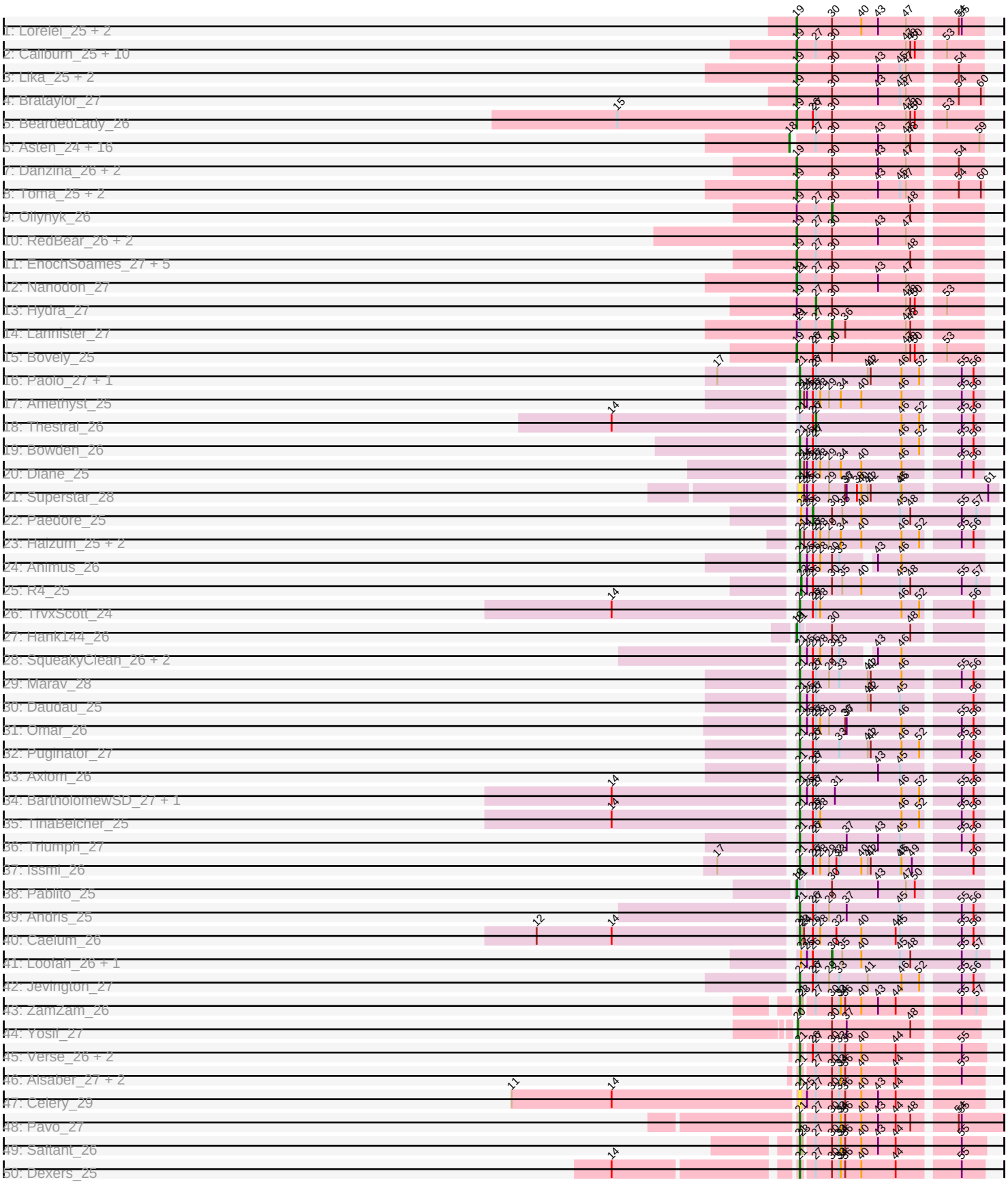
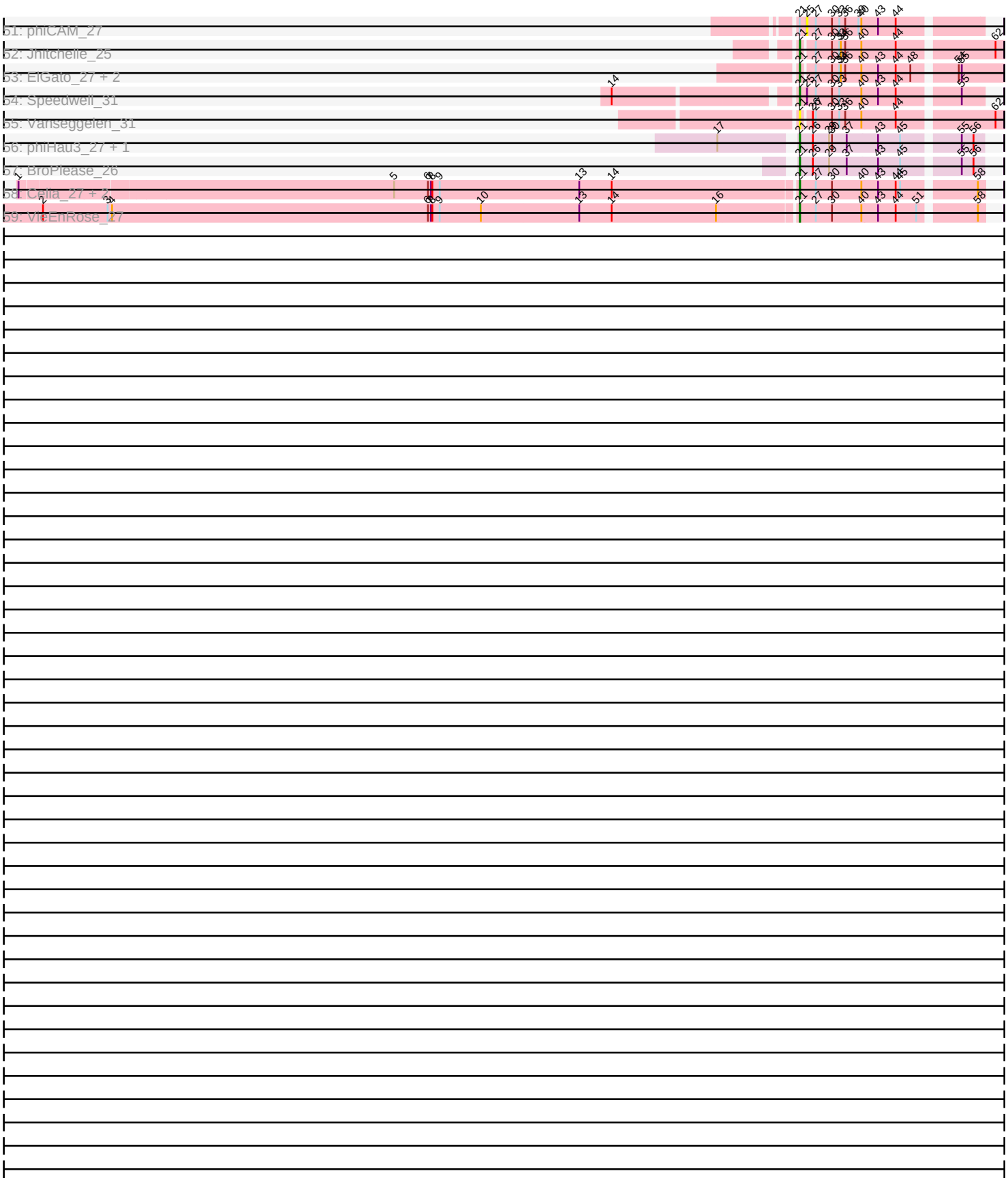
# Pham 345544


1: Lorelei_25 + 2
2: Calburn_25 + 10
3: Lika_25 + 2
4: Brataylor_27
5: BeardedLady_26
6: Asten_24 + 16
7: Danzina_26 + 2
8: Toma_25 + 2
9: Olynyk_26
10: RedBear_26 + 2
11: EnochSoames_27 + 5
12: Nanodon_27
13: Hydra_27
14: Lannister_27
15: Bovely_25
16: Paolo_27 + 1
17: Amethyst_25
18: Thestral_26
19: Bowden_26
20: Diane_25
21: Superstar_28
22: Paedore_25
23: Haizum_25 + 2
24: Animus_26
25: R4_25
26: TrvxScott_24
27: Hank144_26
28: SqueakyClean_26 + 2
29: Marav_28
30: Daudau_25
31: Omar_26
32: Puginator_27
33: Axiom_26
34: BartholomewSD_27 + 1
35: TinaBelcher_25
36: Triumph_27
37: Issmi_26
38: Pablito_25
39: Andris_25
40: Caelum_26
41: Loofah_26 + 1
42: Jevington_27
43: ZamZam_26
44: Yosif_27
45: Verse_26 + 2
46: Alsaber_27 + 2
47: Celery_29
48: Pavo_27
49: Saltant_26
50: Dexers_25

# Pham 345544


51: phiCAM_27
52: Jhitchelle_25
53: ElGato_27 + 2
54: Speedwell_31
55: Vanseggelen_31
56: phiHau3_27 + 1
57: BroPlease_26
58: Cella_27 + 2
59: VileEnRose_27

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 345544 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 345544 has 116 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Lorelei_25, Nabi_25, Rana_25
• Track 2 : Caliburn_25, Legacy_25, Nerdos_25, Leviticus_25, Phettuccine_25, Unstoppable_25, SunsetPointe_25, Aaronocolus_25, Indigo_24, Esperer_25, Ozzie_25
• Track 3 : Lika_25, Dattran_26, Godpower_26
• Track 4 : Brataylor_27
• Track 5 : BeardedLady_26
• Track 6 : Asten_24, TuanPN_24, Maneekul_24, Werner_24, Hippo_24, Yasdnil_24, Ejemplo_24, Dwayne_24, SarahRose_24, BarryBee_26, OzzyJ_25, TagePhighter_25, Chucky_24, Whatever_24, Emaanora_26, Triste_24, Snorlax_24
• Track 7 : Danzina_26, Celeste_25, Zemlya_26
• Track 8 : Toma_25, Goby_25, Sujidade_26
• Track 9 : Oliynyk_26
• Track 10 : RedBear_26, South40_25, Katalie_25
• Track 11 : EnochSoames_27, Izzy_26, Jash_26, BryanRecycles_26, Eddasa_26, Rusticus_26
• Track 12 : Nanodon_27
• Track 13 : Hydra_27
• Track 14 : Lannister_27
• Track 15 : Bovely_25
• Track 16 : Paolo_27, Zainub_27
• Track 17 : Amethyst_25
• Track 18 : Thestral_26
• Track 19 : Bowden_26
• Track 20 : Diane_25
• Track 21 : Superstar_28
• Track 22 : Paedore_25
• Track 23 : Haizum_25, Nishikigoi_25, Tefunt_25
• Track 24 : Animus_26
• Track 25 : R4_25
• Track 26 : TrvxScott_24
• Track 27 : Hank144_26
• Track 28 : SqueakyClean_26, GirlDinner_25, Janus_26

• Track 29 : Marav_28
• Track 30 : Daudau_25
• Track 31 : Omar_26
• Track 32 : Puginator_27
• Track 33 : Axiom_26
• Track 34 : BartholomewSD_27, Alvy_27
• Track 35 : TinaBelcher_25
• Track 36 : Triumph_27
• Track 37 : Issmi_26
• Track 38 : Pablito_25
• Track 39 : Andris_25
• Track 40 : Caelum_26
• Track 41 : Loofah_26, ELB20_24
• Track 42 : Jevington_27
• Track 43 : ZamZam_26
• Track 44 : Yosif_27
• Track 45 : Verse_26, Amela_26, SunkenRoot_26
• Track 46 : Alsaber_27, Sudan_26, Kaine_26
• Track 47 : Celery_29
• Track 48 : Pavo_27
• Track 49 : Saftant_26
• Track 50 : Dexers_25
• Track 51 : phiCAM_27
• Track 52 : Jhitchelle_25
• Track 53 : ElGato_27, Conan_27, Provolone_27
• Track 54 : Speedwell_31
• Track 55 : Vanseggelen_31
• Track 56 : phiHau3_27, GreenWeasel_27
• Track 57 : BroPlease_26
• Track 58 : Celia_27, Urza_27, Itza_27
• Track 59 : VieEnRose_27

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

The start number called the most often in the published annotations is 21, it was called in 48 of the 111 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alsaber_27, Alvy_27, Amela_26, Amethyst_25, Andris_25, Animus_26, Axiom_26, BartholomewSD_27, Bowden_26, BroPlease_26, Caelum_26, Celery_29, Celia_27, Conan_27, Daudau_25, Dexers_25, Diane_25, ElGato_27, GirlDinner_25, GreenWeasel_27, Haizum_25, Issmi_26, Itza_27, Janus_26, Jevington_27, Jhitchelle_25, Kaine_26, Marav_28, Nishikigoi_25, Omar_26, Paolo_27, Pavo_27, Provolone_27, Puginator_27, Saftant_26, Speedwell_31, SqueakyClean_26, Sudan_26, SunkenRoot_26, Superstar_28, Tefunt_25, TinaBelcher_25, Triumph_27, TrvxScott_24, Urza_27, Vanseggelen_31, Verse_26, VieEnRose_27, Zainub_27, ZamZam_26, phiHau3_27,

Genes that have the "Most Annotated" start but do not call it:
• Hank144_26, Lannister_27, Nanodon_27, Pablito_25, Thestral_26, phiCAM_27,

Genes that do not have the "Most Annotated" start:
• Aaronocolus_25, Asten_24, BarryBee_26, BeardedLady_26, Bovely_25, Brataylor_27, BryanRecycles_26, Caliburn_25, Celeste_25, Chucky_24, Danzina_26, Dattran_26, Dwayne_24, ELB20_24, Eddasa_26, Ejemplo_24, Emaanora_26, EnochSoames_27, Esperer_25, Goby_25, Godpower_26, Hippo_24, Hydra_27, Indigo_24, Izzy_26, Jash_26, Katalie_25, Legacy_25, Leviticus_25, Lika_25, Loofah_26, Lorelei_25, Maneekul_24, Nabi_25, Nerdos_25, Oliynyk_26, Ozzie_25, OzzyJ_25, Paedore_25, Phettuccine_25, R4_25, Rana_25, RedBear_26, Rusticus_26, SarahRose_24, Snorlax_24, South40_25, Sujidade_26, SunsetPointe_25, TagePhighter_25, Toma_25, Triste_24, TuanPN_24, Unstoppable_25, Werner_24, Whatever_24, Yasdnil_24, Yosif_27, Zemlya_26,

**Summary by start number:**

Start 18:
• Found in 17 of 116 ( 14.7% ) of genes in pham
• Manual Annotations of this start: 17 of 111
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Asten_24 (BD1), BarryBee_26 (BD1), Chucky_24 (BD1), Dwayne_24 (BD1), Ejemplo_24 (BD1), Emaanora_26 (BD1), Hippo_24 (BD1), Maneekul_24 (BD1), OzzyJ_25 (BD1), SarahRose_24 (BD1), Snorlax_24 (BD1), TagePhighter_25 (BD1), Triste_24 (BD1), TuanPN_24 (BD1), Werner_24 (BD1), Whatever_24 (BD1), Yasdnil_24 (BD1),

Start 19:
• Found in 41 of 116 ( 35.3% ) of genes in pham
• Manual Annotations of this start: 37 of 111
• Called 92.7% of time when present
• Phage (with cluster) where this start called: Aaronocolus_25 (BD1), BeardedLady_26 (BD1), Bovely_25 (BD1), Brataylor_27 (BD1), BryanRecycles_26 (BD1), Caliburn_25 (BD1), Celeste_25 (BD1), Danzina_26 (BD1), Dattran_26 (BD1), Eddasa_26 (BD1), EnochSoames_27 (BD1), Esperer_25 (BD1), Goby_25 (BD1), Godpower_26 (BD1), Hank144_26 (BD2), Indigo_24 (BD1), Izzy_26 (BD1), Jash_26 (BD1), Katalie_25 (BD1), Legacy_25 (BD1), Leviticus_25 (BD1), Lika_25 (BD1), Lorelei_25 (BD1), Nabi_25 (BD1), Nanodon_27 (BD1), Nerdos_25 (BD1), Ozzie_25 (BD1), Pablito_25 (BD2), Phettuccine_25 (BD1), Rana_25 (BD1), RedBear_26 (BD1), Rusticus_26 (BD1), South40_25 (BD1), Sujidade_26 (BD1), SunsetPointe_25 (BD1), Toma_25 (BD1), Unstoppable_25 (BD1), Zemlya_26 (BD1),

Start 20:
• Found in 1 of 116 ( 0.9% ) of genes in pham
• Manual Annotations of this start: 1 of 111
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Yosif_27 (BD3),

Start 21:
• Found in 57 of 116 ( 49.1% ) of genes in pham
• Manual Annotations of this start: 48 of 111
• Called 89.5% of time when present
• Phage (with cluster) where this start called: Alsaber_27 (BD3), Alvy_27 (BD2), Amela_26 (BD3), Amethyst_25 (BD2), Andris_25 (BD2), Animus_26 (BD2), Axiom_26 (BD2), BartholomewSD_27 (BD2), Bowden_26 (BD2), BroPlease_26 (BD4),

Caelum_26 (BD2), Celery_29 (BD3), Celia_27 (BD6), Conan_27 (BD3), Daudau_25 (BD2), Dexers_25 (BD3), Diane_25 (BD2), ElGato_27 (BD3), GirlDinner_25 (BD2), GreenWeasel_27 (BD4), Haizum_25 (BD2), Issmi_26 (BD2), Itza_27 (BD6), Janus_26 (BD2), Jevington_27 (BD2), Jhitchelle_25 (BD3), Kaine_26 (BD3), Marav_28 (BD2), Nishikigoi_25 (BD2), Omar_26 (BD2), Paolo_27 (BD2), Pavo_27 (BD3), Provolone_27 (BD3), Puginator_27 (BD2), Saftant_26 (BD3), Speedwell_31 (BD3), SqueakyClean_26 (BD2), Sudan_26 (BD3), SunkenRoot_26 (BD3), Superstar_28 (BD2), Tefunt_25 (BD2), TinaBelcher_25 (BD2), Triumph_27 (BD2), TrvxScott_24 (BD2), Urza_27 (BD6), Vanseggelen_31 (BD3), Verse_26 (BD3), VieEnRose_27 (BD6), Zainub_27 (BD2), ZamZam_26 (BD3), phiHau3_27 (BD4),

Start 22:
• Found in 4 of 116 ( 3.4% ) of genes in pham
• Manual Annotations of this start: 1 of 111
• Called 25.0% of time when present
• Phage (with cluster) where this start called: R4_25 (BD2),

Start 25:
• Found in 19 of 116 ( 16.4% ) of genes in pham
• No Manual Annotations of this start.
• Called 5.3% of time when present
• Phage (with cluster) where this start called: phiCAM_27 (BD3),

Start 26:
• Found in 41 of 116 ( 35.3% ) of genes in pham
• Manual Annotations of this start: 1 of 111
• Called 2.4% of time when present
• Phage (with cluster) where this start called: Paedore_25 (BD2),

Start 27:
• Found in 87 of 116 ( 75.0% ) of genes in pham
• Manual Annotations of this start: 2 of 111
• Called 2.3% of time when present
• Phage (with cluster) where this start called: Hydra_27 (BD1), Thestral_26 (BD2),

Start 30:
• Found in 91 of 116 ( 78.4% ) of genes in pham
• Manual Annotations of this start: 4 of 111
• Called 4.4% of time when present
• Phage (with cluster) where this start called: ELB20_24 (BD2), Lannister_27 (BD1), Loofah_26 (BD2), Oliynyk_26 (BD1),

**Summary by clusters:**

There are 5 clusters represented in this pham: BD4, BD6, BD1, BD3, BD2,

Info for manual annotations of cluster BD1:
•Start number 18 was manually annotated 17 times for cluster BD1.
•Start number 19 was manually annotated 35 times for cluster BD1.
•Start number 27 was manually annotated 1 time for cluster BD1.
•Start number 30 was manually annotated 2 times for cluster BD1.

Info for manual annotations of cluster BD2:

•Start number 19 was manually annotated 2 times for cluster BD2.
•Start number 21 was manually annotated 26 times for cluster BD2.
•Start number 22 was manually annotated 1 time for cluster BD2.
•Start number 26 was manually annotated 1 time for cluster BD2.
•Start number 27 was manually annotated 1 time for cluster BD2.
•Start number 30 was manually annotated 2 times for cluster BD2.

Info for manual annotations of cluster BD3:
•Start number 20 was manually annotated 1 time for cluster BD3.
•Start number 21 was manually annotated 15 times for cluster BD3.

Info for manual annotations of cluster BD4:
•Start number 21 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:
•Start number 21 was manually annotated 4 times for cluster BD6.

### *Gene Information:*

Gene: Aaronocolus_25 Start: 20591, Stop: 20944, Start Num: 19
Candidate Starts for Aaronocolus_25:
(Start: 19 @20591 has 37 MA's), (Start: 27 @20627 has 2 MA's), (Start: 30 @20660 has 4 MA's), (47, 20810), (48, 20819), (50, 20828), (53, 20873),

Gene: Alsaber_27 Start: 22278, Stop: 22622, Start Num: 21
Candidate Starts for Alsaber_27:
(Start: 21 @22278 has 48 MA's), (Start: 27 @22302 has 2 MA's), (Start: 30 @22335 has 4 MA's), (33, 22350), (34, 22353), (36, 22362), (40, 22395), (44, 22464), (55, 22578),

Gene: Alvy_27 Start: 21377, Stop: 21730, Start Num: 21
Candidate Starts for Alvy_27:
(14, 21017), (Start: 21 @21377 has 48 MA's), (25, 21392), (Start: 26 @21404 has 1 MA's), (Start: 27 @21410 has 2 MA's), (31, 21449), (46, 21584), (52, 21620), (55, 21686), (56, 21710),

Gene: Amela_26 Start: 22973, Stop: 23320, Start Num: 21
Candidate Starts for Amela_26:
(Start: 21 @22973 has 48 MA's), (Start: 26 @22991 has 1 MA's), (Start: 27 @22997 has 2 MA's), (Start: 30 @23030 has 4 MA's), (33, 23045), (36, 23057), (40, 23090), (44, 23159), (55, 23273),

Gene: Amethyst_25 Start: 21208, Stop: 21561, Start Num: 21
Candidate Starts for Amethyst_25:
(Start: 21 @21208 has 48 MA's), (24, 21217), (25, 21223), (Start: 26 @21235 has 1 MA's), (Start: 27 @21241 has 2 MA's), (28, 21250), (29, 21268), (34, 21292), (40, 21334), (46, 21415), (55, 21517), (56, 21541),

Gene: Andris_25 Start: 21074, Stop: 21427, Start Num: 21
Candidate Starts for Andris_25:
(Start: 21 @21074 has 48 MA's), (Start: 26 @21101 has 1 MA's), (Start: 27 @21107 has 2 MA's), (29, 21134), (37, 21170), (45, 21278), (55, 21383), (56, 21407),

Gene: Animus_26 Start: 21413, Stop: 21766, Start Num: 21

Candidate Starts for Animus_26:
(Start: 21 @21413 has 48 MA's), (25, 21428), (Start: 26 @21440 has 1 MA's), (28, 21455), (Start: 30 @21479 has 4 MA's), (33, 21494), (43, 21551), (46, 21599),

Gene: Asten_24 Start: 20696, Stop: 21052, Start Num: 18
Candidate Starts for Asten_24:
(Start: 18 @20696 has 17 MA's), (Start: 27 @20735 has 2 MA's), (Start: 30 @20768 has 4 MA's), (43, 20861), (47, 20918), (48, 20927), (59, 21044),

Gene: Axiom_26 Start: 21249, Stop: 21602, Start Num: 21
Candidate Starts for Axiom_26:
(Start: 21 @21249 has 48 MA's), (Start: 26 @21276 has 1 MA's), (Start: 27 @21282 has 2 MA's), (43, 21408), (45, 21453), (56, 21582),

Gene: BarryBee_26 Start: 20706, Stop: 21062, Start Num: 18
Candidate Starts for BarryBee_26:
(Start: 18 @20706 has 17 MA's), (Start: 27 @20745 has 2 MA's), (Start: 30 @20778 has 4 MA's), (43, 20871), (47, 20928), (48, 20937), (59, 21054),

Gene: BartholomewSD_27 Start: 21377, Stop: 21730, Start Num: 21
Candidate Starts for BartholomewSD_27:
(14, 21017), (Start: 21 @21377 has 48 MA's), (25, 21392), (Start: 26 @21404 has 1 MA's), (Start: 27 @21410 has 2 MA's), (31, 21449), (46, 21584), (52, 21620), (55, 21686), (56, 21710),

Gene: BeardedLady_26 Start: 20844, Stop: 21197, Start Num: 19
Candidate Starts for BeardedLady_26:
(15, 20478), (Start: 19 @20844 has 37 MA's), (Start: 26 @20874 has 1 MA's), (Start: 27 @20880 has 2 MA's), (Start: 30 @20913 has 4 MA's), (47, 21063), (48, 21072), (50, 21081), (53, 21126),

Gene: Bovely_25 Start: 20597, Stop: 20950, Start Num: 19
Candidate Starts for Bovely_25:
(Start: 19 @20597 has 37 MA's), (Start: 26 @20627 has 1 MA's), (Start: 27 @20633 has 2 MA's), (Start: 30 @20666 has 4 MA's), (47, 20816), (48, 20825), (50, 20834), (53, 20879),

Gene: Bowden_26 Start: 21309, Stop: 21662, Start Num: 21
Candidate Starts for Bowden_26:
(Start: 21 @21309 has 48 MA's), (25, 21324), (Start: 26 @21336 has 1 MA's), (Start: 27 @21342 has 2 MA's), (46, 21516), (52, 21552), (55, 21618), (56, 21642),

Gene: Brataylor_27 Start: 21715, Stop: 22068, Start Num: 19
Candidate Starts for Brataylor_27:
(Start: 19 @21715 has 37 MA's), (Start: 30 @21787 has 4 MA's), (43, 21880), (45, 21925), (47, 21937), (54, 22024), (60, 22063),

Gene: BroPlease_26 Start: 20975, Stop: 21328, Start Num: 21
Candidate Starts for BroPlease_26:
(Start: 21 @20975 has 48 MA's), (Start: 26 @21002 has 1 MA's), (29, 21035), (37, 21071), (43, 21134), (45, 21179), (55, 21284), (56, 21308),

Gene: BryanRecycles_26 Start: 20960, Stop: 21313, Start Num: 19
Candidate Starts for BryanRecycles_26:
(Start: 19 @20960 has 37 MA's), (Start: 27 @20996 has 2 MA's), (Start: 30 @21029 has 4 MA's), (48, 21188),

Gene: Caelum_26 Start: 21282, Stop: 21635, Start Num: 21
Candidate Starts for Caelum_26:
(12, 20769), (14, 20922), (Start: 21 @21282 has 48 MA's), (23, 21288), (24, 21291), (Start: 26 @21309 has 1 MA's), (28, 21324), (32, 21357), (40, 21408), (44, 21477), (45, 21486), (55, 21591), (56, 21615),

Gene: Caliburn_25 Start: 20574, Stop: 20927, Start Num: 19
Candidate Starts for Caliburn_25:
(Start: 19 @20574 has 37 MA's), (Start: 27 @20610 has 2 MA's), (Start: 30 @20643 has 4 MA's), (47, 20793), (48, 20802), (50, 20811), (53, 20856),

Gene: Celery_29 Start: 22253, Stop: 22603, Start Num: 21
Candidate Starts for Celery_29:
(11, 21680), (14, 21884), (Start: 21 @22253 has 48 MA's), (25, 22265), (Start: 27 @22283 has 2 MA's), (Start: 30 @22316 has 4 MA's), (33, 22331), (36, 22343), (40, 22376), (43, 22409), (44, 22445),

Gene: Celeste_25 Start: 21167, Stop: 21520, Start Num: 19
Candidate Starts for Celeste_25:
(Start: 19 @21167 has 37 MA's), (Start: 30 @21239 has 4 MA's), (43, 21332), (47, 21389), (54, 21476),

Gene: Celia_27 Start: 21558, Stop: 21914, Start Num: 21
Candidate Starts for Celia_27:
(1, 20016), (5, 20751), (6, 20820), (7, 20826), (8, 20829), (9, 20844), (13, 21126), (14, 21192), (Start: 21 @21558 has 48 MA's), (Start: 27 @21591 has 2 MA's), (Start: 30 @21624 has 4 MA's), (40, 21684), (43, 21717), (44, 21753), (45, 21762), (58, 21900),

Gene: Chucky_24 Start: 20710, Stop: 21066, Start Num: 18
Candidate Starts for Chucky_24:
(Start: 18 @20710 has 17 MA's), (Start: 27 @20749 has 2 MA's), (Start: 30 @20782 has 4 MA's), (43, 20875), (47, 20932), (48, 20941), (59, 21058),

Gene: Conan_27 Start: 22175, Stop: 22561, Start Num: 21
Candidate Starts for Conan_27:
(Start: 21 @22175 has 48 MA's), (Start: 27 @22199 has 2 MA's), (Start: 30 @22232 has 4 MA's), (33, 22247), (34, 22250), (36, 22259), (40, 22292), (43, 22325), (44, 22361), (48, 22391), (54, 22469), (55, 22475),

Gene: Danzina_26 Start: 21468, Stop: 21821, Start Num: 19
Candidate Starts for Danzina_26:
(Start: 19 @21468 has 37 MA's), (Start: 30 @21540 has 4 MA's), (43, 21633), (47, 21690), (54, 21777),

Gene: Dattran_26 Start: 21277, Stop: 21630, Start Num: 19
Candidate Starts for Dattran_26:
(Start: 19 @21277 has 37 MA's), (Start: 30 @21349 has 4 MA's), (43, 21442), (45, 21487), (47, 21499), (54, 21586),

Gene: Daudau_25 Start: 21308, Stop: 21661, Start Num: 21
Candidate Starts for Daudau_25:
(Start: 21 @21308 has 48 MA's), (25, 21323), (Start: 26 @21335 has 1 MA's), (Start: 27 @21341 has 2 MA's), (41, 21446), (42, 21452), (45, 21512), (56, 21641),

Gene: Dexers_25 Start: 22199, Stop: 22543, Start Num: 21
Candidate Starts for Dexers_25:

(14, 21863), (Start: 21 @22199 has 48 MA's), (Start: 27 @22223 has 2 MA's), (Start: 30 @22256 has 4 MA's), (33, 22271), (34, 22274), (36, 22283), (40, 22316), (44, 22385), (55, 22499),

Gene: Diane_25 Start: 21541, Stop: 21894, Start Num: 21
Candidate Starts for Diane_25:
(Start: 21 @21541 has 48 MA's), (24, 21550), (25, 21556), (Start: 26 @21568 has 1 MA's), (Start: 27 @21574 has 2 MA's), (28, 21583), (29, 21601), (34, 21625), (40, 21667), (46, 21748), (55, 21850), (56, 21874),

Gene: Dwayne_24 Start: 20697, Stop: 21053, Start Num: 18
Candidate Starts for Dwayne_24:
(Start: 18 @20697 has 17 MA's), (Start: 27 @20736 has 2 MA's), (Start: 30 @20769 has 4 MA's), (43, 20862), (47, 20919), (48, 20928), (59, 21045),

Gene: ELB20_24 Start: 21476, Stop: 21796, Start Num: 30
Candidate Starts for ELB20_24:
(Start: 22 @21413 has 1 MA's), (25, 21425), (Start: 26 @21437 has 1 MA's), (Start: 30 @21476 has 4 MA's), (35, 21497), (40, 21536), (45, 21614), (48, 21635), (55, 21740), (57, 21770),

Gene: Eddasa_26 Start: 20960, Stop: 21313, Start Num: 19
Candidate Starts for Eddasa_26:
(Start: 19 @20960 has 37 MA's), (Start: 27 @20996 has 2 MA's), (Start: 30 @21029 has 4 MA's), (48, 21188),

Gene: Ejemplo_24 Start: 20736, Stop: 21092, Start Num: 18
Candidate Starts for Ejemplo_24:
(Start: 18 @20736 has 17 MA's), (Start: 27 @20775 has 2 MA's), (Start: 30 @20808 has 4 MA's), (43, 20901), (47, 20958), (48, 20967), (59, 21084),

Gene: ElGato_27 Start: 21835, Stop: 22221, Start Num: 21
Candidate Starts for ElGato_27:
(Start: 21 @21835 has 48 MA's), (Start: 27 @21859 has 2 MA's), (Start: 30 @21892 has 4 MA's), (33, 21907), (34, 21910), (36, 21919), (40, 21952), (43, 21985), (44, 22021), (48, 22051), (54, 22129), (55, 22135),

Gene: Emaanora_26 Start: 20655, Stop: 21011, Start Num: 18
Candidate Starts for Emaanora_26:
(Start: 18 @20655 has 17 MA's), (Start: 27 @20694 has 2 MA's), (Start: 30 @20727 has 4 MA's), (43, 20820), (47, 20877), (48, 20886), (59, 21003),

Gene: EnochSoames_27 Start: 20955, Stop: 21308, Start Num: 19
Candidate Starts for EnochSoames_27:
(Start: 19 @20955 has 37 MA's), (Start: 27 @20991 has 2 MA's), (Start: 30 @21024 has 4 MA's), (48, 21183),

Gene: Esperer_25 Start: 20410, Stop: 20763, Start Num: 19
Candidate Starts for Esperer_25:
(Start: 19 @20410 has 37 MA's), (Start: 27 @20446 has 2 MA's), (Start: 30 @20479 has 4 MA's), (47, 20629), (48, 20638), (50, 20647), (53, 20692),

Gene: GirlDinner_25 Start: 21075, Stop: 21428, Start Num: 21
Candidate Starts for GirlDinner_25:

(Start: 21 @21075 has 48 MA's), (25, 21090), (Start: 26 @21102 has 1 MA's), (28, 21117), (Start: 30 @21141 has 4 MA's), (33, 21156), (43, 21213), (46, 21261),

Gene: Goby_25 Start: 21283, Stop: 21636, Start Num: 19
Candidate Starts for Goby_25:
(Start: 19 @21283 has 37 MA's), (Start: 30 @21355 has 4 MA's), (43, 21448), (45, 21493), (47, 21505), (54, 21592), (60, 21631),

Gene: Godpower_26 Start: 21275, Stop: 21628, Start Num: 19
Candidate Starts for Godpower_26:
(Start: 19 @21275 has 37 MA's), (Start: 30 @21347 has 4 MA's), (43, 21440), (45, 21485), (47, 21497), (54, 21584),

Gene: GreenWeasel_27 Start: 20984, Stop: 21337, Start Num: 21
Candidate Starts for GreenWeasel_27:
(17, 20843), (Start: 21 @20984 has 48 MA's), (Start: 26 @21011 has 1 MA's), (29, 21044), (Start: 30 @21050 has 4 MA's), (37, 21080), (43, 21143), (45, 21188), (55, 21293), (56, 21317),

Gene: Haizum_25 Start: 21215, Stop: 21568, Start Num: 21
Candidate Starts for Haizum_25:
(Start: 21 @21215 has 48 MA's), (24, 21224), (Start: 26 @21242 has 1 MA's), (Start: 27 @21248 has 2 MA's), (28, 21257), (29, 21275), (34, 21299), (40, 21341), (46, 21422), (52, 21458), (55, 21524), (56, 21548),

Gene: Hank144_26 Start: 21524, Stop: 21877, Start Num: 19
Candidate Starts for Hank144_26:
(Start: 19 @21524 has 37 MA's), (Start: 21 @21530 has 48 MA's), (Start: 30 @21590 has 4 MA's), (48, 21749),

Gene: Hippo_24 Start: 20706, Stop: 21062, Start Num: 18
Candidate Starts for Hippo_24:
(Start: 18 @20706 has 17 MA's), (Start: 27 @20745 has 2 MA's), (Start: 30 @20778 has 4 MA's), (43, 20871), (47, 20928), (48, 20937), (59, 21054),

Gene: Hydra_27 Start: 21158, Stop: 21475, Start Num: 27
Candidate Starts for Hydra_27:
(Start: 19 @21122 has 37 MA's), (Start: 27 @21158 has 2 MA's), (Start: 30 @21191 has 4 MA's), (47, 21341), (48, 21350), (50, 21359), (53, 21404),

Gene: Indigo_24 Start: 20590, Stop: 20943, Start Num: 19
Candidate Starts for Indigo_24:
(Start: 19 @20590 has 37 MA's), (Start: 27 @20626 has 2 MA's), (Start: 30 @20659 has 4 MA's), (47, 20809), (48, 20818), (50, 20827), (53, 20872),

Gene: Issmi_26 Start: 21936, Stop: 22289, Start Num: 21
Candidate Starts for Issmi_26:
(17, 21792), (Start: 21 @21936 has 48 MA's), (Start: 26 @21963 has 1 MA's), (Start: 27 @21969 has 2 MA's), (28, 21978), (29, 21996), (32, 22011), (33, 22017), (40, 22062), (41, 22074), (42, 22080), (45, 22140), (46, 22143), (49, 22164), (56, 22269),

Gene: Itza_27 Start: 21472, Stop: 21828, Start Num: 21
Candidate Starts for Itza_27:

(1, 19930), (5, 20665), (6, 20734), (7, 20740), (8, 20743), (9, 20758), (13, 21040), (14, 21106), (Start: 21 @21472 has 48 MA's), (Start: 27 @21505 has 2 MA's), (Start: 30 @21538 has 4 MA's), (40, 21598), (43, 21631), (44, 21667), (45, 21676), (58, 21814),

Gene: Izzy_26 Start: 21007, Stop: 21360, Start Num: 19
Candidate Starts for Izzy_26:
(Start: 19 @21007 has 37 MA's), (Start: 27 @21043 has 2 MA's), (Start: 30 @21076 has 4 MA's), (48, 21235),

Gene: Janus_26 Start: 21413, Stop: 21766, Start Num: 21
Candidate Starts for Janus_26:
(Start: 21 @21413 has 48 MA's), (25, 21428), (Start: 26 @21440 has 1 MA's), (28, 21455), (Start: 30 @21479 has 4 MA's), (33, 21494), (43, 21551), (46, 21599),

Gene: Jash_26 Start: 20960, Stop: 21313, Start Num: 19
Candidate Starts for Jash_26:
(Start: 19 @20960 has 37 MA's), (Start: 27 @20996 has 2 MA's), (Start: 30 @21029 has 4 MA's), (48, 21188),

Gene: Jevington_27 Start: 21756, Stop: 22109, Start Num: 21
Candidate Starts for Jevington_27:
(Start: 21 @21756 has 48 MA's), (Start: 26 @21783 has 1 MA's), (Start: 27 @21789 has 2 MA's), (29, 21816), (33, 21837), (41, 21894), (46, 21963), (52, 21999), (55, 22065), (56, 22089),

Gene: Jhitchelle_25 Start: 21730, Stop: 22116, Start Num: 21
Candidate Starts for Jhitchelle_25:
(Start: 21 @21730 has 48 MA's), (Start: 27 @21754 has 2 MA's), (Start: 30 @21787 has 4 MA's), (33, 21802), (34, 21805), (36, 21814), (40, 21847), (44, 21916), (62, 22099),

Gene: Kaine_26 Start: 21981, Stop: 22325, Start Num: 21
Candidate Starts for Kaine_26:
(Start: 21 @21981 has 48 MA's), (Start: 27 @22005 has 2 MA's), (Start: 30 @22038 has 4 MA's), (33, 22053), (34, 22056), (36, 22065), (40, 22098), (44, 22167), (55, 22281),

Gene: Katalie_25 Start: 20998, Stop: 21354, Start Num: 19
Candidate Starts for Katalie_25:
(Start: 19 @20998 has 37 MA's), (Start: 27 @21037 has 2 MA's), (Start: 30 @21070 has 4 MA's), (43, 21163), (47, 21220),

Gene: Lannister_27 Start: 21693, Stop: 21974, Start Num: 30
Candidate Starts for Lannister_27:
(Start: 19 @21624 has 37 MA's), (Start: 21 @21630 has 48 MA's), (Start: 27 @21660 has 2 MA's), (Start: 30 @21693 has 4 MA's), (36, 21720), (47, 21843), (48, 21852),

Gene: Legacy_25 Start: 20565, Stop: 20918, Start Num: 19
Candidate Starts for Legacy_25:
(Start: 19 @20565 has 37 MA's), (Start: 27 @20601 has 2 MA's), (Start: 30 @20634 has 4 MA's), (47, 20784), (48, 20793), (50, 20802), (53, 20847),

Gene: Leviticus_25 Start: 20594, Stop: 20947, Start Num: 19
Candidate Starts for Leviticus_25:
(Start: 19 @20594 has 37 MA's), (Start: 27 @20630 has 2 MA's), (Start: 30 @20663 has 4 MA's), (47, 20813), (48, 20822), (50, 20831), (53, 20876),

Gene: Lika_25 Start: 21279, Stop: 21632, Start Num: 19
Candidate Starts for Lika_25:
(Start: 19 @21279 has 37 MA's), (Start: 30 @21351 has 4 MA's), (43, 21444), (45, 21489), (47, 21501), (54, 21588),

Gene: Loofah_26 Start: 21398, Stop: 21718, Start Num: 30
Candidate Starts for Loofah_26:
(Start: 22 @21335 has 1 MA's), (25, 21347), (Start: 26 @21359 has 1 MA's), (Start: 30 @21398 has 4 MA's), (35, 21419), (40, 21458), (45, 21536), (48, 21557), (55, 21662), (57, 21692),

Gene: Lorelei_25 Start: 21248, Stop: 21601, Start Num: 19
Candidate Starts for Lorelei_25:
(Start: 19 @21248 has 37 MA's), (Start: 30 @21320 has 4 MA's), (40, 21380), (43, 21413), (47, 21470), (54, 21557), (55, 21563),

Gene: Maneekul_24 Start: 20735, Stop: 21091, Start Num: 18
Candidate Starts for Maneekul_24:
(Start: 18 @20735 has 17 MA's), (Start: 27 @20774 has 2 MA's), (Start: 30 @20807 has 4 MA's), (43, 20900), (47, 20957), (48, 20966), (59, 21083),

Gene: Marav_28 Start: 22095, Stop: 22448, Start Num: 21
Candidate Starts for Marav_28:
(Start: 21 @22095 has 48 MA's), (Start: 26 @22122 has 1 MA's), (Start: 27 @22128 has 2 MA's), (29, 22155), (33, 22176), (41, 22233), (42, 22239), (46, 22302), (55, 22404), (56, 22428),

Gene: Nabi_25 Start: 21248, Stop: 21601, Start Num: 19
Candidate Starts for Nabi_25:
(Start: 19 @21248 has 37 MA's), (Start: 30 @21320 has 4 MA's), (40, 21380), (43, 21413), (47, 21470), (54, 21557), (55, 21563),

Gene: Nanodon_27 Start: 21238, Stop: 21588, Start Num: 19
Candidate Starts for Nanodon_27:
(Start: 19 @21238 has 37 MA's), (Start: 21 @21244 has 48 MA's), (Start: 27 @21274 has 2 MA's), (Start: 30 @21307 has 4 MA's), (43, 21400), (47, 21457),

Gene: Nerdos_25 Start: 20588, Stop: 20941, Start Num: 19
Candidate Starts for Nerdos_25:
(Start: 19 @20588 has 37 MA's), (Start: 27 @20624 has 2 MA's), (Start: 30 @20657 has 4 MA's), (47, 20807), (48, 20816), (50, 20825), (53, 20870),

Gene: Nishikigoi_25 Start: 21215, Stop: 21568, Start Num: 21
Candidate Starts for Nishikigoi_25:
(Start: 21 @21215 has 48 MA's), (24, 21224), (Start: 26 @21242 has 1 MA's), (Start: 27 @21248 has 2 MA's), (28, 21257), (29, 21275), (34, 21299), (40, 21341), (46, 21422), (52, 21458), (55, 21524), (56, 21548),

Gene: Oliynyk_26 Start: 21029, Stop: 21313, Start Num: 30
Candidate Starts for Oliynyk_26:
(Start: 19 @20960 has 37 MA's), (Start: 27 @20996 has 2 MA's), (Start: 30 @21029 has 4 MA's), (48, 21188),

Gene: Omar_26 Start: 21578, Stop: 21931, Start Num: 21

Candidate Starts for Omar_26:
(Start: 21 @21578 has 48 MA's), (25, 21593), (Start: 26 @21605 has 1 MA's), (Start: 27 @21611 has 2 MA's), (28, 21620), (29, 21638), (36, 21671), (37, 21674), (46, 21785), (55, 21887), (56, 21911),

Gene: Ozzie_25 Start: 20574, Stop: 20927, Start Num: 19
Candidate Starts for Ozzie_25:
(Start: 19 @20574 has 37 MA's), (Start: 27 @20610 has 2 MA's), (Start: 30 @20643 has 4 MA's), (47, 20793), (48, 20802), (50, 20811), (53, 20856),

Gene: OzzyJ_25 Start: 20697, Stop: 21053, Start Num: 18
Candidate Starts for OzzyJ_25:
(Start: 18 @20697 has 17 MA's), (Start: 27 @20736 has 2 MA's), (Start: 30 @20769 has 4 MA's), (43, 20862), (47, 20919), (48, 20928), (59, 21045),

Gene: Pablito_25 Start: 21194, Stop: 21544, Start Num: 19
Candidate Starts for Pablito_25:
(Start: 19 @21194 has 37 MA's), (Start: 21 @21200 has 48 MA's), (Start: 30 @21260 has 4 MA's), (43, 21353), (47, 21410), (50, 21428),

Gene: Paedore_25 Start: 21359, Stop: 21718, Start Num: 26
Candidate Starts for Paedore_25:
(Start: 22 @21335 has 1 MA's), (25, 21347), (Start: 26 @21359 has 1 MA's), (Start: 30 @21398 has 4 MA's), (35, 21419), (40, 21458), (45, 21536), (48, 21557), (55, 21662), (57, 21692),

Gene: Paolo_27 Start: 21760, Stop: 22113, Start Num: 21
Candidate Starts for Paolo_27:
(17, 21616), (Start: 21 @21760 has 48 MA's), (Start: 26 @21787 has 1 MA's), (Start: 27 @21793 has 2 MA's), (41, 21898), (42, 21904), (46, 21967), (52, 22003), (55, 22069), (56, 22093),

Gene: Pavo_27 Start: 22448, Stop: 22834, Start Num: 21
Candidate Starts for Pavo_27:
(Start: 21 @22448 has 48 MA's), (Start: 27 @22472 has 2 MA's), (Start: 30 @22505 has 4 MA's), (33, 22520), (34, 22523), (36, 22532), (40, 22565), (43, 22598), (44, 22634), (48, 22664), (54, 22742), (55, 22748),

Gene: Phettuccine_25 Start: 20590, Stop: 20943, Start Num: 19
Candidate Starts for Phettuccine_25:
(Start: 19 @20590 has 37 MA's), (Start: 27 @20626 has 2 MA's), (Start: 30 @20659 has 4 MA's), (47, 20809), (48, 20818), (50, 20827), (53, 20872),

Gene: Provolone_27 Start: 21827, Stop: 22213, Start Num: 21
Candidate Starts for Provolone_27:
(Start: 21 @21827 has 48 MA's), (Start: 27 @21851 has 2 MA's), (Start: 30 @21884 has 4 MA's), (33, 21899), (34, 21902), (36, 21911), (40, 21944), (43, 21977), (44, 22013), (48, 22043), (54, 22121), (55, 22127),

Gene: Puginator_27 Start: 21775, Stop: 22128, Start Num: 21
Candidate Starts for Puginator_27:
(Start: 21 @21775 has 48 MA's), (Start: 26 @21802 has 1 MA's), (Start: 27 @21808 has 2 MA's), (33, 21856), (41, 21913), (42, 21919), (46, 21982), (52, 22018), (55, 22084), (56, 22108),

Gene: R4_25 Start: 21424, Stop: 21807, Start Num: 22
Candidate Starts for R4_25:

(Start: 22 @21424 has 1 MA's), (25, 21436), (Start: 26 @21448 has 1 MA's), (Start: 30 @21487 has 4 MA's), (35, 21508), (40, 21547), (45, 21625), (48, 21646), (55, 21751), (57, 21781),

Gene: Rana_25 Start: 21248, Stop: 21601, Start Num: 19
Candidate Starts for Rana_25:
(Start: 19 @21248 has 37 MA's), (Start: 30 @21320 has 4 MA's), (40, 21380), (43, 21413), (47, 21470), (54, 21557), (55, 21563),

Gene: RedBear_26 Start: 20998, Stop: 21354, Start Num: 19
Candidate Starts for RedBear_26:
(Start: 19 @20998 has 37 MA's), (Start: 27 @21037 has 2 MA's), (Start: 30 @21070 has 4 MA's), (43, 21163), (47, 21220),

Gene: Rusticus_26 Start: 20960, Stop: 21313, Start Num: 19
Candidate Starts for Rusticus_26:
(Start: 19 @20960 has 37 MA's), (Start: 27 @20996 has 2 MA's), (Start: 30 @21029 has 4 MA's), (48, 21188),

Gene: Saftant_26 Start: 22490, Stop: 22837, Start Num: 21
Candidate Starts for Saftant_26:
(Start: 21 @22490 has 48 MA's), (23, 22496), (Start: 27 @22514 has 2 MA's), (Start: 30 @22547 has 4 MA's), (33, 22562), (34, 22565), (36, 22574), (40, 22607), (43, 22640), (44, 22676), (55, 22790),

Gene: SarahRose_24 Start: 20706, Stop: 21062, Start Num: 18
Candidate Starts for SarahRose_24:
(Start: 18 @20706 has 17 MA's), (Start: 27 @20745 has 2 MA's), (Start: 30 @20778 has 4 MA's), (43, 20871), (47, 20928), (48, 20937), (59, 21054),

Gene: Snorlax_24 Start: 20709, Stop: 21065, Start Num: 18
Candidate Starts for Snorlax_24:
(Start: 18 @20709 has 17 MA's), (Start: 27 @20748 has 2 MA's), (Start: 30 @20781 has 4 MA's), (43, 20874), (47, 20931), (48, 20940), (59, 21057),

Gene: South40_25 Start: 20998, Stop: 21354, Start Num: 19
Candidate Starts for South40_25:
(Start: 19 @20998 has 37 MA's), (Start: 27 @21037 has 2 MA's), (Start: 30 @21070 has 4 MA's), (43, 21163), (47, 21220),

Gene: Speedwell_31 Start: 23703, Stop: 24053, Start Num: 21
Candidate Starts for Speedwell_31:
(14, 23367), (Start: 21 @23703 has 48 MA's), (25, 23715), (Start: 27 @23733 has 2 MA's), (Start: 30 @23766 has 4 MA's), (33, 23781), (40, 23826), (43, 23859), (44, 23895), (55, 24009),

Gene: SqueakyClean_26 Start: 21339, Stop: 21692, Start Num: 21
Candidate Starts for SqueakyClean_26:
(Start: 21 @21339 has 48 MA's), (25, 21354), (Start: 26 @21366 has 1 MA's), (28, 21381), (Start: 30 @21405 has 4 MA's), (33, 21420), (43, 21477), (46, 21525),

Gene: Sudan_26 Start: 22268, Stop: 22612, Start Num: 21
Candidate Starts for Sudan_26:
(Start: 21 @22268 has 48 MA's), (Start: 27 @22292 has 2 MA's), (Start: 30 @22325 has 4 MA's), (33, 22340), (34, 22343), (36, 22352), (40, 22385), (44, 22454), (55, 22568),

Gene: Sujidade_26 Start: 21571, Stop: 21924, Start Num: 19
Candidate Starts for Sujidade_26:
(Start: 19 @21571 has 37 MA's), (Start: 30 @21643 has 4 MA's), (43, 21736), (45, 21781), (47, 21793), (54, 21880), (60, 21919),

Gene: SunkenRoot_26 Start: 22767, Stop: 23114, Start Num: 21
Candidate Starts for SunkenRoot_26:
(Start: 21 @22767 has 48 MA's), (Start: 26 @22785 has 1 MA's), (Start: 27 @22791 has 2 MA's), (Start: 30 @22824 has 4 MA's), (33, 22839), (36, 22851), (40, 22884), (44, 22953), (55, 23067),

Gene: SunsetPointe_25 Start: 20581, Stop: 20934, Start Num: 19
Candidate Starts for SunsetPointe_25:
(Start: 19 @20581 has 37 MA's), (Start: 27 @20617 has 2 MA's), (Start: 30 @20650 has 4 MA's), (47, 20800), (48, 20809), (50, 20818), (53, 20863),

Gene: Superstar_28 Start: 22437, Stop: 22820, Start Num: 21
Candidate Starts for Superstar_28:
(Start: 21 @22437 has 48 MA's), (24, 22446), (25, 22452), (Start: 26 @22464 has 1 MA's), (29, 22497), (36, 22530), (37, 22533), (38, 22554), (40, 22563), (41, 22575), (42, 22581), (45, 22641), (46, 22644), (61, 22800),

Gene: TagePhighter_25 Start: 20709, Stop: 21065, Start Num: 18
Candidate Starts for TagePhighter_25:
(Start: 18 @20709 has 17 MA's), (Start: 27 @20748 has 2 MA's), (Start: 30 @20781 has 4 MA's), (43, 20874), (47, 20931), (48, 20940), (59, 21057),

Gene: Tefunt_25 Start: 21218, Stop: 21571, Start Num: 21
Candidate Starts for Tefunt_25:
(Start: 21 @21218 has 48 MA's), (24, 21227), (Start: 26 @21245 has 1 MA's), (Start: 27 @21251 has 2 MA's), (28, 21260), (29, 21278), (34, 21302), (40, 21344), (46, 21425), (52, 21461), (55, 21527), (56, 21551),

Gene: Thestral_26 Start: 21345, Stop: 21665, Start Num: 27
Candidate Starts for Thestral_26:
(14, 20952), (Start: 21 @21312 has 48 MA's), (Start: 26 @21339 has 1 MA's), (Start: 27 @21345 has 2 MA's), (46, 21519), (52, 21555), (55, 21621), (56, 21645),

Gene: TinaBelcher_25 Start: 21260, Stop: 21613, Start Num: 21
Candidate Starts for TinaBelcher_25:
(14, 20900), (Start: 21 @21260 has 48 MA's), (Start: 26 @21287 has 1 MA's), (Start: 27 @21293 has 2 MA's), (28, 21302), (46, 21467), (52, 21503), (55, 21569), (56, 21593),

Gene: Toma_25 Start: 21283, Stop: 21636, Start Num: 19
Candidate Starts for Toma_25:
(Start: 19 @21283 has 37 MA's), (Start: 30 @21355 has 4 MA's), (43, 21448), (45, 21493), (47, 21505), (54, 21592), (60, 21631),

Gene: Triste_24 Start: 20697, Stop: 21053, Start Num: 18
Candidate Starts for Triste_24:
(Start: 18 @20697 has 17 MA's), (Start: 27 @20736 has 2 MA's), (Start: 30 @20769 has 4 MA's), (43, 20862), (47, 20919), (48, 20928), (59, 21045),

Gene: Triumph_27 Start: 21263, Stop: 21616, Start Num: 21

Candidate Starts for Triumph_27:
(Start: 21 @21263 has 48 MA's), (Start: 26 @21290 has 1 MA's), (Start: 27 @21296 has 2 MA's), (37, 21359), (43, 21422), (45, 21467), (55, 21572), (56, 21596),

Gene: TrvxScott_24 Start: 21290, Stop: 21643, Start Num: 21
Candidate Starts for TrvxScott_24:
(14, 20930), (Start: 21 @21290 has 48 MA's), (Start: 26 @21317 has 1 MA's), (Start: 27 @21323 has 2 MA's), (28, 21332), (46, 21497), (52, 21533), (56, 21623),

Gene: TuanPN_24 Start: 20736, Stop: 21092, Start Num: 18
Candidate Starts for TuanPN_24:
(Start: 18 @20736 has 17 MA's), (Start: 27 @20775 has 2 MA's), (Start: 30 @20808 has 4 MA's), (43, 20901), (47, 20958), (48, 20967), (59, 21084),

Gene: Unstoppable_25 Start: 20585, Stop: 20938, Start Num: 19
Candidate Starts for Unstoppable_25:
(Start: 19 @20585 has 37 MA's), (Start: 27 @20621 has 2 MA's), (Start: 30 @20654 has 4 MA's), (47, 20804), (48, 20813), (50, 20822), (53, 20867),

Gene: Urza_27 Start: 21493, Stop: 21849, Start Num: 21
Candidate Starts for Urza_27:
(1, 19951), (5, 20686), (6, 20755), (7, 20761), (8, 20764), (9, 20779), (13, 21061), (14, 21127), (Start: 21 @21493 has 48 MA's), (Start: 27 @21526 has 2 MA's), (Start: 30 @21559 has 4 MA's), (40, 21619), (43, 21652), (44, 21688), (45, 21697), (58, 21835),

Gene: Vanseggelen_31 Start: 21971, Stop: 22357, Start Num: 21
Candidate Starts for Vanseggelen_31:
(Start: 21 @21971 has 48 MA's), (Start: 26 @21989 has 1 MA's), (Start: 27 @21995 has 2 MA's), (Start: 30 @22028 has 4 MA's), (33, 22043), (36, 22055), (40, 22088), (44, 22157), (62, 22340),

Gene: Verse_26 Start: 22967, Stop: 23314, Start Num: 21
Candidate Starts for Verse_26:
(Start: 21 @22967 has 48 MA's), (Start: 26 @22985 has 1 MA's), (Start: 27 @22991 has 2 MA's), (Start: 30 @23024 has 4 MA's), (33, 23039), (36, 23051), (40, 23084), (44, 23153), (55, 23267),

Gene: VieEnRose_27 Start: 21399, Stop: 21755, Start Num: 21
Candidate Starts for VieEnRose_27:
(2, 19875), (3, 20007), (4, 20016), (6, 20661), (7, 20667), (8, 20670), (9, 20685), (10, 20769), (13, 20967), (14, 21033), (16, 21246), (Start: 21 @21399 has 48 MA's), (Start: 27 @21432 has 2 MA's), (Start: 30 @21465 has 4 MA's), (40, 21525), (43, 21558), (44, 21594), (51, 21636), (58, 21741),

Gene: Werner_24 Start: 20707, Stop: 21063, Start Num: 18
Candidate Starts for Werner_24:
(Start: 18 @20707 has 17 MA's), (Start: 27 @20746 has 2 MA's), (Start: 30 @20779 has 4 MA's), (43, 20872), (47, 20929), (48, 20938), (59, 21055),

Gene: Whatever_24 Start: 20707, Stop: 21063, Start Num: 18
Candidate Starts for Whatever_24:
(Start: 18 @20707 has 17 MA's), (Start: 27 @20746 has 2 MA's), (Start: 30 @20779 has 4 MA's), (43, 20872), (47, 20929), (48, 20938), (59, 21055),

Gene: Yasdnil_24 Start: 20732, Stop: 21088, Start Num: 18
Candidate Starts for Yasdnil_24:

(Start: 18 @20732 has 17 MA's), (Start: 27 @20771 has 2 MA's), (Start: 30 @20804 has 4 MA's), (43, 20897), (47, 20954), (48, 20963), (59, 21080),

Gene: Yosif_27 Start: 22496, Stop: 22846, Start Num: 20
Candidate Starts for Yosif_27:
(Start: 20 @22496 has 1 MA's), (Start: 30 @22565 has 4 MA's), (37, 22595), (48, 22724),

Gene: Zainub_27 Start: 21723, Stop: 22076, Start Num: 21
Candidate Starts for Zainub_27:
(17, 21579), (Start: 21 @21723 has 48 MA's), (Start: 26 @21750 has 1 MA's), (Start: 27 @21756 has 2 MA's), (41, 21861), (42, 21867), (46, 21930), (52, 21966), (55, 22032), (56, 22056),

Gene: ZamZam_26 Start: 22424, Stop: 22771, Start Num: 21
Candidate Starts for ZamZam_26:
(Start: 21 @22424 has 48 MA's), (23, 22430), (Start: 27 @22448 has 2 MA's), (Start: 30 @22481 has 4 MA's), (33, 22496), (34, 22499), (36, 22508), (40, 22541), (43, 22574), (44, 22610), (55, 22724), (57, 22754),

Gene: Zemlya_26 Start: 21274, Stop: 21627, Start Num: 19
Candidate Starts for Zemlya_26:
(Start: 19 @21274 has 37 MA's), (Start: 30 @21346 has 4 MA's), (43, 21439), (47, 21496), (54, 21583),

Gene: phiCAM_27 Start: 24270, Stop: 24608, Start Num: 25
Candidate Starts for phiCAM_27:
(Start: 21 @24258 has 48 MA's), (25, 24270), (Start: 27 @24288 has 2 MA's), (Start: 30 @24321 has 4 MA's), (33, 24336), (36, 24348), (39, 24375), (40, 24381), (43, 24414), (44, 24450),

Gene: phiHau3_27 Start: 20948, Stop: 21301, Start Num: 21
Candidate Starts for phiHau3_27:
(17, 20807), (Start: 21 @20948 has 48 MA's), (Start: 26 @20975 has 1 MA's), (29, 21008), (Start: 30 @21014 has 4 MA's), (37, 21044), (43, 21107), (45, 21152), (55, 21257), (56, 21281),