 has 64 MA's), (Start: 31 @23083 has 3 MA's), (46, 23173), (52, 23212),

Gene: Kaine_28 Start: 23238, Stop: 23531, Start Num: 23
Candidate Starts for Kaine_28:
(Start: 23 @23238 has 4 MA's), (Start: 27 @23253 has 4 MA's), (Start: 31 @23298 has 3 MA's), (46, 23388),

Gene: Katalie_27 Start: 22461, Stop: 22727, Start Num: 26
Candidate Starts for Katalie_27:
(15, 22104), (Start: 26 @22461 has 64 MA's), (Start: 28 @22467 has 29 MA's), (38, 22554), (39, 22557), (50, 22620), (56, 22653),

Gene: Kate33_25 Start: 19636, Stop: 19815, Start Num: 22
Candidate Starts for Kate33_25:
(21, 19585), (Start: 22 @19636 has 5 MA's), (39, 19738), (40, 19747),

Gene: Lannister_29 Start: 22999, Stop: 23220, Start Num: 27
Candidate Starts for Lannister_29:
(Start: 27 @22999 has 4 MA's), (44, 23107), (54, 23164),

Gene: Legacy_27 Start: 21899, Stop: 22165, Start Num: 26
Candidate Starts for Legacy_27:

(15, 21554), (Start: 26 @21899 has 64 MA's), (Start: 28 @21905 has 29 MA's), (Start: 30 @21926 has 4 MA's), (38, 21992), (39, 21995), (50, 22058),

Gene: Leviticus_27 Start: 21934, Stop: 22194, Start Num: 28
Candidate Starts for Leviticus_27:
(15, 21583), (Start: 26 @21928 has 64 MA's), (Start: 28 @21934 has 29 MA's), (Start: 30 @21955 has 4 MA's), (38, 22021), (39, 22024), (50, 22087),

Gene: Lika_27 Start: 22749, Stop: 23018, Start Num: 26
Candidate Starts for Lika_27:
(15, 22395), (Start: 26 @22749 has 64 MA's), (Start: 28 @22755 has 29 MA's), (39, 22845), (49, 22905), (56, 22941),

Gene: Lilo27_25 Start: 19648, Stop: 19824, Start Num: 22
Candidate Starts for Lilo27_25:
(21, 19597), (Start: 22 @19648 has 5 MA's), (36, 19726), (39, 19750), (40, 19759),

Gene: Loofah_28 Start: 22838, Stop: 23050, Start Num: 26
Candidate Starts for Loofah_28:
(4, 22157), (7, 22241), (Start: 26 @22838 has 64 MA's), (29, 22856), (Start: 32 @22877 has 1 MA's), (41, 22943),

Gene: Lorelei_27 Start: 22718, Stop: 22987, Start Num: 26
Candidate Starts for Lorelei_27:
(15, 22361), (Start: 26 @22718 has 64 MA's), (Start: 28 @22724 has 29 MA's), (39, 22814), (42, 22832), (49, 22874), (55, 22901), (56, 22910),

Gene: Maneekul_26 Start: 22206, Stop: 22466, Start Num: 28
Candidate Starts for Maneekul_26:
(15, 21843), (Start: 26 @22200 has 64 MA's), (Start: 28 @22206 has 29 MA's), (39, 22296), (42, 22314), (49, 22356), (56, 22392),

Gene: Marav_30 Start: 23529, Stop: 23738, Start Num: 26
Candidate Starts for Marav_30:
(Start: 26 @23529 has 64 MA's), (29, 23547), (41, 23634),

Gene: Nabi_27 Start: 22724, Stop: 22987, Start Num: 28
Candidate Starts for Nabi_27:
(15, 22361), (Start: 26 @22718 has 64 MA's), (Start: 28 @22724 has 29 MA's), (39, 22814), (42, 22832), (49, 22874), (55, 22901), (56, 22910),

Gene: Nanodon_29 Start: 22564, Stop: 22827, Start Num: 28
Candidate Starts for Nanodon_29:
(8, 21964), (9, 21988), (15, 22213), (Start: 26 @22558 has 64 MA's), (Start: 28 @22564 has 29 MA's), (35, 22624), (38, 22651), (39, 22654), (42, 22672), (53, 22732), (56, 22750),

Gene: Nerdos_27 Start: 21922, Stop: 22188, Start Num: 26
Candidate Starts for Nerdos_27:
(15, 21577), (Start: 26 @21922 has 64 MA's), (Start: 28 @21928 has 29 MA's), (Start: 30 @21949 has 4 MA's), (38, 22015), (39, 22018), (50, 22081), (55, 22105),

Gene: Nishikigoi_27 Start: 22538, Stop: 22750, Start Num: 26
Candidate Starts for Nishikigoi_27:

(Start: 26 @22538 has 64 MA's), (29, 22556), (41, 22643),

Gene: Oliynyk_28 Start: 22288, Stop: 22548, Start Num: 28
Candidate Starts for Oliynyk_28:
(1, 21373), (2, 21388), (8, 21691), (9, 21715), (15, 21937), (Start: 26 @22282 has 64 MA's), (Start: 28 @22288 has 29 MA's), (Start: 30 @22309 has 4 MA's), (38, 22375), (39, 22378), (50, 22441),

Gene: Omar_28 Start: 22805, Stop: 23014, Start Num: 26
Candidate Starts for Omar_28:
(12, 22373), (Start: 26 @22805 has 64 MA's), (29, 22823), (Start: 31 @22838 has 3 MA's), (41, 22910),

Gene: Ozzie_27 Start: 21914, Stop: 22174, Start Num: 28
Candidate Starts for Ozzie_27:
(15, 21563), (Start: 26 @21908 has 64 MA's), (Start: 28 @21914 has 29 MA's), (Start: 30 @21935 has 4 MA's), (38, 22001), (39, 22004), (50, 22067),

Gene: OzzyJ_27 Start: 22166, Stop: 22435, Start Num: 26
Candidate Starts for OzzyJ_27:
(Start: 26 @22166 has 64 MA's), (Start: 28 @22172 has 29 MA's), (39, 22262), (42, 22280), (49, 22322), (56, 22358),

Gene: Pablito_27 Start: 22406, Stop: 22624, Start Num: 25
Candidate Starts for Pablito_27:
(17, 22301), (24, 22403), (Start: 25 @22406 has 2 MA's), (Start: 26 @22412 has 64 MA's), (29, 22430), (41, 22517), (44, 22529),

Gene: Paedore_27 Start: 22838, Stop: 23050, Start Num: 26
Candidate Starts for Paedore_27:
(Start: 26 @22838 has 64 MA's), (29, 22856), (Start: 32 @22877 has 1 MA's), (41, 22943),

Gene: Paolo_29 Start: 23192, Stop: 23401, Start Num: 26
Candidate Starts for Paolo_29:
(Start: 26 @23192 has 64 MA's), (29, 23210),

Gene: Pavo_29 Start: 23701, Stop: 23994, Start Num: 23
Candidate Starts for Pavo_29:
(Start: 23 @23701 has 4 MA's), (Start: 27 @23716 has 4 MA's), (Start: 31 @23761 has 3 MA's), (46, 23851),

Gene: Pecas_25 Start: 19672, Stop: 19848, Start Num: 22
Candidate Starts for Pecas_25:
(Start: 22 @19672 has 5 MA's), (36, 19750), (39, 19774), (40, 19783),

Gene: Phettuccine_27 Start: 21930, Stop: 22190, Start Num: 28
Candidate Starts for Phettuccine_27:
(15, 21579), (Start: 26 @21924 has 64 MA's), (Start: 28 @21930 has 29 MA's), (Start: 30 @21951 has 4 MA's), (38, 22017), (39, 22020), (50, 22083),

Gene: Provolone_29 Start: 23095, Stop: 23373, Start Num: 27
Candidate Starts for Provolone_29:
(Start: 23 @23080 has 4 MA's), (Start: 27 @23095 has 4 MA's), (Start: 31 @23140 has 3 MA's), (46, 23230),

Gene: Puginator_29 Start: 23207, Stop: 23416, Start Num: 26
Candidate Starts for Puginator_29:
(Start: 26 @23207 has 64 MA's), (29, 23225), (41, 23312),

Gene: R4_27 Start: 22952, Stop: 23164, Start Num: 26
Candidate Starts for R4_27:
(Start: 26 @22952 has 64 MA's), (29, 22970), (Start: 32 @22991 has 1 MA's), (40, 23051), (41, 23057),

Gene: Rana_27 Start: 22724, Stop: 22987, Start Num: 28
Candidate Starts for Rana_27:
(15, 22361), (Start: 26 @22718 has 64 MA's), (Start: 28 @22724 has 29 MA's), (39, 22814), (42, 22832), (49, 22874), (55, 22901), (56, 22910),

Gene: RedBear_28 Start: 22467, Stop: 22727, Start Num: 28
Candidate Starts for RedBear_28:
(Start: 26 @22461 has 64 MA's), (Start: 28 @22467 has 29 MA's), (38, 22554), (39, 22557), (50, 22620), (56, 22653),

Gene: Rusticus_28 Start: 22288, Stop: 22548, Start Num: 28
Candidate Starts for Rusticus_28:
(1, 21373), (2, 21388), (8, 21691), (9, 21715), (15, 21937), (Start: 26 @22282 has 64 MA's), (Start: 28 @22288 has 29 MA's), (Start: 30 @22309 has 4 MA's), (38, 22375), (39, 22378), (50, 22441),

Gene: Saftant_28 Start: 23714, Stop: 24013, Start Num: 26
Candidate Starts for Saftant_28:
(Start: 23 @23702 has 4 MA's), (Start: 26 @23714 has 64 MA's), (Start: 31 @23765 has 3 MA's), (37, 23798), (44, 23849), (53, 23900), (56, 23918),

Gene: SarahRose_26 Start: 22175, Stop: 22444, Start Num: 26
Candidate Starts for SarahRose_26:
(15, 21821), (Start: 26 @22175 has 64 MA's), (Start: 28 @22181 has 29 MA's), (39, 22271), (42, 22289), (49, 22331), (56, 22367),

Gene: Snorlax_26 Start: 22178, Stop: 22447, Start Num: 26
Candidate Starts for Snorlax_26:
(15, 21824), (Start: 26 @22178 has 64 MA's), (Start: 28 @22184 has 29 MA's), (39, 22274), (42, 22292), (49, 22334), (56, 22370),

Gene: South40_27 Start: 22461, Stop: 22727, Start Num: 26
Candidate Starts for South40_27:
(15, 22104), (Start: 26 @22461 has 64 MA's), (Start: 28 @22467 has 29 MA's), (38, 22554), (39, 22557), (50, 22620), (56, 22653),

Gene: Speedwell_33 Start: 24981, Stop: 25262, Start Num: 26
Candidate Starts for Speedwell_33:
(Start: 23 @24969 has 4 MA's), (Start: 26 @24981 has 64 MA's), (Start: 31 @25029 has 3 MA's), (49, 25146),

Gene: SqueakyClean_28 Start: 22784, Stop: 22990, Start Num: 26
Candidate Starts for SqueakyClean_28:
(Start: 26 @22784 has 64 MA's), (29, 22802), (41, 22889),

Gene: Sudan_28 Start: 23525, Stop: 23818, Start Num: 23

Candidate Starts for Sudan_28:
(Start: 23 @23525 has 4 MA's), (Start: 27 @23540 has 4 MA's), (Start: 31 @23585 has 3 MA's), (46, 23675),

Gene: Sujidade_28 Start: 23034, Stop: 23303, Start Num: 26
Candidate Starts for Sujidade_28:
(15, 22680), (Start: 26 @23034 has 64 MA's), (Start: 28 @23040 has 29 MA's), (39, 23130), (49, 23190), (56, 23226),

Gene: SunkenRoot_28 Start: 24155, Stop: 24439, Start Num: 26
Candidate Starts for SunkenRoot_28:
(14, 23783), (Start: 23 @24143 has 4 MA's), (Start: 26 @24155 has 64 MA's), (Start: 31 @24203 has 3 MA's), (46, 24293), (47, 24296), (49, 24320), (53, 24338),

Gene: SunsetPointe_27 Start: 21921, Stop: 22181, Start Num: 28
Candidate Starts for SunsetPointe_27:
(15, 21570), (Start: 26 @21915 has 64 MA's), (Start: 28 @21921 has 29 MA's), (Start: 30 @21942 has 4 MA's), (38, 22008), (39, 22011), (50, 22074), (55, 22098),

Gene: Superstar_30 Start: 23733, Stop: 23945, Start Num: 26
Candidate Starts for Superstar_30:
(11, 23250), (12, 23310), (Start: 26 @23733 has 64 MA's), (29, 23751), (41, 23838),

Gene: TagePhighter_27 Start: 22178, Stop: 22447, Start Num: 26
Candidate Starts for TagePhighter_27:
(15, 21824), (Start: 26 @22178 has 64 MA's), (Start: 28 @22184 has 29 MA's), (39, 22274), (42, 22292), (49, 22334), (56, 22370),

Gene: Tefunt_27 Start: 22541, Stop: 22753, Start Num: 26
Candidate Starts for Tefunt_27:
(Start: 26 @22541 has 64 MA's), (29, 22559), (41, 22646),

Gene: Thestral_28 Start: 22774, Stop: 22983, Start Num: 26
Candidate Starts for Thestral_28:
(Start: 26 @22774 has 64 MA's), (29, 22792), (43, 22885), (44, 22891), (49, 22924), (51, 22933),

Gene: TinaBelcher_27 Start: 22721, Stop: 22930, Start Num: 26
Candidate Starts for TinaBelcher_27:
(Start: 26 @22721 has 64 MA's), (29, 22739), (43, 22832), (44, 22838), (49, 22871), (51, 22880),

Gene: Toma_27 Start: 22752, Stop: 23015, Start Num: 28
Candidate Starts for Toma_27:
(15, 22392), (Start: 26 @22746 has 64 MA's), (Start: 28 @22752 has 29 MA's), (39, 22842), (42, 22860), (49, 22902), (56, 22938),

Gene: Triste_26 Start: 22166, Stop: 22435, Start Num: 26
Candidate Starts for Triste_26:
(15, 21812), (Start: 26 @22166 has 64 MA's), (Start: 28 @22172 has 29 MA's), (39, 22262), (42, 22280), (49, 22322), (56, 22358),

Gene: Triumph_29 Start: 22699, Stop: 22902, Start Num: 26
Candidate Starts for Triumph_29:
(Start: 26 @22699 has 64 MA's), (29, 22717), (41, 22804),

Gene: TrvxScott_26 Start: 22767, Stop: 22976, Start Num: 26
Candidate Starts for TrvxScott_26:
(Start: 26 @22767 has 64 MA's), (29, 22785), (Start: 32 @22806 has 1 MA's), (43, 22878), (51, 22926),

Gene: TuanPN_26 Start: 22207, Stop: 22467, Start Num: 28
Candidate Starts for TuanPN_26:
(15, 21844), (Start: 26 @22201 has 64 MA's), (Start: 28 @22207 has 29 MA's), (39, 22297), (49, 22357), (56, 22393),

Gene: Unstoppable_27 Start: 21919, Stop: 22185, Start Num: 26
Candidate Starts for Unstoppable_27:
(15, 21574), (Start: 26 @21919 has 64 MA's), (Start: 28 @21925 has 29 MA's), (Start: 30 @21946 has 4 MA's), (38, 22012), (39, 22015), (50, 22078),

Gene: Urza_29 Start: 22935, Stop: 23129, Start Num: 30
Candidate Starts for Urza_29:
(17, 22803), (24, 22905), (Start: 30 @22935 has 4 MA's), (42, 23010), (45, 23022), (51, 23061), (53, 23070), (56, 23088),

Gene: Vanseggelen_33 Start: 23285, Stop: 23563, Start Num: 27
Candidate Starts for Vanseggelen_33:
(Start: 23 @23270 has 4 MA's), (Start: 27 @23285 has 4 MA's), (Start: 31 @23330 has 3 MA's), (46, 23420), (52, 23459), (56, 23483),

Gene: Verabelle_30 Start: 23699, Stop: 23980, Start Num: 26
Candidate Starts for Verabelle_30:
(Start: 23 @23687 has 4 MA's), (Start: 26 @23699 has 64 MA's), (Start: 31 @23747 has 3 MA's), (38, 23801), (46, 23837), (52, 23876),

Gene: Verse_28 Start: 24400, Stop: 24636, Start Num: 31
Candidate Starts for Verse_28:
(Start: 23 @24340 has 4 MA's), (Start: 26 @24352 has 64 MA's), (Start: 31 @24400 has 3 MA's), (46, 24490), (47, 24493), (49, 24517), (53, 24535),

Gene: VieEnRose_29 Start: 23003, Stop: 23209, Start Num: 30
Candidate Starts for VieEnRose_29:
(24, 22973), (Start: 30 @23003 has 4 MA's), (33, 23024), (45, 23105), (53, 23153), (56, 23171),

Gene: Werner_26 Start: 22176, Stop: 22445, Start Num: 26
Candidate Starts for Werner_26:
(15, 21822), (Start: 26 @22176 has 64 MA's), (Start: 28 @22182 has 29 MA's), (39, 22272), (42, 22290), (49, 22332), (56, 22368),

Gene: Whatever_26 Start: 22176, Stop: 22445, Start Num: 26
Candidate Starts for Whatever_26:
(15, 21822), (Start: 26 @22176 has 64 MA's), (Start: 28 @22182 has 29 MA's), (39, 22272), (42, 22290), (49, 22332), (56, 22368),

Gene: Yasdnil_26 Start: 22203, Stop: 22463, Start Num: 28
Candidate Starts for Yasdnil_26:
(15, 21840), (Start: 26 @22197 has 64 MA's), (Start: 28 @22203 has 29 MA's), (39, 22293), (42, 22311), (49, 22353), (56, 22389),

Gene: Yosif_29 Start: 23870, Stop: 24091, Start Num: 27
Candidate Starts for Yosif_29:
(Start: 27 @23870 has 4 MA's), (47, 23987),

Gene: Zainub_29 Start: 23156, Stop: 23365, Start Num: 26
Candidate Starts for Zainub_29:
(Start: 26 @23156 has 64 MA's), (29, 23174),

Gene: ZamZam_28 Start: 23634, Stop: 23936, Start Num: 26
Candidate Starts for ZamZam_28:
(16, 23289), (18, 23532), (Start: 23 @23622 has 4 MA's), (Start: 26 @23634 has 64 MA's), (Start: 31 @23688 has 3 MA's), (37, 23721), (49, 23805), (53, 23823), (56, 23841),

Gene: Zemlya_28 Start: 22738, Stop: 23007, Start Num: 26
Candidate Starts for Zemlya_28:
(15, 22384), (Start: 26 @22738 has 64 MA's), (Start: 28 @22744 has 29 MA's), (39, 22834), (42, 22852), (49, 22894), (55, 22921), (56, 22930),

Gene: phiCAM_29 Start: 25497, Stop: 25778, Start Num: 26
Candidate Starts for phiCAM_29:
(Start: 23 @25485 has 4 MA's), (Start: 26 @25497 has 64 MA's), (Start: 31 @25545 has 3 MA's),

Gene: phiHau3_29 Start: 22430, Stop: 22636, Start Num: 26
Candidate Starts for phiHau3_29:
(19, 22361), (Start: 26 @22430 has 64 MA's), (49, 22568), (53, 22586), (56, 22604),