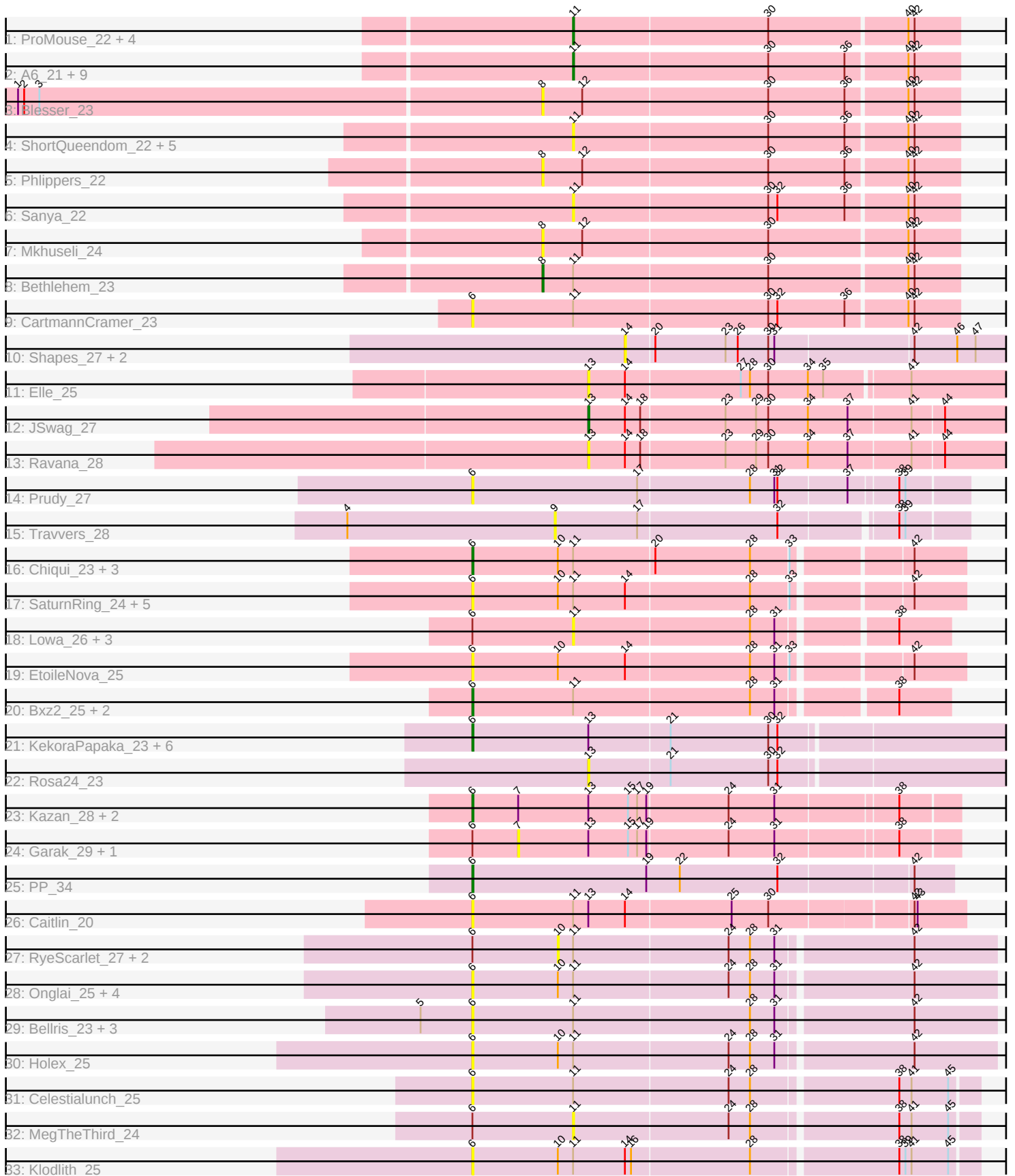


Pham 274139



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 274139 Report

This analysis was run 02/07/26 on database version 634.

Pham number 274139 has 84 members, 68 are drafts.

Phages represented in each track:

- Track 1 : ProMouse_22, Puppet_23, Aeneas_25, U2_23, PhrostyMug_23
- Track 2 : A6_21, CatBus_24, Iqorha_22, Noxious_24, Aldrich_24, Inyanga_22, StewieG_22, KikiBouba_24, GroundGoblin_24, BK1_21
- Track 3 : Blesser_23
- Track 4 : ShortQueendom_22, Gachnar_23, Blackflame_23, Sandaddy_22, Teodoridan_21, Whitspit_24
- Track 5 : Phlippers_22
- Track 6 : Sanya_22
- Track 7 : Mkhuseleli_24
- Track 8 : Bethlehem_23
- Track 9 : CartmannCramer_23
- Track 10 : Shapes_27, Rowdy_27, DustyMartin_27
- Track 11 : Elle_25
- Track 12 : JSwag_27
- Track 13 : Ravana_28
- Track 14 : Prudy_27
- Track 15 : Travvers_28
- Track 16 : Chiqui_23, Kachowdy_24, B1_22, BabyJohn_23
- Track 17 : SaturnRing_24, DropBear_24, Bugatti_24, Marchesa_24, Clammy_24, Zarafa_24
- Track 18 : Iowa_26, Montavir_25, Bigflo_26, Gwennie_25
- Track 19 : EtoileNova_25
- Track 20 : Bxz2_25, Calvinny_27, Anubis_28
- Track 21 : KekoraPapaka_23, NorthStar_24, Kingmustik0402_24, LeoAvram_24, SteMason_23, RockieBear_23, Huxley_24
- Track 22 : Rosa24_23
- Track 23 : Kazan_28, BennyP_28, DaVinci_28
- Track 24 : Garak_29, Candra_28
- Track 25 : PP_34
- Track 26 : Caitlin_20
- Track 27 : RyeScarlet_27, EdogawaKiddo_24, Jiawan_25
- Track 28 : Onglai_25, AyanoChan_27, Lilleskat_24, Sachima_24, Hanray_25
- Track 29 : Belliris_23, CogOmlette_23, Minispark_23, WorldCup_23
- Track 30 : Halex_25
- Track 31 : Celestiallunch_25
- Track 32 : MegTheThird_24
- Track 33 : Klodlith_25

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

The start number called the most often in the published annotations is 6, it was called in 9 of the 16 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anubis_28, Ayanochan_27, B1_22, BabyJohn_23, Bellris_23, BennyP_28, Bugatti_24, Bxz2_25, Caitlin_20, Calvinny_27, CartmannCramer_23, Celestiallunch_25, Chiqui_23, Clammy_24, CogOmlette_23, DaVinci_28, DropBear_24, EtoileNova_25, Hanray_25, Halex_25, Huxley_24, Kachowdy_24, Kazan_28, KekoraPapaka_23, Kingmustik0402_24, Klodlith_25, LeoAvram_24, Lilleskat_24, Marchesa_24, Minispark_23, NorthStar_24, Onglai_25, PP_34, Prudy_27, RockieBear_23, Sachima_24, SaturnRing_24, SteMason_23, WorldCup_23, Zarafa_24,

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

- Bigflo_26, Candra_28, EdogawaKiddo_24, Garak_29, Gwennie_25, Jiawan_25, Lowa_26, MegTheThird_24, Montavir_25, RyeScarlet_27,

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

- A6_21, Aeneas_25, Aldrich_24, BK1_21, Bethlehem_23, Blackflame_23, Blesser_23, CatBus_24, DustyMartin_27, Elle_25, Gachnar_23, GroundGoblin_24, Inyanga_22, Iqorha_22, JSwag_27, KikiBouba_24, Mkhuseli_24, Noxious_24, Phlippers_22, PhrostyMug_23, ProMouse_22, Puppet_23, Ravana_28, Rosa24_23, Rowdy_27, Sandaddy_22, Sanya_22, Shapes_27, ShortQueendom_22, StewieG_22, Teodoridan_21, Travvers_28, U2_23, Whitspit_24,

Summary by start number:

Start 6:

- Found in 50 of 84 (59.5%) of genes in pham
- Manual Annotations of this start: 9 of 16
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Anubis_28 (A3), Ayanochan_27 (A9), B1_22 (A3), BabyJohn_23 (A3), Bellris_23 (A9), BennyP_28 (A6), Bugatti_24 (A3), Bxz2_25 (A3), Caitlin_20 (A8), Calvinny_27 (A3), CartmannCramer_23 (A1), Celestiallunch_25 (A9), Chiqui_23 (A3), Clammy_24 (A3), CogOmlette_23 (A9), DaVinci_28 (A6), DropBear_24 (A3), EtoileNova_25 (A3), Hanray_25 (A9), Halex_25 (A9), Huxley_24 (A4), Kachowdy_24 (A3), Kazan_28 (A6), KekoraPapaka_23 (A4), Kingmustik0402_24 (A4), Klodlith_25 (A9), LeoAvram_24 (A4), Lilleskat_24 (A9), Marchesa_24 (A3), Minispark_23 (A9), NorthStar_24 (A4), Onglai_25 (A9), PP_34 (A7), Prudy_27 (A2), RockieBear_23 (A4), Sachima_24 (A9), SaturnRing_24 (A3), SteMason_23 (A4), WorldCup_23 (A9), Zarafa_24 (A3),

Start 7:

- Found in 5 of 84 (6.0%) of genes in pham
- No Manual Annotations of this start.
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Candra_28 (A6), Garak_29 (A6),

Start 8:

- Found in 4 of 84 (4.8%) of genes in pham
- Manual Annotations of this start: 1 of 16
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bethlehem_23 (A1), Blessers_23 (A1), Mkhusele_24 (A1), Phlippers_22 (A1),

Start 9:

- Found in 1 of 84 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Travvers_28 (A2),

Start 10:

- Found in 21 of 84 (25.0%) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: EdogawaKiddo_24 (A9), Jiawan_25 (A9), RyeScarlet_27 (A9),

Start 11:

- Found in 58 of 84 (69.0%) of genes in pham
- Manual Annotations of this start: 5 of 16
- Called 46.6% of time when present
- Phage (with cluster) where this start called: A6_21 (A1), Aeneas_25 (A1), Aldrich_24 (A1), BK1_21 (A1), Bigflo_26 (A3), Blackflame_23 (A1), CatBus_24 (A1), Gachnar_23 (A1), GroundGoblin_24 (A1), Gwennie_25 (A3), Inyanga_22 (A1), Iqorha_22 (A1), KikiBouba_24 (A1), Lowa_26 (A3), MegTheThird_24 (A9), Montavir_25 (A3), Noxious_24 (A1), PhrostyMug_23 (A1), ProMouse_22 (A1), Puppet_23 (A1), Sandaddy_22 (A1), Sanya_22 (A1), ShortQueendom_22 (A1), StewieG_22 (A1), Teodoridan_21 (A1), U2_23 (A1), Whitspit_24 (A1),

Start 13:

- Found in 17 of 84 (20.2%) of genes in pham
- Manual Annotations of this start: 1 of 16
- Called 23.5% of time when present
- Phage (with cluster) where this start called: Elle_25 (A15), JSwag_27 (A15), Ravana_28 (A15), Rosa24_23 (A4),

Start 14:

- Found in 15 of 84 (17.9%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: DustyMartin_27 (A10), Rowdy_27 (A10), Shapes_27 (A10),

Summary by clusters:

There are 10 clusters represented in this pham: A15, A10, A1, A3, A2, A4, A7, A6, A9, A8,

Info for manual annotations of cluster A1:

- Start number 8 was manually annotated 1 time for cluster A1.
- Start number 11 was manually annotated 5 times for cluster A1.

Info for manual annotations of cluster A15:

- Start number 13 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A3:

- Start number 6 was manually annotated 3 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 6 was manually annotated 3 times for cluster A4.

Info for manual annotations of cluster A6:

- Start number 6 was manually annotated 2 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 6 was manually annotated 1 time for cluster A7.

Gene Information:

Gene: A6_21 Start: 15547, Stop: 15918, Start Num: 11

Candidate Starts for A6_21:

(Start: 11 @15547 has 5 MA's), (30, 15736), (36, 15811), (40, 15868), (42, 15874),

Gene: Aeneas_25 Start: 16311, Stop: 16682, Start Num: 11

Candidate Starts for Aeneas_25:

(Start: 11 @16311 has 5 MA's), (30, 16500), (40, 16632), (42, 16638),

Gene: Aldrich_24 Start: 16812, Stop: 17183, Start Num: 11

Candidate Starts for Aldrich_24:

(Start: 11 @16812 has 5 MA's), (30, 17001), (36, 17076), (40, 17133), (42, 17139),

Gene: Anubis_28 Start: 15419, Stop: 15865, Start Num: 6

Candidate Starts for Anubis_28:

(Start: 6 @15419 has 9 MA's), (Start: 11 @15518 has 5 MA's), (28, 15689), (31, 15713), (38, 15815),

Gene: Ayanochan_27 Start: 16994, Stop: 17494, Start Num: 6

Candidate Starts for Ayanochan_27:

(Start: 6 @16994 has 9 MA's), (10, 17078), (Start: 11 @17093 has 5 MA's), (24, 17243), (28, 17264), (31, 17288), (42, 17414),

Gene: B1_22 Start: 14712, Stop: 15173, Start Num: 6

Candidate Starts for B1_22:

(Start: 6 @14712 has 9 MA's), (10, 14796), (Start: 11 @14811 has 5 MA's), (20, 14889), (28, 14982), (33, 15018), (42, 15123),

Gene: BK1_21 Start: 15547, Stop: 15918, Start Num: 11

Candidate Starts for BK1_21:

(Start: 11 @15547 has 5 MA's), (30, 15736), (36, 15811), (40, 15868), (42, 15874),

Gene: BabyJohn_23 Start: 15302, Stop: 15763, Start Num: 6

Candidate Starts for BabyJohn_23:

(Start: 6 @15302 has 9 MA's), (10, 15386), (Start: 11 @15401 has 5 MA's), (20, 15479), (28, 15572), (33, 15608), (42, 15713),

Gene: Bellris_23 Start: 15039, Stop: 15539, Start Num: 6

Candidate Starts for Bellris_23:

(5, 14988), (Start: 6 @15039 has 9 MA's), (Start: 11 @15138 has 5 MA's), (28, 15309), (31, 15333), (42, 15459),

Gene: BennyP_28 Start: 16278, Stop: 16742, Start Num: 6

Candidate Starts for BennyP_28:

(Start: 6 @16278 has 9 MA's), (7, 16323), (Start: 13 @16392 has 1 MA's), (15, 16431), (17, 16440), (19, 16449), (24, 16527), (31, 16572), (38, 16686),

Gene: Bethlehem_23 Start: 17213, Stop: 17614, Start Num: 8

Candidate Starts for Bethlehem_23:

(Start: 8 @17213 has 1 MA's), (Start: 11 @17243 has 5 MA's), (30, 17432), (40, 17564), (42, 17570),

Gene: Bigflo_26 Start: 15631, Stop: 15978, Start Num: 11

Candidate Starts for Bigflo_26:

(Start: 6 @15532 has 9 MA's), (Start: 11 @15631 has 5 MA's), (28, 15802), (31, 15826), (38, 15928),

Gene: Blackflame_23 Start: 15998, Stop: 16369, Start Num: 11

Candidate Starts for Blackflame_23:

(Start: 11 @15998 has 5 MA's), (30, 16187), (36, 16262), (40, 16319), (42, 16325),

Gene: Blessor_23 Start: 16246, Stop: 16647, Start Num: 8

Candidate Starts for Blessor_23:

(1, 15736), (2, 15742), (3, 15757), (Start: 8 @16246 has 1 MA's), (12, 16285), (30, 16465), (36, 16540), (40, 16597), (42, 16603),

Gene: Bugatti_24 Start: 15033, Stop: 15494, Start Num: 6

Candidate Starts for Bugatti_24:

(Start: 6 @15033 has 9 MA's), (10, 15117), (Start: 11 @15132 has 5 MA's), (14, 15183), (28, 15303), (33, 15339), (42, 15444),

Gene: Bxz2_25 Start: 15627, Stop: 16073, Start Num: 6

Candidate Starts for Bxz2_25:

(Start: 6 @15627 has 9 MA's), (Start: 11 @15726 has 5 MA's), (28, 15897), (31, 15921), (38, 16023),

Gene: Caitlin_20 Start: 14083, Stop: 14553, Start Num: 6

Candidate Starts for Caitlin_20:

(Start: 6 @14083 has 9 MA's), (Start: 11 @14182 has 5 MA's), (Start: 13 @14197 has 1 MA's), (14, 14233), (25, 14335), (30, 14371), (42, 14503), (43, 14506),

Gene: Calvinny_27 Start: 15611, Stop: 16057, Start Num: 6

Candidate Starts for Calvinny_27:

(Start: 6 @15611 has 9 MA's), (Start: 11 @15710 has 5 MA's), (28, 15881), (31, 15905), (38, 16007),

Gene: Candra_28 Start: 16359, Stop: 16778, Start Num: 7

Candidate Starts for Candra_28:

(Start: 6 @16314 has 9 MA's), (7, 16359), (Start: 13 @16428 has 1 MA's), (15, 16467), (17, 16476), (19, 16485), (24, 16563), (31, 16608), (38, 16722),

Gene: CartmannCramer_23 Start: 17708, Stop: 18178, Start Num: 6

Candidate Starts for CartmannCramer_23:

(Start: 6 @17708 has 9 MA's), (Start: 11 @17807 has 5 MA's), (30, 17996), (32, 18005), (36, 18071), (40, 18128), (42, 18134),

Gene: CatBus_24 Start: 17004, Stop: 17375, Start Num: 11

Candidate Starts for CatBus_24:

(Start: 11 @17004 has 5 MA's), (30, 17193), (36, 17268), (40, 17325), (42, 17331),

Gene: Celestiallunch_25 Start: 15084, Stop: 15563, Start Num: 6

Candidate Starts for Celestiallunch_25:

(Start: 6 @15084 has 9 MA's), (Start: 11 @15183 has 5 MA's), (24, 15333), (28, 15354), (38, 15489), (41, 15501), (45, 15537),

Gene: Chiqui_23 Start: 15302, Stop: 15763, Start Num: 6

Candidate Starts for Chiqui_23:

(Start: 6 @15302 has 9 MA's), (10, 15386), (Start: 11 @15401 has 5 MA's), (20, 15479), (28, 15572), (33, 15608), (42, 15713),

Gene: Clammy_24 Start: 15033, Stop: 15494, Start Num: 6

Candidate Starts for Clammy_24:

(Start: 6 @15033 has 9 MA's), (10, 15117), (Start: 11 @15132 has 5 MA's), (14, 15183), (28, 15303), (33, 15339), (42, 15444),

Gene: CogOmlette_23 Start: 15039, Stop: 15539, Start Num: 6

Candidate Starts for CogOmlette_23:

(5, 14988), (Start: 6 @15039 has 9 MA's), (Start: 11 @15138 has 5 MA's), (28, 15309), (31, 15333), (42, 15459),

Gene: DaVinci_28 Start: 16279, Stop: 16743, Start Num: 6

Candidate Starts for DaVinci_28:

(Start: 6 @16279 has 9 MA's), (7, 16324), (Start: 13 @16393 has 1 MA's), (15, 16432), (17, 16441), (19, 16450), (24, 16528), (31, 16573), (38, 16687),

Gene: DropBear_24 Start: 15093, Stop: 15554, Start Num: 6

Candidate Starts for DropBear_24:

(Start: 6 @15093 has 9 MA's), (10, 15177), (Start: 11 @15192 has 5 MA's), (14, 15243), (28, 15363), (33, 15399), (42, 15504),

Gene: DustyMartin_27 Start: 15449, Stop: 15850, Start Num: 14

Candidate Starts for DustyMartin_27:

(14, 15449), (20, 15476), (23, 15545), (26, 15557), (30, 15587), (31, 15593), (42, 15725), (46, 15767), (47, 15785),

Gene: EdogawaKiddo_24 Start: 17045, Stop: 17461, Start Num: 10

Candidate Starts for EdogawaKiddo_24:

(Start: 6 @16961 has 9 MA's), (10, 17045), (Start: 11 @17060 has 5 MA's), (24, 17210), (28, 17231), (31, 17255), (42, 17381),

Gene: Elle_25 Start: 15065, Stop: 15514, Start Num: 13

Candidate Starts for Elle_25:

(Start: 13 @15065 has 1 MA's), (14, 15101), (27, 15212), (28, 15221), (30, 15239), (34, 15278), (35, 15293), (41, 15371),

Gene: EtoileNova_25 Start: 15586, Stop: 16047, Start Num: 6

Candidate Starts for EtoileNova_25:

(Start: 6 @15586 has 9 MA's), (10, 15670), (14, 15736), (28, 15856), (31, 15880), (33, 15892), (42, 15997),

Gene: Gachnar_23 Start: 16002, Stop: 16373, Start Num: 11

Candidate Starts for Gachnar_23:

(Start: 11 @16002 has 5 MA's), (30, 16191), (36, 16266), (40, 16323), (42, 16329),

Gene: Garak_29 Start: 16321, Stop: 16740, Start Num: 7

Candidate Starts for Garak_29:

(Start: 6 @16276 has 9 MA's), (7, 16321), (Start: 13 @16390 has 1 MA's), (15, 16429), (17, 16438), (19, 16447), (24, 16525), (31, 16570), (38, 16684),

Gene: GroundGoblin_24 Start: 16812, Stop: 17183, Start Num: 11

Candidate Starts for GroundGoblin_24:

(Start: 11 @16812 has 5 MA's), (30, 17001), (36, 17076), (40, 17133), (42, 17139),

Gene: Gwennie_25 Start: 15632, Stop: 15979, Start Num: 11

Candidate Starts for Gwennie_25:

(Start: 6 @15533 has 9 MA's), (Start: 11 @15632 has 5 MA's), (28, 15803), (31, 15827), (38, 15929),

Gene: Hanray_25 Start: 16965, Stop: 17465, Start Num: 6

Candidate Starts for Hanray_25:

(Start: 6 @16965 has 9 MA's), (10, 17049), (Start: 11 @17064 has 5 MA's), (24, 17214), (28, 17235), (31, 17259), (42, 17385),

Gene: Horex_25 Start: 16965, Stop: 17465, Start Num: 6

Candidate Starts for Horex_25:

(Start: 6 @16965 has 9 MA's), (10, 17049), (Start: 11 @17064 has 5 MA's), (24, 17214), (28, 17235), (31, 17259), (42, 17385),

Gene: Huxley_24 Start: 15485, Stop: 16030, Start Num: 6

Candidate Starts for Huxley_24:

(Start: 6 @15485 has 9 MA's), (Start: 13 @15599 has 1 MA's), (21, 15677), (30, 15773), (32, 15782),

Gene: Inyanga_22 Start: 15755, Stop: 16126, Start Num: 11

Candidate Starts for Inyanga_22:

(Start: 11 @15755 has 5 MA's), (30, 15944), (36, 16019), (40, 16076), (42, 16082),

Gene: Iqorha_22 Start: 15754, Stop: 16125, Start Num: 11

Candidate Starts for Iqorha_22:

(Start: 11 @15754 has 5 MA's), (30, 15943), (36, 16018), (40, 16075), (42, 16081),

Gene: JSwag_27 Start: 15383, Stop: 15838, Start Num: 13

Candidate Starts for JSwag_27:

(Start: 13 @15383 has 1 MA's), (14, 15419), (18, 15434), (23, 15515), (29, 15545), (30, 15557), (34, 15596), (37, 15635), (41, 15695), (44, 15725),

Gene: Jiawan_25 Start: 17081, Stop: 17497, Start Num: 10

Candidate Starts for Jiawan_25:

(Start: 6 @16997 has 9 MA's), (10, 17081), (Start: 11 @17096 has 5 MA's), (24, 17246), (28, 17267), (31, 17291), (42, 17417),

Gene: Kachowdy_24 Start: 15086, Stop: 15547, Start Num: 6

Candidate Starts for Kachowdy_24:

(Start: 6 @15086 has 9 MA's), (10, 15170), (Start: 11 @15185 has 5 MA's), (20, 15263), (28, 15356), (33, 15392), (42, 15497),

Gene: Kazan_28 Start: 16284, Stop: 16748, Start Num: 6

Candidate Starts for Kazan_28:

(Start: 6 @16284 has 9 MA's), (7, 16329), (Start: 13 @16398 has 1 MA's), (15, 16437), (17, 16446), (19, 16455), (24, 16533), (31, 16578), (38, 16692),

Gene: KekoraPapaka_23 Start: 15421, Stop: 15966, Start Num: 6

Candidate Starts for KekoraPapaka_23:

(Start: 6 @15421 has 9 MA's), (Start: 13 @15535 has 1 MA's), (21, 15613), (30, 15709), (32, 15718),

Gene: KikiBouba_24 Start: 16813, Stop: 17184, Start Num: 11

Candidate Starts for KikiBouba_24:

(Start: 11 @16813 has 5 MA's), (30, 17002), (36, 17077), (40, 17134), (42, 17140),

Gene: Kingmustik0402_24 Start: 15413, Stop: 15958, Start Num: 6

Candidate Starts for Kingmustik0402_24:

(Start: 6 @15413 has 9 MA's), (Start: 13 @15527 has 1 MA's), (21, 15605), (30, 15701), (32, 15710),

Gene: Klodlith_25 Start: 15093, Stop: 15572, Start Num: 6

Candidate Starts for Klodlith_25:

(Start: 6 @15093 has 9 MA's), (10, 15177), (Start: 11 @15192 has 5 MA's), (14, 15243), (16, 15249), (28, 15363), (38, 15498), (39, 15504), (41, 15510), (45, 15546),

Gene: LeoAvram_24 Start: 15418, Stop: 15963, Start Num: 6

Candidate Starts for LeoAvram_24:

(Start: 6 @15418 has 9 MA's), (Start: 13 @15532 has 1 MA's), (21, 15610), (30, 15706), (32, 15715),

Gene: Lilleskat_24 Start: 16961, Stop: 17461, Start Num: 6

Candidate Starts for Lilleskat_24:

(Start: 6 @16961 has 9 MA's), (10, 17045), (Start: 11 @17060 has 5 MA's), (24, 17210), (28, 17231), (31, 17255), (42, 17381),

Gene: Lowa_26 Start: 15624, Stop: 15971, Start Num: 11

Candidate Starts for Lowa_26:

(Start: 6 @15525 has 9 MA's), (Start: 11 @15624 has 5 MA's), (28, 15795), (31, 15819), (38, 15921),

Gene: Marchesa_24 Start: 15084, Stop: 15545, Start Num: 6

Candidate Starts for Marchesa_24:

(Start: 6 @15084 has 9 MA's), (10, 15168), (Start: 11 @15183 has 5 MA's), (14, 15234), (28, 15354), (33, 15390), (42, 15495),

Gene: MegTheThird_24 Start: 15183, Stop: 15563, Start Num: 11
Candidate Starts for MegTheThird_24:
(Start: 6 @15084 has 9 MA's), (Start: 11 @15183 has 5 MA's), (24, 15333), (28, 15354), (38, 15489),
(41, 15501), (45, 15537),

Gene: Minispark_23 Start: 15039, Stop: 15539, Start Num: 6
Candidate Starts for Minispark_23:
(5, 14988), (Start: 6 @15039 has 9 MA's), (Start: 11 @15138 has 5 MA's), (28, 15309), (31, 15333),
(42, 15459),

Gene: Mkhuseli_24 Start: 16008, Stop: 16409, Start Num: 8
Candidate Starts for Mkhuseli_24:
(Start: 8 @16008 has 1 MA's), (12, 16047), (30, 16227), (40, 16359), (42, 16365),

Gene: Montavir_25 Start: 15632, Stop: 15979, Start Num: 11
Candidate Starts for Montavir_25:
(Start: 6 @15533 has 9 MA's), (Start: 11 @15632 has 5 MA's), (28, 15803), (31, 15827), (38, 15929),

Gene: NorthStar_24 Start: 15421, Stop: 15966, Start Num: 6
Candidate Starts for NorthStar_24:
(Start: 6 @15421 has 9 MA's), (Start: 13 @15535 has 1 MA's), (21, 15613), (30, 15709), (32, 15718),

Gene: Noxious_24 Start: 17004, Stop: 17375, Start Num: 11
Candidate Starts for Noxious_24:
(Start: 11 @17004 has 5 MA's), (30, 17193), (36, 17268), (40, 17325), (42, 17331),

Gene: Onglai_25 Start: 15295, Stop: 15795, Start Num: 6
Candidate Starts for Onglai_25:
(Start: 6 @15295 has 9 MA's), (10, 15379), (Start: 11 @15394 has 5 MA's), (24, 15544), (28, 15565),
(31, 15589), (42, 15715),

Gene: PP_34 Start: 21309, Stop: 21773, Start Num: 6
Candidate Starts for PP_34:
(Start: 6 @21309 has 9 MA's), (19, 21480), (22, 21513), (32, 21609), (42, 21735),

Gene: Phlippers_22 Start: 16908, Stop: 17309, Start Num: 8
Candidate Starts for Phlippers_22:
(Start: 8 @16908 has 1 MA's), (12, 16947), (30, 17127), (36, 17202), (40, 17259), (42, 17265),

Gene: PhrostyMug_23 Start: 16015, Stop: 16386, Start Num: 11
Candidate Starts for PhrostyMug_23:
(Start: 11 @16015 has 5 MA's), (30, 16204), (40, 16336), (42, 16342),

Gene: ProMouse_22 Start: 16469, Stop: 16840, Start Num: 11
Candidate Starts for ProMouse_22:
(Start: 11 @16469 has 5 MA's), (30, 16658), (40, 16790), (42, 16796),

Gene: Prudy_27 Start: 17973, Stop: 18446, Start Num: 6
Candidate Starts for Prudy_27:
(Start: 6 @17973 has 9 MA's), (17, 18135), (28, 18243), (31, 18267), (32, 18270), (37, 18336), (38,
18381), (39, 18387),

Gene: Puppet_23 Start: 16019, Stop: 16390, Start Num: 11

Candidate Starts for Puppet_23:

(Start: 11 @16019 has 5 MA's), (30, 16208), (40, 16340), (42, 16346),

Gene: Ravana_28 Start: 15358, Stop: 15813, Start Num: 13

Candidate Starts for Ravana_28:

(Start: 13 @15358 has 1 MA's), (14, 15394), (18, 15409), (23, 15490), (29, 15520), (30, 15532), (34, 15571), (37, 15610), (41, 15670), (44, 15700),

Gene: RockieBear_23 Start: 15421, Stop: 15966, Start Num: 6

Candidate Starts for RockieBear_23:

(Start: 6 @15421 has 9 MA's), (Start: 13 @15535 has 1 MA's), (21, 15613), (30, 15709), (32, 15718),

Gene: Rosa24_23 Start: 15507, Stop: 15938, Start Num: 13

Candidate Starts for Rosa24_23:

(Start: 13 @15507 has 1 MA's), (21, 15585), (30, 15681), (32, 15690),

Gene: Rowdy_27 Start: 15449, Stop: 15850, Start Num: 14

Candidate Starts for Rowdy_27:

(14, 15449), (20, 15476), (23, 15545), (26, 15557), (30, 15587), (31, 15593), (42, 15725), (46, 15767), (47, 15785),

Gene: RyeScarlet_27 Start: 17049, Stop: 17465, Start Num: 10

Candidate Starts for RyeScarlet_27:

(Start: 6 @16965 has 9 MA's), (10, 17049), (Start: 11 @17064 has 5 MA's), (24, 17214), (28, 17235), (31, 17259), (42, 17385),

Gene: Sachima_24 Start: 16961, Stop: 17461, Start Num: 6

Candidate Starts for Sachima_24:

(Start: 6 @16961 has 9 MA's), (10, 17045), (Start: 11 @17060 has 5 MA's), (24, 17210), (28, 17231), (31, 17255), (42, 17381),

Gene: Sandaddy_22 Start: 15945, Stop: 16316, Start Num: 11

Candidate Starts for Sandaddy_22:

(Start: 11 @15945 has 5 MA's), (30, 16134), (36, 16209), (40, 16266), (42, 16272),

Gene: Sanya_22 Start: 16607, Stop: 16978, Start Num: 11

Candidate Starts for Sanya_22:

(Start: 11 @16607 has 5 MA's), (30, 16796), (32, 16805), (36, 16871), (40, 16928), (42, 16934),

Gene: SaturnRing_24 Start: 15033, Stop: 15494, Start Num: 6

Candidate Starts for SaturnRing_24:

(Start: 6 @15033 has 9 MA's), (10, 15117), (Start: 11 @15132 has 5 MA's), (14, 15183), (28, 15303), (33, 15339), (42, 15444),

Gene: Shapes_27 Start: 15449, Stop: 15850, Start Num: 14

Candidate Starts for Shapes_27:

(14, 15449), (20, 15476), (23, 15545), (26, 15557), (30, 15587), (31, 15593), (42, 15725), (46, 15767), (47, 15785),

Gene: ShortQueendom_22 Start: 15905, Stop: 16276, Start Num: 11

Candidate Starts for ShortQueendom_22:

(Start: 11 @15905 has 5 MA's), (30, 16094), (36, 16169), (40, 16226), (42, 16232),

Gene: SteMason_23 Start: 15421, Stop: 15966, Start Num: 6
Candidate Starts for SteMason_23:
(Start: 6 @15421 has 9 MA's), (Start: 13 @15535 has 1 MA's), (21, 15613), (30, 15709), (32, 15718),

Gene: StewieG_22 Start: 15788, Stop: 16159, Start Num: 11
Candidate Starts for StewieG_22:
(Start: 11 @15788 has 5 MA's), (30, 15977), (36, 16052), (40, 16109), (42, 16115),

Gene: Teodoridan_21 Start: 15353, Stop: 15724, Start Num: 11
Candidate Starts for Teodoridan_21:
(Start: 11 @15353 has 5 MA's), (30, 15542), (36, 15617), (40, 15674), (42, 15680),

Gene: Travvers_28 Start: 16132, Stop: 16518, Start Num: 9
Candidate Starts for Travvers_28:
(4, 15928), (9, 16132), (17, 16213), (32, 16348), (38, 16453), (39, 16459),

Gene: U2_23 Start: 16127, Stop: 16498, Start Num: 11
Candidate Starts for U2_23:
(Start: 11 @16127 has 5 MA's), (30, 16316), (40, 16448), (42, 16454),

Gene: Whitspit_24 Start: 16630, Stop: 17001, Start Num: 11
Candidate Starts for Whitspit_24:
(Start: 11 @16630 has 5 MA's), (30, 16819), (36, 16894), (40, 16951), (42, 16957),

Gene: WorldCup_23 Start: 15039, Stop: 15539, Start Num: 6
Candidate Starts for WorldCup_23:
(5, 14988), (Start: 6 @15039 has 9 MA's), (Start: 11 @15138 has 5 MA's), (28, 15309), (31, 15333),
(42, 15459),

Gene: Zarafa_24 Start: 15095, Stop: 15556, Start Num: 6
Candidate Starts for Zarafa_24:
(Start: 6 @15095 has 9 MA's), (10, 15179), (Start: 11 @15194 has 5 MA's), (14, 15245), (28, 15365),
(33, 15401), (42, 15506),