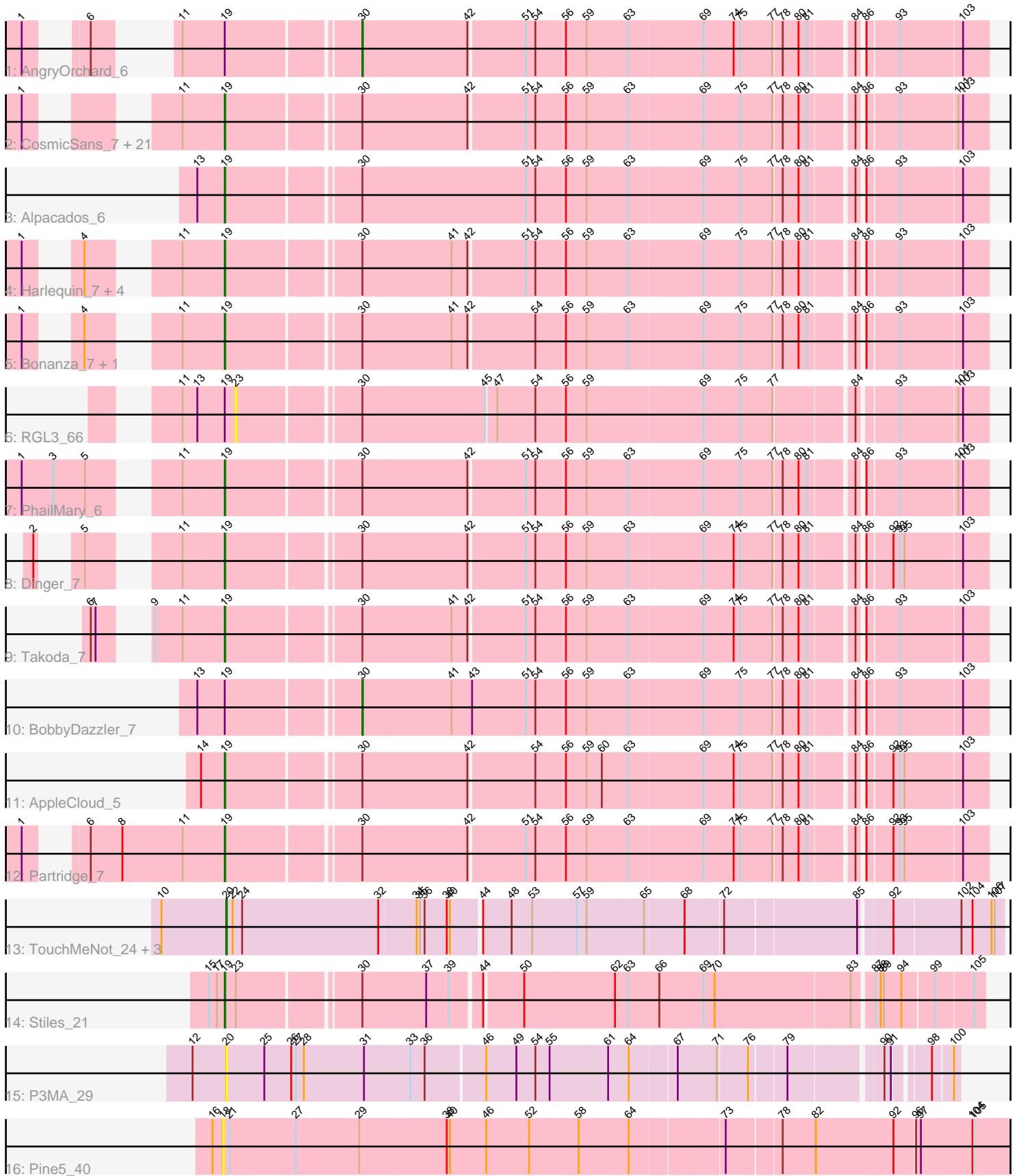


Pham 163040



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 163040 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163040 has 45 members, 4 are drafts.

Phages represented in each track:

- Track 1 : AngryOrchard_6
- Track 2 : CosmicSans_7, Bradshaw_7, Rhodalysa_7, Alatin_7, Shuman_7, Swann_7, RER2_67, Belenaria_7, Rasputin_7, Erik_7, Nancinator_7, RexFury_7, Espica_7, TWAMP_7, Krishelle_7, Lillie_7, Naiad_7, StCroix_7, Phrankenstein_7, UhSalsa_7, Gollum_7, Natosaleda_7
- Track 3 : Alpacados_6
- Track 4 : Harlequin_7, Jester_7, Bryce_7, Yoncess_7, Hiro_7
- Track 5 : Bonanza_7, Yogi_7
- Track 6 : RGL3_66
- Track 7 : PhailMary_6
- Track 8 : Dinger_7
- Track 9 : Takoda_7
- Track 10 : BobbyDazzler_7
- Track 11 : AppleCloud_5
- Track 12 : Partridge_7
- Track 13 : TouchMeNot_24, Colleen_24, Poushou_24, Arianna_24
- Track 14 : Stiles_21
- Track 15 : P3MA_29
- Track 16 : Pine5_40

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

The start number called the most often in the published annotations is 19, it was called in 35 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alatin_7, Alpacados_6, AppleCloud_5, Belenaria_7, Bonanza_7, Bradshaw_7, Bryce_7, CosmicSans_7, Dinger_7, Erik_7, Espica_7, Gollum_7, Harlequin_7, Hiro_7, Jester_7, Krishelle_7, Lillie_7, Naiad_7, Nancinator_7, Natosaleda_7, Partridge_7, PhailMary_6, Phrankenstein_7, RER2_67, Rasputin_7, RexFury_7, Rhodalysa_7, Shuman_7, StCroix_7, Stiles_21, Swann_7, TWAMP_7, Takoda_7, UhSalsa_7, Yogi_7, Yoncess_7,

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

- AngryOrchard_6, BobbyDazzler_7, RGL3_66,

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

- Arianna_24, Colleen_24, P3MA_29, Pine5_40, Poushou_24, TouchMeNot_24,

Summary by start number:

Start 18:

- Found in 1 of 45 (2.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pine5_40 (singleton),

Start 19:

- Found in 39 of 45 (86.7%) of genes in pham
- Manual Annotations of this start: 35 of 41
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Alatin_7 (CA), Alpacados_6 (CA), AppleCloud_5 (CA), Belenaria_7 (CA), Bonanza_7 (CA), Bradshaw_7 (CA), Bryce_7 (CA), CosmicSans_7 (CA), Dinger_7 (CA), Erik_7 (CA), Espica_7 (CA), Gollum_7 (CA), Harlequin_7 (CA), Hiro_7 (CA), Jester_7 (CA), Krishelle_7 (CA), Lillie_7 (CA), Naiad_7 (CA), Nancinator_7 (CA), Natosaleda_7 (CA), Partridge_7 (CA), PhailMary_6 (CA), Phrankenstein_7 (CA), RER2_67 (CA), Rasputin_7 (CA), RexFury_7 (CA), Rhodalysa_7 (CA), Shuman_7 (CA), StCroix_7 (CA), Stiles_21 (EP), Swann_7 (CA), TWAMP_7 (CA), Takoda_7 (CA), UhSalsa_7 (CA), Yogi_7 (CA), Yoncess_7 (CA),

Start 20:

- Found in 5 of 45 (11.1%) of genes in pham
- Manual Annotations of this start: 4 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arianna_24 (EO), Colleen_24 (EO), P3MA_29 (UNK), Poushou_24 (EO), TouchMeNot_24 (EO),

Start 23:

- Found in 2 of 45 (4.4%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: RGL3_66 (CA),

Start 30:

- Found in 39 of 45 (86.7%) of genes in pham
- Manual Annotations of this start: 2 of 41
- Called 5.1% of time when present
- Phage (with cluster) where this start called: AngryOrchard_6 (CA), BobbyDazzler_7 (CA),

Summary by clusters:

There are 5 clusters represented in this pham: CA, UNK, singleton, EO, EP,

Info for manual annotations of cluster CA:

- Start number 19 was manually annotated 34 times for cluster CA.

- Start number 30 was manually annotated 2 times for cluster CA.

Info for manual annotations of cluster EO:

- Start number 20 was manually annotated 4 times for cluster EO.

Info for manual annotations of cluster EP:

- Start number 19 was manually annotated 1 time for cluster EP.

Gene Information:

Gene: Alatin_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Alatin_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Alpacados_6 Start: 1745, Stop: 3085, Start Num: 19

Candidate Starts for Alpacados_6:

(13, 1697), (Start: 19 @1745 has 35 MA's), (Start: 30 @1979 has 2 MA's), (51, 2282), (54, 2300), (56, 2354), (59, 2390), (63, 2465), (69, 2603), (75, 2666), (77, 2726), (78, 2741), (80, 2771), (81, 2786), (84, 2858), (86, 2867), (93, 2924), (103, 3038),

Gene: AngryOrchard_6 Start: 1971, Stop: 3068, Start Num: 30

Candidate Starts for AngryOrchard_6:

(1, 1542), (6, 1602), (11, 1662), (Start: 19 @1737 has 35 MA's), (Start: 30 @1971 has 2 MA's), (42, 2163), (51, 2265), (54, 2283), (56, 2337), (59, 2373), (63, 2448), (69, 2586), (74, 2640), (75, 2649), (77, 2709), (78, 2724), (80, 2754), (81, 2769), (84, 2841), (86, 2850), (93, 2907), (103, 3021),

Gene: AppleCloud_5 Start: 1501, Stop: 2832, Start Num: 19

Candidate Starts for AppleCloud_5:

(14, 1456), (Start: 19 @1501 has 35 MA's), (Start: 30 @1735 has 2 MA's), (42, 1927), (54, 2047), (56, 2101), (59, 2137), (60, 2164), (63, 2212), (69, 2350), (74, 2404), (75, 2413), (77, 2473), (78, 2488), (80, 2518), (81, 2533), (84, 2605), (86, 2614), (92, 2659), (93, 2671), (95, 2680), (103, 2785),

Gene: Arianna_24 Start: 22733, Stop: 24118, Start Num: 20

Candidate Starts for Arianna_24:

(10, 22610), (Start: 20 @22733 has 4 MA's), (22, 22742), (24, 22760), (32, 23012), (34, 23081), (35, 23087), (36, 23096), (38, 23135), (40, 23141), (44, 23192), (48, 23246), (53, 23285), (57, 23366), (59, 23384), (65, 23489), (68, 23561), (72, 23627), (85, 23861), (92, 23915), (102, 24038), (104, 24059), (106, 24095), (107, 24101),

Gene: Belenaria_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Belenaria_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: BobbyDazzler_7 Start: 2091, Stop: 3194, Start Num: 30

Candidate Starts for BobbyDazzler_7:

(13, 1809), (Start: 19 @1857 has 35 MA's), (Start: 30 @2091 has 2 MA's), (41, 2253), (43, 2289), (51, 2391), (54, 2409), (56, 2463), (59, 2499), (63, 2574), (69, 2712), (75, 2775), (77, 2835), (78, 2850), (80, 2880), (81, 2895), (84, 2967), (86, 2976), (93, 3033), (103, 3147),

Gene: Bonanza_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Bonanza_7:

(1, 1549), (4, 1603), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (41, 2188), (42, 2218), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (103, 3076),

Gene: Bradshaw_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Bradshaw_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Bryce_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Bryce_7:

(1, 1549), (4, 1603), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (41, 2188), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (103, 3076),

Gene: Colleen_24 Start: 22733, Stop: 24118, Start Num: 20

Candidate Starts for Colleen_24:

(10, 22610), (Start: 20 @22733 has 4 MA's), (22, 22742), (24, 22760), (32, 23012), (34, 23081), (35, 23087), (36, 23096), (38, 23135), (40, 23141), (44, 23192), (48, 23246), (53, 23285), (57, 23366), (59, 23384), (65, 23489), (68, 23561), (72, 23627), (85, 23861), (92, 23915), (102, 24038), (104, 24059), (106, 24095), (107, 24101),

Gene: CosmicSans_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for CosmicSans_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Dinger_7 Start: 1788, Stop: 3119, Start Num: 19

Candidate Starts for Dinger_7:

(2, 1566), (5, 1599), (11, 1713), (Start: 19 @1788 has 35 MA's), (Start: 30 @2022 has 2 MA's), (42, 2214), (51, 2316), (54, 2334), (56, 2388), (59, 2424), (63, 2499), (69, 2637), (74, 2691), (75, 2700), (77, 2760), (78, 2775), (80, 2805), (81, 2820), (84, 2892), (86, 2901), (92, 2946), (93, 2958), (95, 2967), (103, 3072),

Gene: Erik_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Erik_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Espica_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Espica_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Gollum_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Gollum_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Harlequin_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Harlequin_7:

(1, 1549), (4, 1603), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (41, 2188), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (103, 3076),

Gene: Hiro_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Hiro_7:

(1, 1549), (4, 1603), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (41, 2188), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (103, 3076),

Gene: Jester_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Jester_7:

(1, 1549), (4, 1603), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (41, 2188), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (103, 3076),

Gene: Krishelle_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Krishelle_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Lillie_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Lillie_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Naiad_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Naiad_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Nancinator_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Nancinator_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Natosaleda_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Natosaleda_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779),

(80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: P3MA_29 Start: 22769, Stop: 24010, Start Num: 20

Candidate Starts for P3MA_29:

(12, 22706), (Start: 20 @22769 has 4 MA's), (25, 22835), (26, 22886), (27, 22895), (28, 22910), (31, 23021), (33, 23105), (36, 23132), (46, 23234), (49, 23291), (54, 23327), (55, 23354), (61, 23459), (64, 23492), (67, 23573), (71, 23636), (76, 23687), (79, 23750), (90, 23903), (91, 23915), (98, 23966), (100, 23999),

Gene: Partridge_7 Start: 1851, Stop: 3182, Start Num: 19

Candidate Starts for Partridge_7:

(1, 1542), (6, 1602), (8, 1662), (11, 1776), (Start: 19 @1851 has 35 MA's), (Start: 30 @2085 has 2 MA's), (42, 2277), (51, 2379), (54, 2397), (56, 2451), (59, 2487), (63, 2562), (69, 2700), (74, 2754), (75, 2763), (77, 2823), (78, 2838), (80, 2868), (81, 2883), (84, 2955), (86, 2964), (92, 3009), (93, 3021), (95, 3030), (103, 3135),

Gene: PhailMary_6 Start: 1858, Stop: 3189, Start Num: 19

Candidate Starts for PhailMary_6:

(1, 1549), (3, 1609), (5, 1669), (11, 1783), (Start: 19 @1858 has 35 MA's), (Start: 30 @2092 has 2 MA's), (42, 2284), (51, 2386), (54, 2404), (56, 2458), (59, 2494), (63, 2569), (69, 2707), (75, 2770), (77, 2830), (78, 2845), (80, 2875), (81, 2890), (84, 2962), (86, 2971), (93, 3028), (101, 3133), (103, 3142),

Gene: Phrankenstein_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Phrankenstein_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Pine5_40 Start: 32407, Stop: 33843, Start Num: 18

Candidate Starts for Pine5_40:

(16, 32389), (18, 32407), (21, 32419), (27, 32539), (29, 32659), (38, 32824), (40, 32830), (46, 32899), (52, 32980), (58, 33070), (64, 33157), (73, 33313), (78, 33409), (82, 33472), (92, 33616), (96, 33652), (97, 33661), (104, 33757), (105, 33760),

Gene: Poushou_24 Start: 22562, Stop: 23947, Start Num: 20

Candidate Starts for Poushou_24:

(10, 22439), (Start: 20 @22562 has 4 MA's), (22, 22571), (24, 22589), (32, 22841), (34, 22910), (35, 22916), (36, 22925), (38, 22964), (40, 22970), (44, 23021), (48, 23075), (53, 23114), (57, 23195), (59, 23213), (65, 23318), (68, 23390), (72, 23456), (85, 23690), (92, 23744), (102, 23867), (104, 23888), (106, 23924), (107, 23930),

Gene: RER2_67 Start: 45250, Stop: 46581, Start Num: 19

Candidate Starts for RER2_67:

(1, 45007), (11, 45175), (Start: 19 @45250 has 35 MA's), (Start: 30 @45484 has 2 MA's), (42, 45676), (51, 45778), (54, 45796), (56, 45850), (59, 45886), (63, 45961), (69, 46099), (75, 46162), (77, 46222), (78, 46237), (80, 46267), (81, 46282), (84, 46354), (86, 46363), (93, 46420), (101, 46525), (103, 46534),

Gene: RGL3_66 Start: 46754, Stop: 48067, Start Num: 23

Candidate Starts for RGL3_66:

(11, 46658), (13, 46685), (Start: 19 @46733 has 35 MA's), (23, 46754), (Start: 30 @46967 has 2 MA's), (45, 47192), (47, 47210), (54, 47282), (56, 47336), (59, 47372), (69, 47585), (75, 47648), (77,

47708), (84, 47840), (93, 47906), (101, 48011), (103, 48020),

Gene: Rasputin_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Rasputin_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: RexFury_7 Start: 1823, Stop: 3154, Start Num: 19

Candidate Starts for RexFury_7:

(1, 1580), (11, 1748), (Start: 19 @1823 has 35 MA's), (Start: 30 @2057 has 2 MA's), (42, 2249), (51, 2351), (54, 2369), (56, 2423), (59, 2459), (63, 2534), (69, 2672), (75, 2735), (77, 2795), (78, 2810), (80, 2840), (81, 2855), (84, 2927), (86, 2936), (93, 2993), (101, 3098), (103, 3107),

Gene: Rhodalysa_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Rhodalysa_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Shuman_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Shuman_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: StCroix_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for StCroix_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Stiles_21 Start: 19641, Stop: 20984, Start Num: 19

Candidate Starts for Stiles_21:

(15, 19611), (17, 19626), (Start: 19 @19641 has 35 MA's), (23, 19659), (Start: 30 @19872 has 2 MA's), (37, 19986), (39, 20028), (44, 20082), (50, 20151), (62, 20322), (63, 20346), (66, 20406), (69, 20487), (70, 20508), (83, 20757), (87, 20793), (88, 20802), (89, 20808), (94, 20841), (99, 20898), (105, 20967),

Gene: Swann_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Swann_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: TWAMP_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for TWAMP_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Takoda_7 Start: 1784, Stop: 3115, Start Num: 19

Candidate Starts for Takoda_7:

(6, 1607), (7, 1616), (9, 1658), (11, 1709), (Start: 19 @1784 has 35 MA's), (Start: 30 @2018 has 2 MA's), (41, 2180), (42, 2210), (51, 2312), (54, 2330), (56, 2384), (59, 2420), (63, 2495), (69, 2633), (74, 2687), (75, 2696), (77, 2756), (78, 2771), (80, 2801), (81, 2816), (84, 2888), (86, 2897), (93, 2954), (103, 3068),

Gene: TouchMeNot_24 Start: 22733, Stop: 24118, Start Num: 20

Candidate Starts for TouchMeNot_24:

(10, 22610), (Start: 20 @22733 has 4 MA's), (22, 22742), (24, 22760), (32, 23012), (34, 23081), (35, 23087), (36, 23096), (38, 23135), (40, 23141), (44, 23192), (48, 23246), (53, 23285), (57, 23366), (59, 23384), (65, 23489), (68, 23561), (72, 23627), (85, 23861), (92, 23915), (102, 24038), (104, 24059), (106, 24095), (107, 24101),

Gene: UhSalsa_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for UhSalsa_7:

(1, 1549), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (101, 3067), (103, 3076),

Gene: Yogi_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Yogi_7:

(1, 1549), (4, 1603), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (41, 2188), (42, 2218), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (103, 3076),

Gene: Yoncess_7 Start: 1792, Stop: 3123, Start Num: 19

Candidate Starts for Yoncess_7:

(1, 1549), (4, 1603), (11, 1717), (Start: 19 @1792 has 35 MA's), (Start: 30 @2026 has 2 MA's), (41, 2188), (42, 2218), (51, 2320), (54, 2338), (56, 2392), (59, 2428), (63, 2503), (69, 2641), (75, 2704), (77, 2764), (78, 2779), (80, 2809), (81, 2824), (84, 2896), (86, 2905), (93, 2962), (103, 3076),