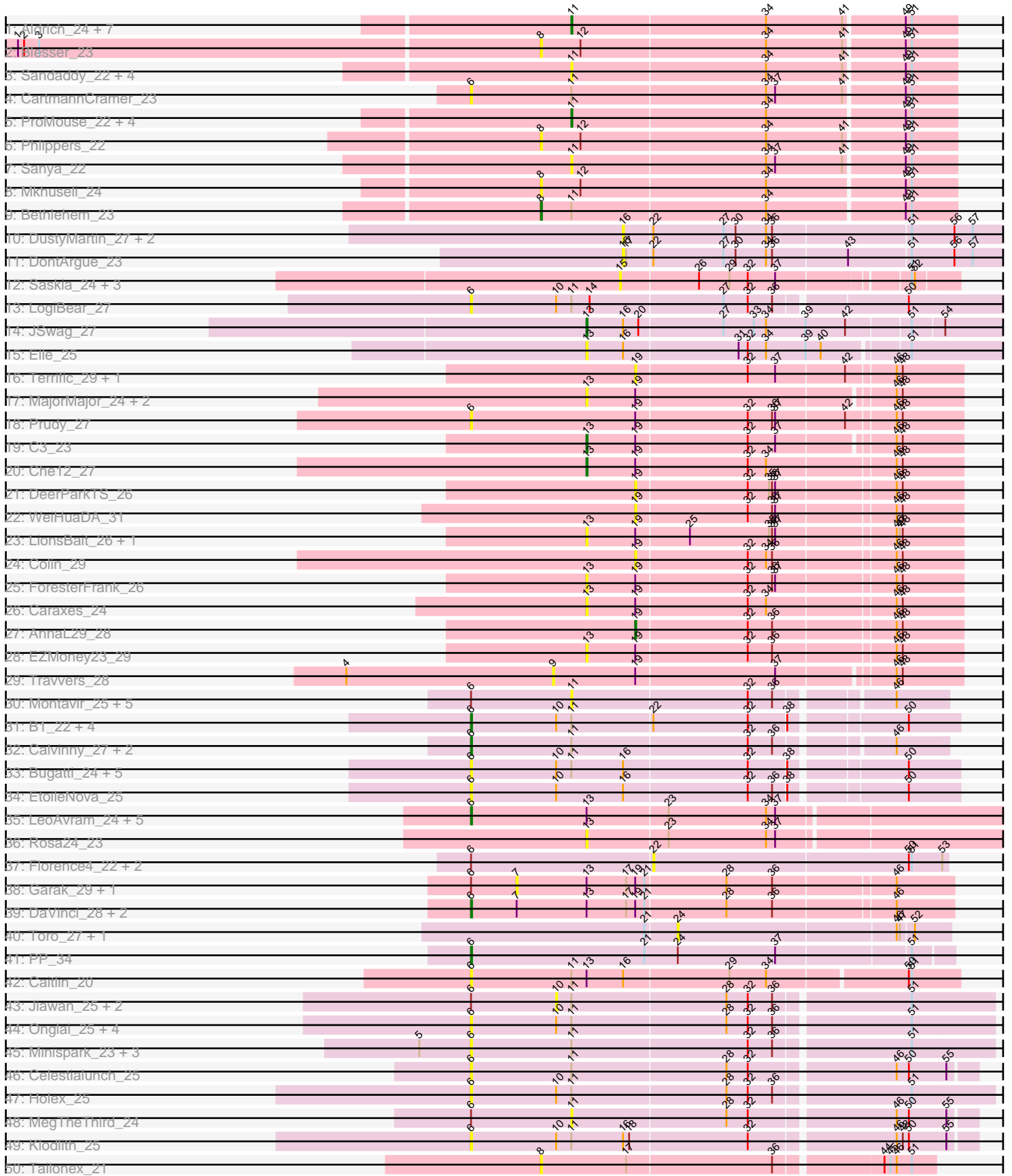


Pham 303227



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 303227 Report

This analysis was run 06/08/26 on database version 649.

Pham number 303227 has 110 members, 91 are drafts.

Phages represented in each track:

- Track 1 : Aldrich_24, StewieG_22, BK1_21, Inyanga_22, DirtDevil_24, A6_21, Iqorha_22, CatBus_24
- Track 2 : Blesser_23
- Track 3 : Sandaddy_22, Blackflame_23, Teodoridan_21, Whitspit_24, Gachnar_23
- Track 4 : CartmannCramer_23
- Track 5 : ProMouse_22, Aeneas_25, Puppet_23, U2_23, PhrostyMug_23
- Track 6 : Phlippers_22
- Track 7 : Sanya_22
- Track 8 : Mkhuseleli_24
- Track 9 : Bethlehem_23
- Track 10 : DustyMartin_27, Rowdy_27, Shapes_27
- Track 11 : DontArgue_23
- Track 12 : Saskia_24, Kimba_25, Petersenfast_24, Wolpertinger_24
- Track 13 : LogiBear_27
- Track 14 : JSwag_27
- Track 15 : Elle_25
- Track 16 : Terrific_29, Gratitude_26
- Track 17 : MajorMajor_24, Bradman_24, Quokka_23
- Track 18 : Prudy_27
- Track 19 : C3_23
- Track 20 : Che12_27
- Track 21 : DeerParkTS_26
- Track 22 : WeiHuaDA_31
- Track 23 : LionsBait_26, HippoHollow_26
- Track 24 : Colin_29
- Track 25 : ForesterFrank_26
- Track 26 : Caraxes_24
- Track 27 : AnnaL29_28
- Track 28 : EZMoney23_29
- Track 29 : Travvers_28
- Track 30 : Montavir_25, ClownCar_27, Croquant_27, Lova_26, Bigflo_26, Gwennie_25
- Track 31 : B1_22, Roimos_24, Kachowdy_24, BabyJohn_23, Chiqui_23
- Track 32 : Calvinny_27, Anubis_28, Bxz2_25
- Track 33 : Bugatti_24, DropBear_24, Clammy_24, Zarafa_24, SaturnRing_24, Marchesa_24
- Track 34 : EtoileNova_25

- Track 35 : LeoAvram_24, SteMason_23, RockieBear_23, Kingmustik0402_24, KekoraPapaka_23, NorthStar_24
- Track 36 : Rosa24_23
- Track 37 : Florence4_22, Prinashe11_22, Florence1_21
- Track 38 : Garak_29, Candra_28
- Track 39 : DaVinci_28, DelvinSonDorr_27, Kazan_28
- Track 40 : Toro_27, FlyCatcher_28
- Track 41 : PP_34
- Track 42 : Caitlin_20
- Track 43 : Jiawan_25, RyeScarlet_27, EdogawaKiddo_24
- Track 44 : Onglai_25, Lilleskat_24, Sachima_24, Hanray_25, Ayanochan_27
- Track 45 : Minispark_23, WorldCup_23, Bellris_23, CogOmlette_23
- Track 46 : Celestiallunch_25
- Track 47 : Halex_25
- Track 48 : MegTheThird_24
- Track 49 : Klodlith_25
- Track 50 : Tailonex_21

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 19 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anubis_28, Ayanochan_27, B1_22, BabyJohn_23, Bellris_23, Bugatti_24, Bxz2_25, Caitlin_20, Calvinny_27, CartmannCramer_23, Celestiallunch_25, Chiqui_23, Clammy_24, CogOmlette_23, DaVinci_28, DelvinSonDorr_27, DropBear_24, EtoileNova_25, Hanray_25, Halex_25, Kachowdy_24, Kazan_28, KekoraPapaka_23, Kingmustik0402_24, Klodlith_25, LeoAvram_24, Lilleskat_24, LogiBear_27, Marchesa_24, Minispark_23, NorthStar_24, Onglai_25, PP_34, Prudy_27, RockieBear_23, Roimos_24, 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, ClownCar_27, Croquant_27, EdogawaKiddo_24, Florence1_21, Florence4_22, Garak_29, Gwennie_25, Jiawan_25, Lowa_26, MegTheThird_24, Montavir_25, Prinashe11_22, RyeScarlet_27,

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

- A6_21, Aeneas_25, Aldrich_24, AnnaL29_28, BK1_21, Bethlehem_23, Blackflame_23, Blesser_23, Bradman_24, C3_23, Caraxes_24, CatBus_24, Che12_27, Colin_29, DeerParkTS_26, DirtDevil_24, DontArgue_23, DustyMartin_27, EZMoney23_29, Elle_25, FlyCatcher_28, ForesterFrank_26, Gachnar_23, Gratitude_26, HippoHollow_26, Inyanga_22, Iqorha_22, JSwag_27, Kimba_25, LionsBait_26, MajorMajor_24, Mkhuseli_24, Petersenfast_24, Phlippers_22, PhrostyMug_23, ProMouse_22, Puppet_23, Quokka_23, Rosa24_23, Rowdy_27, Sandaddy_22, Sanya_22, Saskia_24, Shapes_27, StewieG_22, Tailonex_21, Teodoridan_21, Terrific_29, Toro_27, Travvers_28, U2_23, WeiHuaDA_31, Whitspit_24, Wolpertinger_24,

Summary by start number:

Start 6:

- Found in 56 of 110 (50.9%) of genes in pham
- Manual Annotations of this start: 9 of 19
- Called 73.2% 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), Bugatti_24 (A3), Bxz2_25 (A3), Caitlin_20 (A8), Calvinny_27 (A3), CartmannCramer_23 (A1), Celestialunch_25 (A9), Chiqui_23 (A3), Clammy_24 (A3), CogOmlette_23 (A9), DaVinci_28 (A6), DelvinSonDorr_27 (A6), DropBear_24 (A3), EtoileNova_25 (A3), Hanray_25 (A9), Horex_25 (A9), Kachowdy_24 (A3), Kazan_28 (A6), KekoraPapaka_23 (A4), Kingmustik0402_24 (A4), Klodlith_25 (A9), LeoAvram_24 (A4), Lilleskat_24 (A9), LogiBear_27 (A15), Marchesa_24 (A3), Minispark_23 (A9), NorthStar_24 (A4), Onglai_25 (A9), PP_34 (A7), Prudy_27 (A2), RockieBear_23 (A4), Roimos_24 (A3), Sachima_24 (A9), SaturnRing_24 (A3), SteMason_23 (A4), WorldCup_23 (A9), Zarafa_24 (A3),

Start 7:

- Found in 5 of 110 (4.5%) 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 5 of 110 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 19
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bethlehem_23 (A1), Blesser_23 (A1), Mkhuseleli_24 (A1), Phlippers_22 (A1), Tailonex_21 (singleton),

Start 9:

- Found in 1 of 110 (0.9%) 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 23 of 110 (20.9%) of genes in pham
- No Manual Annotations of this start.
- Called 13.0% of time when present
- Phage (with cluster) where this start called: EdogawaKiddo_24 (A9), Jiawan_25 (A9), RyeScarlet_27 (A9),

Start 11:

- Found in 59 of 110 (53.6%) of genes in pham
- Manual Annotations of this start: 5 of 19
- Called 44.1% 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), ClownCar_27 (A3), Croquant_27 (A3), DirtDevil_24 (A1), Gachnar_23 (A1), Gwennie_25 (A3), Inyanga_22 (A1), Iqorha_22 (A1), Lowa_26 (A3), MegTheThird_24 (A9), Montavir_25 (A3), PhrostyMug_23 (A1), ProMouse_22 (A1), Puppet_23 (A1),

Sandaddy_22 (A1), Sanya_22 (A1), StewieG_22 (A1), Teodoridan_21 (A1), U2_23 (A1), Whitspit_24 (A1),

Start 13:

- Found in 25 of 110 (22.7%) of genes in pham
- Manual Annotations of this start: 3 of 19
- Called 52.0% of time when present
- Phage (with cluster) where this start called: Bradman_24 (A2), C3_23 (A2), Caraxes_24 (A2), Che12_27 (A2), EZMoney23_29 (A2), Elle_25 (A15), ForesterFrank_26 (A2), HippoHollow_26 (A2), JSwag_27 (A15), LionsBait_26 (A2), MajorMajor_24 (A2), Quokka_23 (A2), Rosa24_23 (A4),

Start 15:

- Found in 4 of 110 (3.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kimba_25 (A11), Petersenfast_24 (A11), Saskia_24 (A11), Wolpertinger_24 (A11),

Start 16:

- Found in 15 of 110 (13.6%) of genes in pham
- No Manual Annotations of this start.
- Called 26.7% of time when present
- Phage (with cluster) where this start called: DontArgue_23 (A10), DustyMartin_27 (A10), Rowdy_27 (A10), Shapes_27 (A10),

Start 19:

- Found in 23 of 110 (20.9%) of genes in pham
- Manual Annotations of this start: 1 of 19
- Called 26.1% of time when present
- Phage (with cluster) where this start called: AnnaL29_28 (A2), Colin_29 (A2), DeerParkTS_26 (A2), Gratitude_26 (A2), Terrific_29 (A2), WeiHuaDA_31 (A2),

Start 22:

- Found in 12 of 110 (10.9%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Florence1_21 (A5), Florence4_22 (A5), Prinashe11_22 (A5),

Start 24:

- Found in 3 of 110 (2.7%) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: FlyCatcher_28 (A7), Toro_27 (A7),

Summary by clusters:

There are 13 clusters represented in this pham: A15, singleton, A11, A10, A1, A3, A2, A5, 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 A2:

- Start number 13 was manually annotated 2 times for cluster A2.
- Start number 19 was manually annotated 1 time for cluster A2.

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), (34, 15736), (41, 15811), (49, 15868), (51, 15874),

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

Candidate Starts for Aeneas_25:

(Start: 11 @16311 has 5 MA's), (34, 16500), (49, 16632), (51, 16638),

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

Candidate Starts for Aldrich_24:

(Start: 11 @16812 has 5 MA's), (34, 17001), (41, 17076), (49, 17133), (51, 17139),

Gene: AnnaL29_28 Start: 18178, Stop: 18489, Start Num: 19

Candidate Starts for AnnaL29_28:

(Start: 19 @18178 has 1 MA's), (32, 18286), (36, 18310), (46, 18424), (48, 18430),

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), (32, 15689), (36, 15713), (46, 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), (28, 17243), (32, 17264), (36, 17288), (51, 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), (22, 14889), (32, 14982), (38, 15018), (50, 15123),

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

Candidate Starts for BK1_21:

(Start: 11 @15547 has 5 MA's), (34, 15736), (41, 15811), (49, 15868), (51, 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), (22, 15479), (32, 15572), (38, 15608), (50, 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), (32, 15309), (36, 15333), (51, 15459),

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), (34, 17432), (49, 17564), (51, 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), (32, 15802), (36, 15826), (46, 15928),

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

Candidate Starts for Blackflame_23:

(Start: 11 @15998 has 5 MA's), (34, 16187), (41, 16262), (49, 16319), (51, 16325),

Gene: Blesser_23 Start: 16246, Stop: 16647, Start Num: 8

Candidate Starts for Blesser_23:

(1, 15736), (2, 15742), (3, 15757), (Start: 8 @16246 has 1 MA's), (12, 16285), (34, 16465), (41, 16540), (49, 16597), (51, 16603),

Gene: Bradman_24 Start: 15185, Stop: 15538, Start Num: 13

Candidate Starts for Bradman_24:

(Start: 13 @15185 has 3 MA's), (Start: 19 @15233 has 1 MA's), (46, 15473), (48, 15479),

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), (16, 15183), (32, 15303), (38, 15339), (50, 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), (32, 15897), (36, 15921), (46, 16023),

Gene: C3_23 Start: 16308, Stop: 16661, Start Num: 13

Candidate Starts for C3_23:

(Start: 13 @16308 has 3 MA's), (Start: 19 @16356 has 1 MA's), (32, 16464), (37, 16491), (46, 16596), (48, 16602),

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 3 MA's), (16, 14233), (29, 14335), (34, 14371), (50, 14503), (51, 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), (32, 15881), (36, 15905), (46, 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 3 MA's), (17, 16467), (Start: 19 @16476 has 1 MA's), (21, 16485), (28, 16563), (36, 16608), (46, 16722),

Gene: Caraxes_24 Start: 14918, Stop: 15277, Start Num: 13

Candidate Starts for Caraxes_24:

(Start: 13 @14918 has 3 MA's), (Start: 19 @14966 has 1 MA's), (32, 15074), (34, 15092), (46, 15212), (48, 15218),

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), (34, 17996), (37, 18005), (41, 18071), (49, 18128), (51, 18134),

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

Candidate Starts for CatBus_24:

(Start: 11 @17004 has 5 MA's), (34, 17193), (41, 17268), (49, 17325), (51, 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), (28, 15333), (32, 15354), (46, 15489), (50, 15501), (55, 15537),

Gene: Che12_27 Start: 15178, Stop: 15537, Start Num: 13

Candidate Starts for Che12_27:

(Start: 13 @15178 has 3 MA's), (Start: 19 @15226 has 1 MA's), (32, 15334), (34, 15352), (46, 15472), (48, 15478),

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), (22, 15479), (32, 15572), (38, 15608), (50, 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), (16, 15183), (32, 15303), (38, 15339), (50, 15444),

Gene: ClownCar_27 Start: 15702, Stop: 16049, Start Num: 11

Candidate Starts for ClownCar_27:

(Start: 6 @15603 has 9 MA's), (Start: 11 @15702 has 5 MA's), (32, 15873), (36, 15897), (46, 15999),

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), (32, 15309), (36, 15333), (51, 15459),

Gene: Colin_29 Start: 18010, Stop: 18321, Start Num: 19

Candidate Starts for Colin_29:

(Start: 19 @18010 has 1 MA's), (32, 18118), (34, 18136), (36, 18142), (46, 18256), (48, 18262),

Gene: Croquant_27 Start: 15630, Stop: 15977, Start Num: 11

Candidate Starts for Croquant_27:

(Start: 6 @15531 has 9 MA's), (Start: 11 @15630 has 5 MA's), (32, 15801), (36, 15825), (46, 15927),

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 3 MA's), (17, 16432), (Start: 19 @16441 has 1 MA's), (21, 16450), (28, 16528), (36, 16573), (46, 16687),

Gene: DeerParkTS_26 Start: 16386, Stop: 16697, Start Num: 19

Candidate Starts for DeerParkTS_26:

(Start: 19 @16386 has 1 MA's), (32, 16494), (35, 16515), (36, 16518), (37, 16521), (46, 16632), (48, 16638),

Gene: DelvinSonDorr_27 Start: 16271, Stop: 16735, Start Num: 6

Candidate Starts for DelvinSonDorr_27:

(Start: 6 @16271 has 9 MA's), (7, 16316), (Start: 13 @16385 has 3 MA's), (17, 16424), (Start: 19 @16433 has 1 MA's), (21, 16442), (28, 16520), (36, 16565), (46, 16679),

Gene: DirtDevil_24 Start: 16812, Stop: 17183, Start Num: 11

Candidate Starts for DirtDevil_24:

(Start: 11 @16812 has 5 MA's), (34, 17001), (41, 17076), (49, 17133), (51, 17139),

Gene: DontArgue_23 Start: 13643, Stop: 14041, Start Num: 16

Candidate Starts for DontArgue_23:

(16, 13643), (17, 13646), (22, 13670), (27, 13739), (30, 13751), (34, 13781), (36, 13787), (43, 13856), (51, 13916), (56, 13958), (57, 13976),

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), (16, 15243), (32, 15363), (38, 15399), (50, 15504),

Gene: DustyMartin_27 Start: 15449, Stop: 15850, Start Num: 16

Candidate Starts for DustyMartin_27:

(16, 15449), (22, 15476), (27, 15545), (30, 15557), (34, 15587), (36, 15593), (51, 15725), (56, 15767), (57, 15785),

Gene: EZMoney23_29 Start: 18248, Stop: 18607, Start Num: 13

Candidate Starts for EZMoney23_29:

(Start: 13 @18248 has 3 MA's), (Start: 19 @18296 has 1 MA's), (32, 18404), (36, 18428), (46, 18542), (48, 18548),

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), (28, 17210), (32, 17231), (36, 17255), (51, 17381),

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

Candidate Starts for Elle_25:

(Start: 13 @15065 has 3 MA's), (16, 15101), (31, 15212), (32, 15221), (34, 15239), (39, 15278), (40, 15293), (51, 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), (16, 15736), (32, 15856), (36, 15880), (38, 15892), (50, 15997),

Gene: Florence1_21 Start: 14740, Stop: 15027, Start Num: 22

Candidate Starts for Florence1_21:

(Start: 6 @14563 has 9 MA's), (22, 14740), (50, 14989), (51, 14992), (53, 15022),

Gene: Florence4_22 Start: 14740, Stop: 15027, Start Num: 22

Candidate Starts for Florence4_22:

(Start: 6 @14563 has 9 MA's), (22, 14740), (50, 14989), (51, 14992), (53, 15022),

Gene: FlyCatcher_28 Start: 17296, Stop: 17556, Start Num: 24

Candidate Starts for FlyCatcher_28:

(21, 17266), (24, 17296), (46, 17506), (47, 17509), (52, 17521),

Gene: ForesterFrank_26 Start: 17788, Stop: 18147, Start Num: 13

Candidate Starts for ForesterFrank_26:

(Start: 13 @17788 has 3 MA's), (Start: 19 @17836 has 1 MA's), (32, 17944), (36, 17968), (37, 17971), (46, 18082), (48, 18088),

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

Candidate Starts for Gachnar_23:

(Start: 11 @16002 has 5 MA's), (34, 16191), (41, 16266), (49, 16323), (51, 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 3 MA's), (17, 16429), (Start: 19 @16438 has 1 MA's), (21, 16447), (28, 16525), (36, 16570), (46, 16684),

Gene: Gratitude_26 Start: 16814, Stop: 17125, Start Num: 19

Candidate Starts for Gratitude_26:

(Start: 19 @16814 has 1 MA's), (32, 16922), (37, 16949), (42, 17015), (46, 17060), (48, 17066),

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), (32, 15803), (36, 15827), (46, 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), (28, 17214), (32, 17235), (36, 17259), (51, 17385),

Gene: HippoHollow_26 Start: 18036, Stop: 18395, Start Num: 13

Candidate Starts for HippoHollow_26:

(Start: 13 @18036 has 3 MA's), (Start: 19 @18084 has 1 MA's), (25, 18135), (35, 18213), (36, 18216), (37, 18219), (46, 18330), (47, 18333), (48, 18336),

Gene: Holec_25 Start: 16965, Stop: 17465, Start Num: 6

Candidate Starts for Holec_25:

(Start: 6 @16965 has 9 MA's), (10, 17049), (Start: 11 @17064 has 5 MA's), (28, 17214), (32, 17235), (36, 17259), (51, 17385),

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

Candidate Starts for Inyanga_22:

(Start: 11 @15755 has 5 MA's), (34, 15944), (41, 16019), (49, 16076), (51, 16082),

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

Candidate Starts for Iqorha_22:

(Start: 11 @15754 has 5 MA's), (34, 15943), (41, 16018), (49, 16075), (51, 16081),

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

Candidate Starts for JSwag_27:

(Start: 13 @15383 has 3 MA's), (16, 15419), (20, 15434), (27, 15515), (33, 15545), (34, 15557), (39, 15596), (42, 15635), (51, 15695), (54, 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), (28, 17246), (32, 17267), (36, 17291), (51, 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), (22, 15263), (32, 15356), (38, 15392), (50, 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 3 MA's), (17, 16437), (Start: 19 @16446 has 1 MA's), (21, 16455), (28, 16533), (36, 16578), (46, 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 3 MA's), (23, 15613), (34, 15709), (37, 15718),

Gene: Kimba_25 Start: 16908, Stop: 17222, Start Num: 15

Candidate Starts for Kimba_25:

(15, 16908), (26, 16983), (29, 17013), (32, 17031), (37, 17058), (51, 17178), (52, 17181),

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 3 MA's), (23, 15605), (34, 15701), (37, 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), (16, 15243), (18, 15249), (32, 15363), (46, 15498), (48, 15504), (50, 15510), (55, 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 3 MA's), (23, 15610), (34, 15706), (37, 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), (28, 17210), (32, 17231), (36, 17255), (51, 17381),

Gene: LionsBait_26 Start: 18030, Stop: 18389, Start Num: 13

Candidate Starts for LionsBait_26:

(Start: 13 @18030 has 3 MA's), (Start: 19 @18078 has 1 MA's), (25, 18129), (35, 18207), (36, 18210), (37, 18213), (46, 18324), (47, 18327), (48, 18330),

Gene: LogiBear_27 Start: 16020, Stop: 16553, Start Num: 6

Candidate Starts for LogiBear_27:

(Start: 6 @16020 has 9 MA's), (10, 16104), (Start: 11 @16119 has 5 MA's), (14, 16137), (27, 16266), (32, 16290), (36, 16314), (50, 16434),

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), (32, 15795), (36, 15819), (46, 15921),

Gene: MajorMajor_24 Start: 15185, Stop: 15538, Start Num: 13

Candidate Starts for MajorMajor_24:

(Start: 13 @15185 has 3 MA's), (Start: 19 @15233 has 1 MA's), (46, 15473), (48, 15479),

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), (16, 15234), (32, 15354), (38, 15390), (50, 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), (28, 15333), (32, 15354), (46, 15489), (50, 15501), (55, 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), (32, 15309), (36, 15333), (51, 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), (34, 16227), (49, 16359), (51, 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), (32, 15803), (36, 15827), (46, 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 3 MA's), (23, 15613), (34, 15709), (37, 15718),

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), (28, 15544), (32, 15565), (36, 15589), (51, 15715),

Gene: PP_34 Start: 21309, Stop: 21773, Start Num: 6

Candidate Starts for PP_34:

(Start: 6 @21309 has 9 MA's), (21, 21480), (24, 21513), (37, 21609), (51, 21735),

Gene: Petersenfast_24 Start: 16853, Stop: 17167, Start Num: 15

Candidate Starts for Petersenfast_24:

(15, 16853), (26, 16928), (29, 16958), (32, 16976), (37, 17003), (51, 17123), (52, 17126),

Gene: Phlippers_22 Start: 16908, Stop: 17309, Start Num: 8

Candidate Starts for Phlippers_22:

(Start: 8 @16908 has 1 MA's), (12, 16947), (34, 17127), (41, 17202), (49, 17259), (51, 17265),

Gene: PhrostyMug_23 Start: 16015, Stop: 16386, Start Num: 11

Candidate Starts for PhrostyMug_23:

(Start: 11 @16015 has 5 MA's), (34, 16204), (49, 16336), (51, 16342),

Gene: Prin Ashe11_22 Start: 14920, Stop: 15207, Start Num: 22

Candidate Starts for Prin Ashe11_22:

(Start: 6 @14743 has 9 MA's), (22, 14920), (50, 15169), (51, 15172), (53, 15202),

Gene: ProMouse_22 Start: 16469, Stop: 16840, Start Num: 11

Candidate Starts for ProMouse_22:

(Start: 11 @16469 has 5 MA's), (34, 16658), (49, 16790), (51, 16796),

Gene: Prudy_27 Start: 17973, Stop: 18446, Start Num: 6

Candidate Starts for Prudy_27:

(Start: 6 @17973 has 9 MA's), (Start: 19 @18135 has 1 MA's), (32, 18243), (36, 18267), (37, 18270), (42, 18336), (46, 18381), (48, 18387),

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

Candidate Starts for Puppet_23:

(Start: 11 @16019 has 5 MA's), (34, 16208), (49, 16340), (51, 16346),

Gene: Quokka_23 Start: 15185, Stop: 15538, Start Num: 13

Candidate Starts for Quokka_23:

(Start: 13 @15185 has 3 MA's), (Start: 19 @15233 has 1 MA's), (46, 15473), (48, 15479),

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 3 MA's), (23, 15613), (34, 15709), (37, 15718),

Gene: Roimos_24 Start: 15002, Stop: 15463, Start Num: 6

Candidate Starts for Roimos_24:

(Start: 6 @15002 has 9 MA's), (10, 15086), (Start: 11 @15101 has 5 MA's), (22, 15179), (32, 15272), (38, 15308), (50, 15413),

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

Candidate Starts for Rosa24_23:

(Start: 13 @15507 has 3 MA's), (23, 15585), (34, 15681), (37, 15690),

Gene: Rowdy_27 Start: 15449, Stop: 15850, Start Num: 16

Candidate Starts for Rowdy_27:

(16, 15449), (22, 15476), (27, 15545), (30, 15557), (34, 15587), (36, 15593), (51, 15725), (56, 15767), (57, 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), (28, 17214), (32, 17235), (36, 17259), (51, 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), (28, 17210), (32, 17231), (36, 17255), (51, 17381),

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

Candidate Starts for Sandaddy_22:

(Start: 11 @15945 has 5 MA's), (34, 16134), (41, 16209), (49, 16266), (51, 16272),

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

Candidate Starts for Sanya_22:

(Start: 11 @16607 has 5 MA's), (34, 16796), (37, 16805), (41, 16871), (49, 16928), (51, 16934),

Gene: Saskia_24 Start: 16850, Stop: 17164, Start Num: 15

Candidate Starts for Saskia_24:

(15, 16850), (26, 16925), (29, 16955), (32, 16973), (37, 17000), (51, 17120), (52, 17123),

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), (16, 15183), (32, 15303), (38, 15339), (50, 15444),

Gene: Shapes_27 Start: 15449, Stop: 15850, Start Num: 16

Candidate Starts for Shapes_27:

(16, 15449), (22, 15476), (27, 15545), (30, 15557), (34, 15587), (36, 15593), (51, 15725), (56, 15767), (57, 15785),

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 3 MA's), (23, 15613), (34, 15709), (37, 15718),

Gene: StewieG_22 Start: 15788, Stop: 16159, Start Num: 11

Candidate Starts for StewieG_22:

(Start: 11 @15788 has 5 MA's), (34, 15977), (41, 16052), (49, 16109), (51, 16115),

Gene: Tailonex_21 Start: 14580, Stop: 14951, Start Num: 8
Candidate Starts for Tailonex_21:
(Start: 8 @14580 has 1 MA's), (17, 14664), (36, 14805), (44, 14901), (45, 14907), (46, 14913), (51, 14928),

Gene: Teodoridan_21 Start: 15353, Stop: 15724, Start Num: 11
Candidate Starts for Teodoridan_21:
(Start: 11 @15353 has 5 MA's), (34, 15542), (41, 15617), (49, 15674), (51, 15680),

Gene: Terrific_29 Start: 16826, Stop: 17137, Start Num: 19
Candidate Starts for Terrific_29:
(Start: 19 @16826 has 1 MA's), (32, 16934), (37, 16961), (42, 17027), (46, 17072), (48, 17078),

Gene: Toro_27 Start: 17296, Stop: 17556, Start Num: 24
Candidate Starts for Toro_27:
(21, 17266), (24, 17296), (46, 17506), (47, 17509), (52, 17521),

Gene: Travvers_28 Start: 16132, Stop: 16518, Start Num: 9
Candidate Starts for Travvers_28:
(4, 15928), (9, 16132), (Start: 19 @16213 has 1 MA's), (37, 16348), (46, 16453), (48, 16459),

Gene: U2_23 Start: 16127, Stop: 16498, Start Num: 11
Candidate Starts for U2_23:
(Start: 11 @16127 has 5 MA's), (34, 16316), (49, 16448), (51, 16454),

Gene: WeiHuaDA_31 Start: 18580, Stop: 18891, Start Num: 19
Candidate Starts for WeiHuaDA_31:
(Start: 19 @18580 has 1 MA's), (32, 18688), (36, 18712), (37, 18715), (46, 18826), (48, 18832),

Gene: Whitspit_24 Start: 16630, Stop: 17001, Start Num: 11
Candidate Starts for Whitspit_24:
(Start: 11 @16630 has 5 MA's), (34, 16819), (41, 16894), (49, 16951), (51, 16957),

Gene: Wolpertinger_24 Start: 16853, Stop: 17167, Start Num: 15
Candidate Starts for Wolpertinger_24:
(15, 16853), (26, 16928), (29, 16958), (32, 16976), (37, 17003), (51, 17123), (52, 17126),

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), (32, 15309), (36, 15333), (51, 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), (16, 15245), (32, 15365), (38, 15401), (50, 15506),