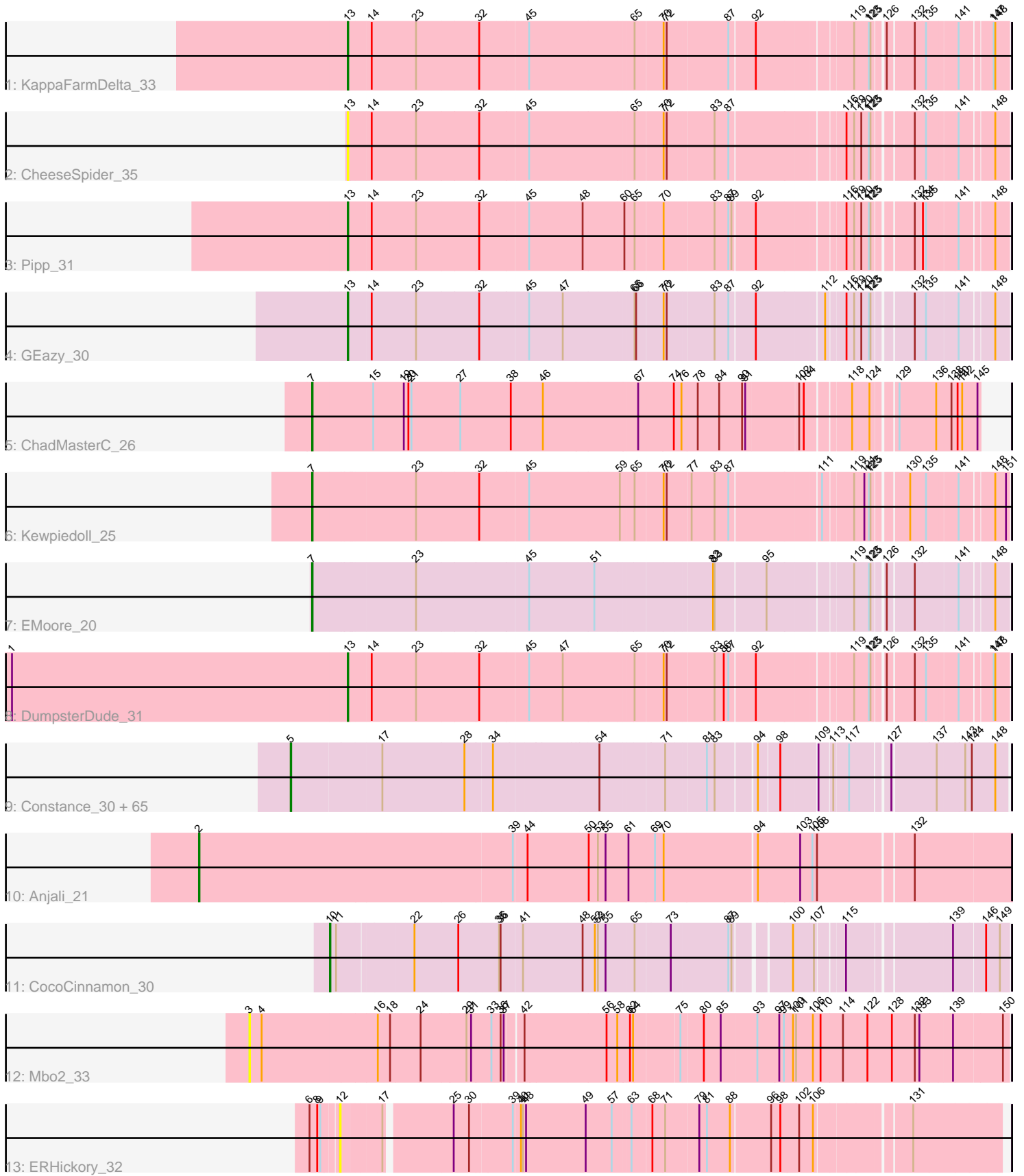


Pham 304957



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 304957 Report

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

Pham number 304957 has 78 members, 22 are drafts.

Phages represented in each track:

- Track 1 : KappaFarmDelta_33
- Track 2 : CheeseSpider_35
- Track 3 : Pipp_31
- Track 4 : GEazy_30
- Track 5 : ChadMasterC_26
- Track 6 : Kewpiedoll_25
- Track 7 : EMoore_20
- Track 8 : DumpsterDude_31
- Track 9 : Constance_30, Isolde_32, DarwinJr_36, PeggyLeg03_30, NikkiHotWheels_32, GumGum_32, BlueShadow_32, RadFad_32, Ichiang_30, Shukran_32, KayMoney_31, Halloweekend_30, Yonex_32, MaterMagnus_32, MidnightRain_32, Hestia_32, ThayneTheZag_32, Hillester_32, Ryan_32, BigSherm_33, Popper_30, Kihatsu_33, Raphaella_32, Bauer_28, Henrique_32, MUWow_31, Mapleville_32, GlobiWarming_31, Sakai_32, ToastyOats_35, BlackSpider_27, Richie_32, Sporco_33, BenchScraper_32, CosmicBrownie_32, Zaheer_32, Dirtdigger_32, FosterFrank_31, Saintcarr_32, CookieBear_32, Gusanita_30, Satrap_32, Guinevere_32, Judy_31, Cole_30, Lenoxika_32, Toodles_33, Schism_32, Lawnathon_32, BellaJr_29, SonDevVon_31, Nandita_32, Karkharias_30, MillySue_32, QuinnAvery_32, LilyBell_30, YoungHarleezy_32, BasketStar_32, Donatella_31, Kabloowy_32, Lasker_32, ChuckDuck_31, SpicyFrank_32, Globfish_32, Bridgette_30, GoodLuckBabe_33
- Track 10 : Anjali_21
- Track 11 : CocoCinnamon_30
- Track 12 : Mbo2_33
- Track 13 : ERHickory_32

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

The start number called the most often in the published annotations is 5, it was called in 47 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BasketStar_32, Bauer_28, BellaJr_29, BenchScraper_32, BigSherm_33, BlackSpider_27, BlueShadow_32, Bridgette_30, ChuckDuck_31, Cole_30,

Constance_30, CookieBear_32, CosmicBrownie_32, DarwinJr_36, Dirdigger_32, Donatella_31, FosterFrank_31, Globfish_32, GlobiWarming_31, GoodLuckBabe_33, Guinevere_32, GumGum_32, Gusanita_30, Halloweekend_30, Henrique_32, Hestia_32, Hillester_32, Ichiang_30, Isolde_32, Judy_31, Kabloowy_32, Karkharias_30, KayMoney_31, Kihatsu_33, Lasker_32, Lawnathon_32, Lenoxika_32, LilyBell_30, MUWow_31, Mapleville_32, MaterMagnus_32, MidnightRain_32, MillySue_32, Nandita_32, NikkiHotWheels_32, PeggyLeg03_30, Popper_30, QuinnAvery_32, RadFad_32, Raphaella_32, Richie_32, Ryan_32, Saintcarr_32, Sakai_32, Satrap_32, Schism_32, Shukran_32, SonDevVon_31, SpicyFrank_32, Sporco_33, ThayneTheZag_32, ToastyOats_35, Toodles_33, Yonex_32, YoungHarleezy_32, Zaheer_32,

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

-

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

- Anjali_21, ChadMasterC_26, CheeseSpider_35, CocoCinnamon_30, DumpsterDude_31, EMOore_20, ERHickory_32, GEazy_30, KappaFarmDelta_33, Kewpiedoll_25, Mbo2_33, Pipp_31,

Summary by start number:

Start 2:

- Found in 1 of 78 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anjali_21 (FD),

Start 3:

- Found in 1 of 78 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo2_33 (singleton),

Start 5:

- Found in 66 of 78 (84.6%) of genes in pham
- Manual Annotations of this start: 47 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BasketStar_32 (AY), Bauer_28 (FN), BellaJr_29 (FN), BenchScraper_32 (AY), BigSherm_33 (FF), BlackSpider_27 (FN), BlueShadow_32 (AY), Bridgette_30 (FA), ChuckDuck_31 (FA), Cole_30 (FF), Constance_30 (FA), CookieBear_32 (AY), CosmicBrownie_32 (AY), DarwinJr_36 (AY), Dirdigger_32 (FF), Donatella_31 (FF), FosterFrank_31 (FA), Globfish_32 (AY), GlobiWarming_31 (FA), GoodLuckBabe_33 (FF), Guinevere_32 (FF), GumGum_32 (AY), Gusanita_30 (FF), Halloweekend_30 (FF), Henrique_32 (FA), Hestia_32 (AY), Hillester_32 (AY), Ichiang_30 (FF), Isolde_32 (AY), Judy_31 (FA), Kabloowy_32 (AY), Karkharias_30 (FA), KayMoney_31 (FA), Kihatsu_33 (FF), Lasker_32 (AY), Lawnathon_32 (AY), Lenoxika_32 (FF), LilyBell_30 (FA), MUWow_31 (AY), Mapleville_32 (AY), MaterMagnus_32 (AY), MidnightRain_32 (AY), MillySue_32 (FF), Nandita_32 (FF), NikkiHotWheels_32 (FA), PeggyLeg03_30 (FA), Popper_30 (FF), QuinnAvery_32 (FF), RadFad_32 (AY), Raphaella_32 (AY), Richie_32 (AY), Ryan_32 (FF), Saintcarr_32 (FF), Sakai_32 (AY), Satrap_32 (AY), Schism_32 (FF), Shukran_32 (AY), SonDevVon_31 (AY), SpicyFrank_32 (AY), Sporco_33 (AY),

ThayneTheZag_32 (AY), ToastyOats_35 (FF), Toodles_33 (FF), Yonex_32 (FF), YoungHarleezy_32 (AY), Zaheer_32 (FF),

Start 7:

- Found in 3 of 78 (3.8%) of genes in pham
- Manual Annotations of this start: 3 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChadMasterC_26 (DE1), EMoore_20 (DE2), Kewpiedoll_25 (DE1),

Start 10:

- Found in 1 of 78 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CocoCinnamon_30 (FO),

Start 12:

- Found in 1 of 78 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ERHickory_32 (singleton),

Start 13:

- Found in 5 of 78 (6.4%) of genes in pham
- Manual Annotations of this start: 4 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CheeseSpider_35 (CV), DumpsterDude_31 (DW), GEazy_30 (DB), KappaFarmDelta_33 (CV), Pipp_31 (CV),

Summary by clusters:

There are 12 clusters represented in this pham: singleton, DE1, DE2, DB, FA, FD, FF, AY, DW, CV, FN, FO,

Info for manual annotations of cluster AY:

- Start number 5 was manually annotated 20 times for cluster AY.

Info for manual annotations of cluster CV:

- Start number 13 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster DB:

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

Info for manual annotations of cluster DE1:

- Start number 7 was manually annotated 2 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 7 was manually annotated 1 time for cluster DE2.

Info for manual annotations of cluster DW:

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

Info for manual annotations of cluster FA:

- Start number 5 was manually annotated 9 times for cluster FA.

Info for manual annotations of cluster FD:

- Start number 2 was manually annotated 1 time for cluster FD.

Info for manual annotations of cluster FF:

- Start number 5 was manually annotated 16 times for cluster FF.

Info for manual annotations of cluster FN:

- Start number 5 was manually annotated 2 times for cluster FN.

Info for manual annotations of cluster FO:

- Start number 10 was manually annotated 1 time for cluster FO.

Gene Information:

Gene: Anjali_21 Start: 16366, Stop: 17904, Start Num: 2

Candidate Starts for Anjali_21:

(Start: 2 @16366 has 1 MA's), (39, 16972), (44, 16996), (50, 17116), (53, 17134), (55, 17149), (61, 17194), (69, 17245), (70, 17260), (94, 17437), (103, 17515), (105, 17539), (108, 17548), (132, 17722),

Gene: BasketStar_32 Start: 21691, Stop: 22944, Start Num: 5

Candidate Starts for BasketStar_32:

(Start: 5 @21691 has 47 MA's), (17, 21859), (28, 22018), (34, 22069), (54, 22252), (71, 22363), (81, 22435), (83, 22450), (94, 22522), (98, 22558), (109, 22624), (113, 22648), (117, 22675), (127, 22741), (137, 22819), (143, 22867), (144, 22879), (148, 22921),

Gene: Bauer_28 Start: 21209, Stop: 22462, Start Num: 5

Candidate Starts for Bauer_28:

(Start: 5 @21209 has 47 MA's), (17, 21377), (28, 21536), (34, 21587), (54, 21770), (71, 21881), (81, 21953), (83, 21968), (94, 22040), (98, 22076), (109, 22142), (113, 22166), (117, 22193), (127, 22259), (137, 22337), (143, 22385), (144, 22397), (148, 22439),

Gene: BellaJr_29 Start: 22187, Stop: 23440, Start Num: 5

Candidate Starts for BellaJr_29:

(Start: 5 @22187 has 47 MA's), (17, 22355), (28, 22514), (34, 22565), (54, 22748), (71, 22859), (81, 22931), (83, 22946), (94, 23018), (98, 23054), (109, 23120), (113, 23144), (117, 23171), (127, 23237), (137, 23315), (143, 23363), (144, 23375), (148, 23417),

Gene: BenchScraper_32 Start: 21652, Stop: 22905, Start Num: 5

Candidate Starts for BenchScraper_32:

(Start: 5 @21652 has 47 MA's), (17, 21820), (28, 21979), (34, 22030), (54, 22213), (71, 22324), (81, 22396), (83, 22411), (94, 22483), (98, 22519), (109, 22585), (113, 22609), (117, 22636), (127, 22702), (137, 22780), (143, 22828), (144, 22840), (148, 22882),

Gene: BigSherm_33 Start: 23424, Stop: 24677, Start Num: 5

Candidate Starts for BigSherm_33:

(Start: 5 @23424 has 47 MA's), (17, 23592), (28, 23751), (34, 23802), (54, 23985), (71, 24096), (81, 24168), (83, 24183), (94, 24255), (98, 24291), (109, 24357), (113, 24381), (117, 24408), (127, 24474), (137, 24552), (143, 24600), (144, 24612), (148, 24654),

Gene: BlackSpider_27 Start: 21099, Stop: 22352, Start Num: 5

Candidate Starts for BlackSpider_27:

(Start: 5 @21099 has 47 MA's), (17, 21267), (28, 21426), (34, 21477), (54, 21660), (71, 21771), (81, 21843), (83, 21858), (94, 21930), (98, 21966), (109, 22032), (113, 22056), (117, 22083), (127, 22149), (137, 22227), (143, 22275), (144, 22287), (148, 22329),

Gene: BlueShadow_32 Start: 21637, Stop: 22890, Start Num: 5

Candidate Starts for BlueShadow_32:

(Start: 5 @21637 has 47 MA's), (17, 21805), (28, 21964), (34, 22015), (54, 22198), (71, 22309), (81, 22381), (83, 22396), (94, 22468), (98, 22504), (109, 22570), (113, 22594), (117, 22621), (127, 22687), (137, 22765), (143, 22813), (144, 22825), (148, 22867),

Gene: Bridgette_30 Start: 21703, Stop: 22956, Start Num: 5

Candidate Starts for Bridgette_30:

(Start: 5 @21703 has 47 MA's), (17, 21871), (28, 22030), (34, 22081), (54, 22264), (71, 22375), (81, 22447), (83, 22462), (94, 22534), (98, 22570), (109, 22636), (113, 22660), (117, 22687), (127, 22753), (137, 22831), (143, 22879), (144, 22891), (148, 22933),

Gene: ChadMasterC_26 Start: 20791, Stop: 22044, Start Num: 7

Candidate Starts for ChadMasterC_26:

(Start: 7 @20791 has 3 MA's), (15, 20908), (19, 20968), (20, 20977), (21, 20983), (27, 21079), (38, 21178), (46, 21241), (67, 21421), (74, 21490), (76, 21505), (78, 21535), (84, 21577), (90, 21622), (91, 21628), (102, 21727), (104, 21736), (118, 21814), (124, 21847), (129, 21886), (136, 21958), (138, 21988), (140, 22000), (142, 22009), (145, 22039),

Gene: CheeseSpider_35 Start: 26082, Stop: 27251, Start Num: 13

Candidate Starts for CheeseSpider_35:

(Start: 13 @26082 has 4 MA's), (14, 26121), (23, 26208), (32, 26325), (45, 26418), (65, 26610), (70, 26661), (72, 26667), (83, 26751), (87, 26778), (116, 26982), (119, 26997), (120, 27009), (123, 27024), (125, 27027), (132, 27090), (135, 27111), (141, 27165), (148, 27225),

Gene: ChuckDuck_31 Start: 21471, Stop: 22724, Start Num: 5

Candidate Starts for ChuckDuck_31:

(Start: 5 @21471 has 47 MA's), (17, 21639), (28, 21798), (34, 21849), (54, 22032), (71, 22143), (81, 22215), (83, 22230), (94, 22302), (98, 22338), (109, 22404), (113, 22428), (117, 22455), (127, 22521), (137, 22599), (143, 22647), (144, 22659), (148, 22701),

Gene: CocoCinnamon_30 Start: 21380, Stop: 22567, Start Num: 10

Candidate Starts for CocoCinnamon_30:

(Start: 10 @21380 has 1 MA's), (11, 21389), (22, 21524), (26, 21608), (35, 21683), (36, 21686), (41, 21719), (48, 21830), (52, 21854), (53, 21860), (55, 21875), (65, 21929), (73, 21995), (87, 22103), (89, 22109), (100, 22199), (107, 22235), (115, 22283), (139, 22466), (146, 22523), (149, 22550),

Gene: Cole_30 Start: 23171, Stop: 24424, Start Num: 5

Candidate Starts for Cole_30:

(Start: 5 @23171 has 47 MA's), (17, 23339), (28, 23498), (34, 23549), (54, 23732), (71, 23843), (81, 23915), (83, 23930), (94, 24002), (98, 24038), (109, 24104), (113, 24128), (117, 24155), (127, 24221), (137, 24299), (143, 24347), (144, 24359), (148, 24401),

Gene: Constance_30 Start: 21943, Stop: 23196, Start Num: 5

Candidate Starts for Constance_30:

(Start: 5 @21943 has 47 MA's), (17, 22111), (28, 22270), (34, 22321), (54, 22504), (71, 22615), (81, 22687), (83, 22702), (94, 22774), (98, 22810), (109, 22876), (113, 22900), (117, 22927), (127, 22993),

(137, 23071), (143, 23119), (144, 23131), (148, 23173),

Gene: CookieBear_32 Start: 21637, Stop: 22890, Start Num: 5

Candidate Starts for CookieBear_32:

(Start: 5 @21637 has 47 MA's), (17, 21805), (28, 21964), (34, 22015), (54, 22198), (71, 22309), (81, 22381), (83, 22396), (94, 22468), (98, 22504), (109, 22570), (113, 22594), (117, 22621), (127, 22687), (137, 22765), (143, 22813), (144, 22825), (148, 22867),

Gene: CosmicBrownie_32 Start: 21456, Stop: 22709, Start Num: 5

Candidate Starts for CosmicBrownie_32:

(Start: 5 @21456 has 47 MA's), (17, 21624), (28, 21783), (34, 21834), (54, 22017), (71, 22128), (81, 22200), (83, 22215), (94, 22287), (98, 22323), (109, 22389), (113, 22413), (117, 22440), (127, 22506), (137, 22584), (143, 22632), (144, 22644), (148, 22686),

Gene: DarwinJr_36 Start: 23048, Stop: 24301, Start Num: 5

Candidate Starts for DarwinJr_36:

(Start: 5 @23048 has 47 MA's), (17, 23216), (28, 23375), (34, 23426), (54, 23609), (71, 23720), (81, 23792), (83, 23807), (94, 23879), (98, 23915), (109, 23981), (113, 24005), (117, 24032), (127, 24098), (137, 24176), (143, 24224), (144, 24236), (148, 24278),

Gene: Dirdigger_32 Start: 23245, Stop: 24498, Start Num: 5

Candidate Starts for Dirdigger_32:

(Start: 5 @23245 has 47 MA's), (17, 23413), (28, 23572), (34, 23623), (54, 23806), (71, 23917), (81, 23989), (83, 24004), (94, 24076), (98, 24112), (109, 24178), (113, 24202), (117, 24229), (127, 24295), (137, 24373), (143, 24421), (144, 24433), (148, 24475),

Gene: Donatella_31 Start: 23635, Stop: 24888, Start Num: 5

Candidate Starts for Donatella_31:

(Start: 5 @23635 has 47 MA's), (17, 23803), (28, 23962), (34, 24013), (54, 24196), (71, 24307), (81, 24379), (83, 24394), (94, 24466), (98, 24502), (109, 24568), (113, 24592), (117, 24619), (127, 24685), (137, 24763), (143, 24811), (144, 24823), (148, 24865),

Gene: DumpsterDude_31 Start: 27356, Stop: 28525, Start Num: 13

Candidate Starts for DumpsterDude_31:

(1, 26702), (Start: 13 @27356 has 4 MA's), (14, 27395), (23, 27482), (32, 27599), (45, 27692), (47, 27758), (65, 27884), (70, 27935), (72, 27941), (83, 28025), (86, 28043), (87, 28052), (92, 28100), (119, 28271), (123, 28298), (125, 28301), (126, 28319), (132, 28364), (135, 28385), (141, 28439), (147, 28496), (148, 28499),

Gene: EMoore_20 Start: 17259, Stop: 18491, Start Num: 7

Candidate Starts for EMoore_20:

(Start: 7 @17259 has 3 MA's), (23, 17448), (45, 17658), (51, 17781), (82, 17988), (83, 17991), (95, 18087), (119, 18237), (123, 18264), (125, 18267), (126, 18285), (132, 18330), (141, 18405), (148, 18465),

Gene: ERHickory_32 Start: 13609, Stop: 14778, Start Num: 12

Candidate Starts for ERHickory_32:

(6, 13561), (8, 13576), (9, 13582), (12, 13609), (17, 13678), (25, 13798), (30, 13828), (39, 13903), (40, 13915), (41, 13918), (43, 13921), (49, 14035), (57, 14086), (63, 14119), (68, 14155), (71, 14179), (79, 14236), (81, 14251), (88, 14293), (96, 14368), (98, 14386), (102, 14422), (106, 14449), (131, 14611),

Gene: FosterFrank_31 Start: 21545, Stop: 22798, Start Num: 5

Candidate Starts for FosterFrank_31:

(Start: 5 @21545 has 47 MA's), (17, 21713), (28, 21872), (34, 21923), (54, 22106), (71, 22217), (81, 22289), (83, 22304), (94, 22376), (98, 22412), (109, 22478), (113, 22502), (117, 22529), (127, 22595), (137, 22673), (143, 22721), (144, 22733), (148, 22775),

Gene: GEazy_30 Start: 24987, Stop: 26156, Start Num: 13

Candidate Starts for GEazy_30:

(Start: 13 @24987 has 4 MA's), (14, 25026), (23, 25113), (32, 25230), (45, 25323), (47, 25389), (65, 25515), (66, 25518), (70, 25566), (72, 25572), (83, 25656), (87, 25683), (92, 25731), (112, 25854), (116, 25887), (119, 25902), (120, 25914), (123, 25929), (125, 25932), (132, 25995), (135, 26016), (141, 26070), (148, 26130),

Gene: Globfish_32 Start: 21871, Stop: 23124, Start Num: 5

Candidate Starts for Globfish_32:

(Start: 5 @21871 has 47 MA's), (17, 22039), (28, 22198), (34, 22249), (54, 22432), (71, 22543), (81, 22615), (83, 22630), (94, 22702), (98, 22738), (109, 22804), (113, 22828), (117, 22855), (127, 22921), (137, 22999), (143, 23047), (144, 23059), (148, 23101),

Gene: GlobiWarming_31 Start: 21386, Stop: 22639, Start Num: 5

Candidate Starts for GlobiWarming_31:

(Start: 5 @21386 has 47 MA's), (17, 21554), (28, 21713), (34, 21764), (54, 21947), (71, 22058), (81, 22130), (83, 22145), (94, 22217), (98, 22253), (109, 22319), (113, 22343), (117, 22370), (127, 22436), (137, 22514), (143, 22562), (144, 22574), (148, 22616),

Gene: GoodLuckBabe_33 Start: 23753, Stop: 25006, Start Num: 5

Candidate Starts for GoodLuckBabe_33:

(Start: 5 @23753 has 47 MA's), (17, 23921), (28, 24080), (34, 24131), (54, 24314), (71, 24425), (81, 24497), (83, 24512), (94, 24584), (98, 24620), (109, 24686), (113, 24710), (117, 24737), (127, 24803), (137, 24881), (143, 24929), (144, 24941), (148, 24983),

Gene: Guinevere_32 Start: 23343, Stop: 24596, Start Num: 5

Candidate Starts for Guinevere_32:

(Start: 5 @23343 has 47 MA's), (17, 23511), (28, 23670), (34, 23721), (54, 23904), (71, 24015), (81, 24087), (83, 24102), (94, 24174), (98, 24210), (109, 24276), (113, 24300), (117, 24327), (127, 24393), (137, 24471), (143, 24519), (144, 24531), (148, 24573),

Gene: GumGum_32 Start: 21800, Stop: 23053, Start Num: 5

Candidate Starts for GumGum_32:

(Start: 5 @21800 has 47 MA's), (17, 21968), (28, 22127), (34, 22178), (54, 22361), (71, 22472), (81, 22544), (83, 22559), (94, 22631), (98, 22667), (109, 22733), (113, 22757), (117, 22784), (127, 22850), (137, 22928), (143, 22976), (144, 22988), (148, 23030),

Gene: Gusanita_30 Start: 23106, Stop: 24359, Start Num: 5

Candidate Starts for Gusanita_30:

(Start: 5 @23106 has 47 MA's), (17, 23274), (28, 23433), (34, 23484), (54, 23667), (71, 23778), (81, 23850), (83, 23865), (94, 23937), (98, 23973), (109, 24039), (113, 24063), (117, 24090), (127, 24156), (137, 24234), (143, 24282), (144, 24294), (148, 24336),

Gene: Halloweekend_30 Start: 23050, Stop: 24303, Start Num: 5

Candidate Starts for Halloweekend_30:

(Start: 5 @23050 has 47 MA's), (17, 23218), (28, 23377), (34, 23428), (54, 23611), (71, 23722), (81, 23794), (83, 23809), (94, 23881), (98, 23917), (109, 23983), (113, 24007), (117, 24034), (127, 24100), (137, 24178), (143, 24226), (144, 24238), (148, 24280),

Gene: Henrique_32 Start: 21414, Stop: 22667, Start Num: 5

Candidate Starts for Henrique_32:

(Start: 5 @21414 has 47 MA's), (17, 21582), (28, 21741), (34, 21792), (54, 21975), (71, 22086), (81, 22158), (83, 22173), (94, 22245), (98, 22281), (109, 22347), (113, 22371), (117, 22398), (127, 22464), (137, 22542), (143, 22590), (144, 22602), (148, 22644),

Gene: Hestia_32 Start: 21676, Stop: 22929, Start Num: 5

Candidate Starts for Hestia_32:

(Start: 5 @21676 has 47 MA's), (17, 21844), (28, 22003), (34, 22054), (54, 22237), (71, 22348), (81, 22420), (83, 22435), (94, 22507), (98, 22543), (109, 22609), (113, 22633), (117, 22660), (127, 22726), (137, 22804), (143, 22852), (144, 22864), (148, 22906),

Gene: Hillester_32 Start: 21637, Stop: 22890, Start Num: 5

Candidate Starts for Hillester_32:

(Start: 5 @21637 has 47 MA's), (17, 21805), (28, 21964), (34, 22015), (54, 22198), (71, 22309), (81, 22381), (83, 22396), (94, 22468), (98, 22504), (109, 22570), (113, 22594), (117, 22621), (127, 22687), (137, 22765), (143, 22813), (144, 22825), (148, 22867),

Gene: Ichiang_30 Start: 23069, Stop: 24322, Start Num: 5

Candidate Starts for Ichiang_30:

(Start: 5 @23069 has 47 MA's), (17, 23237), (28, 23396), (34, 23447), (54, 23630), (71, 23741), (81, 23813), (83, 23828), (94, 23900), (98, 23936), (109, 24002), (113, 24026), (117, 24053), (127, 24119), (137, 24197), (143, 24245), (144, 24257), (148, 24299),

Gene: Isolde_32 Start: 21406, Stop: 22659, Start Num: 5

Candidate Starts for Isolde_32:

(Start: 5 @21406 has 47 MA's), (17, 21574), (28, 21733), (34, 21784), (54, 21967), (71, 22078), (81, 22150), (83, 22165), (94, 22237), (98, 22273), (109, 22339), (113, 22363), (117, 22390), (127, 22456), (137, 22534), (143, 22582), (144, 22594), (148, 22636),

Gene: Judy_31 Start: 21954, Stop: 23207, Start Num: 5

Candidate Starts for Judy_31:

(Start: 5 @21954 has 47 MA's), (17, 22122), (28, 22281), (34, 22332), (54, 22515), (71, 22626), (81, 22698), (83, 22713), (94, 22785), (98, 22821), (109, 22887), (113, 22911), (117, 22938), (127, 23004), (137, 23082), (143, 23130), (144, 23142), (148, 23184),

Gene: Kabloowy_32 Start: 21817, Stop: 23070, Start Num: 5

Candidate Starts for Kabloowy_32:

(Start: 5 @21817 has 47 MA's), (17, 21985), (28, 22144), (34, 22195), (54, 22378), (71, 22489), (81, 22561), (83, 22576), (94, 22648), (98, 22684), (109, 22750), (113, 22774), (117, 22801), (127, 22867), (137, 22945), (143, 22993), (144, 23005), (148, 23047),

Gene: KappaFarmDelta_33 Start: 25961, Stop: 27130, Start Num: 13

Candidate Starts for KappaFarmDelta_33:

(Start: 13 @25961 has 4 MA's), (14, 26000), (23, 26087), (32, 26204), (45, 26297), (65, 26489), (70, 26540), (72, 26546), (87, 26657), (92, 26705), (119, 26876), (123, 26903), (125, 26906), (126, 26924), (132, 26969), (135, 26990), (141, 27044), (147, 27101), (148, 27104),

Gene: Karkharias_30 Start: 21331, Stop: 22584, Start Num: 5

Candidate Starts for Karkharias_30:

(Start: 5 @21331 has 47 MA's), (17, 21499), (28, 21658), (34, 21709), (54, 21892), (71, 22003), (81, 22075), (83, 22090), (94, 22162), (98, 22198), (109, 22264), (113, 22288), (117, 22315), (127, 22381), (137, 22459), (143, 22507), (144, 22519), (148, 22561),

Gene: KayMoney_31 Start: 21475, Stop: 22728, Start Num: 5

Candidate Starts for KayMoney_31:

(Start: 5 @21475 has 47 MA's), (17, 21643), (28, 21802), (34, 21853), (54, 22036), (71, 22147), (81, 22219), (83, 22234), (94, 22306), (98, 22342), (109, 22408), (113, 22432), (117, 22459), (127, 22525), (137, 22603), (143, 22651), (144, 22663), (148, 22705),

Gene: Kewpiedoll_25 Start: 19354, Stop: 20586, Start Num: 7

Candidate Starts for Kewpiedoll_25:

(Start: 7 @19354 has 3 MA's), (23, 19543), (32, 19660), (45, 19753), (59, 19924), (65, 19945), (70, 19996), (72, 20002), (77, 20041), (83, 20086), (87, 20113), (111, 20278), (119, 20332), (121, 20350), (123, 20359), (125, 20362), (130, 20416), (135, 20446), (141, 20500), (148, 20560), (151, 20581),

Gene: Kihatsu_33 Start: 23689, Stop: 24942, Start Num: 5

Candidate Starts for Kihatsu_33:

(Start: 5 @23689 has 47 MA's), (17, 23857), (28, 24016), (34, 24067), (54, 24250), (71, 24361), (81, 24433), (83, 24448), (94, 24520), (98, 24556), (109, 24622), (113, 24646), (117, 24673), (127, 24739), (137, 24817), (143, 24865), (144, 24877), (148, 24919),

Gene: Lasker_32 Start: 21645, Stop: 22898, Start Num: 5

Candidate Starts for Lasker_32:

(Start: 5 @21645 has 47 MA's), (17, 21813), (28, 21972), (34, 22023), (54, 22206), (71, 22317), (81, 22389), (83, 22404), (94, 22476), (98, 22512), (109, 22578), (113, 22602), (117, 22629), (127, 22695), (137, 22773), (143, 22821), (144, 22833), (148, 22875),

Gene: Lawnathon_32 Start: 21500, Stop: 22753, Start Num: 5

Candidate Starts for Lawnathon_32:

(Start: 5 @21500 has 47 MA's), (17, 21668), (28, 21827), (34, 21878), (54, 22061), (71, 22172), (81, 22244), (83, 22259), (94, 22331), (98, 22367), (109, 22433), (113, 22457), (117, 22484), (127, 22550), (137, 22628), (143, 22676), (144, 22688), (148, 22730),

Gene: Lenoxika_32 Start: 23339, Stop: 24592, Start Num: 5

Candidate Starts for Lenoxika_32:

(Start: 5 @23339 has 47 MA's), (17, 23507), (28, 23666), (34, 23717), (54, 23900), (71, 24011), (81, 24083), (83, 24098), (94, 24170), (98, 24206), (109, 24272), (113, 24296), (117, 24323), (127, 24389), (137, 24467), (143, 24515), (144, 24527), (148, 24569),

Gene: LilyBell_30 Start: 21343, Stop: 22596, Start Num: 5

Candidate Starts for LilyBell_30:

(Start: 5 @21343 has 47 MA's), (17, 21511), (28, 21670), (34, 21721), (54, 21904), (71, 22015), (81, 22087), (83, 22102), (94, 22174), (98, 22210), (109, 22276), (113, 22300), (117, 22327), (127, 22393), (137, 22471), (143, 22519), (144, 22531), (148, 22573),

Gene: MUWow_31 Start: 21664, Stop: 22917, Start Num: 5

Candidate Starts for MUWow_31:

(Start: 5 @21664 has 47 MA's), (17, 21832), (28, 21991), (34, 22042), (54, 22225), (71, 22336), (81, 22408), (83, 22423), (94, 22495), (98, 22531), (109, 22597), (113, 22621), (117, 22648), (127, 22714), (137, 22792), (143, 22840), (144, 22852), (148, 22894),

Gene: Mapleville_32 Start: 21570, Stop: 22823, Start Num: 5

Candidate Starts for Mapleville_32:

(Start: 5 @21570 has 47 MA's), (17, 21738), (28, 21897), (34, 21948), (54, 22131), (71, 22242), (81, 22314), (83, 22329), (94, 22401), (98, 22437), (109, 22503), (113, 22527), (117, 22554), (127, 22620),

(137, 22698), (143, 22746), (144, 22758), (148, 22800),

Gene: MaterMagnus_32 Start: 21647, Stop: 22900, Start Num: 5

Candidate Starts for MaterMagnus_32:

(Start: 5 @21647 has 47 MA's), (17, 21815), (28, 21974), (34, 22025), (54, 22208), (71, 22319), (81, 22391), (83, 22406), (94, 22478), (98, 22514), (109, 22580), (113, 22604), (117, 22631), (127, 22697), (137, 22775), (143, 22823), (144, 22835), (148, 22877),

Gene: Mbo2_33 Start: 32558, Stop: 33970, Start Num: 3

Candidate Starts for Mbo2_33:

(3, 32558), (4, 32582), (16, 32801), (18, 32825), (24, 32882), (29, 32969), (31, 32978), (33, 33017), (36, 33035), (37, 33041), (42, 33071), (56, 33224), (58, 33245), (62, 33266), (64, 33272), (75, 33356), (80, 33395), (85, 33428), (93, 33497), (97, 33539), (99, 33548), (100, 33566), (101, 33569), (106, 33602), (110, 33617), (114, 33659), (122, 33707), (128, 33755), (132, 33800), (133, 33809), (139, 33869), (150, 33959),

Gene: MidnightRain_32 Start: 21636, Stop: 22889, Start Num: 5

Candidate Starts for MidnightRain_32:

(Start: 5 @21636 has 47 MA's), (17, 21804), (28, 21963), (34, 22014), (54, 22197), (71, 22308), (81, 22380), (83, 22395), (94, 22467), (98, 22503), (109, 22569), (113, 22593), (117, 22620), (127, 22686), (137, 22764), (143, 22812), (144, 22824), (148, 22866),

Gene: MillySue_32 Start: 23252, Stop: 24505, Start Num: 5

Candidate Starts for MillySue_32:

(Start: 5 @23252 has 47 MA's), (17, 23420), (28, 23579), (34, 23630), (54, 23813), (71, 23924), (81, 23996), (83, 24011), (94, 24083), (98, 24119), (109, 24185), (113, 24209), (117, 24236), (127, 24302), (137, 24380), (143, 24428), (144, 24440), (148, 24482),

Gene: Nandita_32 Start: 23343, Stop: 24596, Start Num: 5

Candidate Starts for Nandita_32:

(Start: 5 @23343 has 47 MA's), (17, 23511), (28, 23670), (34, 23721), (54, 23904), (71, 24015), (81, 24087), (83, 24102), (94, 24174), (98, 24210), (109, 24276), (113, 24300), (117, 24327), (127, 24393), (137, 24471), (143, 24519), (144, 24531), (148, 24573),

Gene: NikkiHotWheels_32 Start: 21407, Stop: 22660, Start Num: 5

Candidate Starts for NikkiHotWheels_32:

(Start: 5 @21407 has 47 MA's), (17, 21575), (28, 21734), (34, 21785), (54, 21968), (71, 22079), (81, 22151), (83, 22166), (94, 22238), (98, 22274), (109, 22340), (113, 22364), (117, 22391), (127, 22457), (137, 22535), (143, 22583), (144, 22595), (148, 22637),

Gene: PeggyLeg03_30 Start: 21943, Stop: 23196, Start Num: 5

Candidate Starts for PeggyLeg03_30:

(Start: 5 @21943 has 47 MA's), (17, 22111), (28, 22270), (34, 22321), (54, 22504), (71, 22615), (81, 22687), (83, 22702), (94, 22774), (98, 22810), (109, 22876), (113, 22900), (117, 22927), (127, 22993), (137, 23071), (143, 23119), (144, 23131), (148, 23173),

Gene: Pipp_31 Start: 26106, Stop: 27275, Start Num: 13

Candidate Starts for Pipp_31:

(Start: 13 @26106 has 4 MA's), (14, 26145), (23, 26232), (32, 26349), (45, 26442), (48, 26544), (60, 26619), (65, 26634), (70, 26685), (83, 26775), (87, 26802), (89, 26808), (92, 26850), (116, 27006), (119, 27021), (120, 27033), (123, 27048), (125, 27051), (132, 27114), (134, 27129), (135, 27135), (141, 27189), (148, 27249),

Gene: Popper_30 Start: 23256, Stop: 24509, Start Num: 5

Candidate Starts for Popper_30:

(Start: 5 @23256 has 47 MA's), (17, 23424), (28, 23583), (34, 23634), (54, 23817), (71, 23928), (81, 24000), (83, 24015), (94, 24087), (98, 24123), (109, 24189), (113, 24213), (117, 24240), (127, 24306), (137, 24384), (143, 24432), (144, 24444), (148, 24486),

Gene: QuinnAvery_32 Start: 23433, Stop: 24686, Start Num: 5

Candidate Starts for QuinnAvery_32:

(Start: 5 @23433 has 47 MA's), (17, 23601), (28, 23760), (34, 23811), (54, 23994), (71, 24105), (81, 24177), (83, 24192), (94, 24264), (98, 24300), (109, 24366), (113, 24390), (117, 24417), (127, 24483), (137, 24561), (143, 24609), (144, 24621), (148, 24663),

Gene: RadFad_32 Start: 21637, Stop: 22890, Start Num: 5

Candidate Starts for RadFad_32:

(Start: 5 @21637 has 47 MA's), (17, 21805), (28, 21964), (34, 22015), (54, 22198), (71, 22309), (81, 22381), (83, 22396), (94, 22468), (98, 22504), (109, 22570), (113, 22594), (117, 22621), (127, 22687), (137, 22765), (143, 22813), (144, 22825), (148, 22867),

Gene: Raphaella_32 Start: 21571, Stop: 22824, Start Num: 5

Candidate Starts for Raphaella_32:

(Start: 5 @21571 has 47 MA's), (17, 21739), (28, 21898), (34, 21949), (54, 22132), (71, 22243), (81, 22315), (83, 22330), (94, 22402), (98, 22438), (109, 22504), (113, 22528), (117, 22555), (127, 22621), (137, 22699), (143, 22747), (144, 22759), (148, 22801),

Gene: Richie_32 Start: 21652, Stop: 22905, Start Num: 5

Candidate Starts for Richie_32:

(Start: 5 @21652 has 47 MA's), (17, 21820), (28, 21979), (34, 22030), (54, 22213), (71, 22324), (81, 22396), (83, 22411), (94, 22483), (98, 22519), (109, 22585), (113, 22609), (117, 22636), (127, 22702), (137, 22780), (143, 22828), (144, 22840), (148, 22882),

Gene: Ryan_32 Start: 23954, Stop: 25207, Start Num: 5

Candidate Starts for Ryan_32:

(Start: 5 @23954 has 47 MA's), (17, 24122), (28, 24281), (34, 24332), (54, 24515), (71, 24626), (81, 24698), (83, 24713), (94, 24785), (98, 24821), (109, 24887), (113, 24911), (117, 24938), (127, 25004), (137, 25082), (143, 25130), (144, 25142), (148, 25184),

Gene: Saintcarr_32 Start: 23516, Stop: 24769, Start Num: 5

Candidate Starts for Saintcarr_32:

(Start: 5 @23516 has 47 MA's), (17, 23684), (28, 23843), (34, 23894), (54, 24077), (71, 24188), (81, 24260), (83, 24275), (94, 24347), (98, 24383), (109, 24449), (113, 24473), (117, 24500), (127, 24566), (137, 24644), (143, 24692), (144, 24704), (148, 24746),

Gene: Sakai_32 Start: 21580, Stop: 22833, Start Num: 5

Candidate Starts for Sakai_32:

(Start: 5 @21580 has 47 MA's), (17, 21748), (28, 21907), (34, 21958), (54, 22141), (71, 22252), (81, 22324), (83, 22339), (94, 22411), (98, 22447), (109, 22513), (113, 22537), (117, 22564), (127, 22630), (137, 22708), (143, 22756), (144, 22768), (148, 22810),

Gene: Satrap_32 Start: 21746, Stop: 22999, Start Num: 5

Candidate Starts for Satrap_32:

(Start: 5 @21746 has 47 MA's), (17, 21914), (28, 22073), (34, 22124), (54, 22307), (71, 22418), (81, 22490), (83, 22505), (94, 22577), (98, 22613), (109, 22679), (113, 22703), (117, 22730), (127, 22796), (137, 22874), (143, 22922), (144, 22934), (148, 22976),

Gene: Schism_32 Start: 23343, Stop: 24596, Start Num: 5

Candidate Starts for Schism_32:

(Start: 5 @23343 has 47 MA's), (17, 23511), (28, 23670), (34, 23721), (54, 23904), (71, 24015), (81, 24087), (83, 24102), (94, 24174), (98, 24210), (109, 24276), (113, 24300), (117, 24327), (127, 24393), (137, 24471), (143, 24519), (144, 24531), (148, 24573),

Gene: Shukran_32 Start: 21746, Stop: 22999, Start Num: 5

Candidate Starts for Shukran_32:

(Start: 5 @21746 has 47 MA's), (17, 21914), (28, 22073), (34, 22124), (54, 22307), (71, 22418), (81, 22490), (83, 22505), (94, 22577), (98, 22613), (109, 22679), (113, 22703), (117, 22730), (127, 22796), (137, 22874), (143, 22922), (144, 22934), (148, 22976),

Gene: SonDevVon_31 Start: 21573, Stop: 22826, Start Num: 5

Candidate Starts for SonDevVon_31:

(Start: 5 @21573 has 47 MA's), (17, 21741), (28, 21900), (34, 21951), (54, 22134), (71, 22245), (81, 22317), (83, 22332), (94, 22404), (98, 22440), (109, 22506), (113, 22530), (117, 22557), (127, 22623), (137, 22701), (143, 22749), (144, 22761), (148, 22803),

Gene: SpicyFrank_32 Start: 21872, Stop: 23125, Start Num: 5

Candidate Starts for SpicyFrank_32:

(Start: 5 @21872 has 47 MA's), (17, 22040), (28, 22199), (34, 22250), (54, 22433), (71, 22544), (81, 22616), (83, 22631), (94, 22703), (98, 22739), (109, 22805), (113, 22829), (117, 22856), (127, 22922), (137, 23000), (143, 23048), (144, 23060), (148, 23102),

Gene: Sporco_33 Start: 21628, Stop: 22881, Start Num: 5

Candidate Starts for Sporco_33:

(Start: 5 @21628 has 47 MA's), (17, 21796), (28, 21955), (34, 22006), (54, 22189), (71, 22300), (81, 22372), (83, 22387), (94, 22459), (98, 22495), (109, 22561), (113, 22585), (117, 22612), (127, 22678), (137, 22756), (143, 22804), (144, 22816), (148, 22858),

Gene: ThayneTheZag_32 Start: 21791, Stop: 23044, Start Num: 5

Candidate Starts for ThayneTheZag_32:

(Start: 5 @21791 has 47 MA's), (17, 21959), (28, 22118), (34, 22169), (54, 22352), (71, 22463), (81, 22535), (83, 22550), (94, 22622), (98, 22658), (109, 22724), (113, 22748), (117, 22775), (127, 22841), (137, 22919), (143, 22967), (144, 22979), (148, 23021),

Gene: ToastyOats_35 Start: 23974, Stop: 25227, Start Num: 5

Candidate Starts for ToastyOats_35:

(Start: 5 @23974 has 47 MA's), (17, 24142), (28, 24301), (34, 24352), (54, 24535), (71, 24646), (81, 24718), (83, 24733), (94, 24805), (98, 24841), (109, 24907), (113, 24931), (117, 24958), (127, 25024), (137, 25102), (143, 25150), (144, 25162), (148, 25204),

Gene: Toodles_33 Start: 23804, Stop: 25057, Start Num: 5

Candidate Starts for Toodles_33:

(Start: 5 @23804 has 47 MA's), (17, 23972), (28, 24131), (34, 24182), (54, 24365), (71, 24476), (81, 24548), (83, 24563), (94, 24635), (98, 24671), (109, 24737), (113, 24761), (117, 24788), (127, 24854), (137, 24932), (143, 24980), (144, 24992), (148, 25034),

Gene: Yonex_32 Start: 23954, Stop: 25207, Start Num: 5

Candidate Starts for Yonex_32:

(Start: 5 @23954 has 47 MA's), (17, 24122), (28, 24281), (34, 24332), (54, 24515), (71, 24626), (81, 24698), (83, 24713), (94, 24785), (98, 24821), (109, 24887), (113, 24911), (117, 24938), (127, 25004),

(137, 25082), (143, 25130), (144, 25142), (148, 25184),

Gene: YoungHarleezy_32 Start: 21650, Stop: 22903, Start Num: 5

Candidate Starts for YoungHarleezy_32:

(Start: 5 @21650 has 47 MA's), (17, 21818), (28, 21977), (34, 22028), (54, 22211), (71, 22322), (81, 22394), (83, 22409), (94, 22481), (98, 22517), (109, 22583), (113, 22607), (117, 22634), (127, 22700), (137, 22778), (143, 22826), (144, 22838), (148, 22880),

Gene: Zaheer_32 Start: 24043, Stop: 25296, Start Num: 5

Candidate Starts for Zaheer_32:

(Start: 5 @24043 has 47 MA's), (17, 24211), (28, 24370), (34, 24421), (54, 24604), (71, 24715), (81, 24787), (83, 24802), (94, 24874), (98, 24910), (109, 24976), (113, 25000), (117, 25027), (127, 25093), (137, 25171), (143, 25219), (144, 25231), (148, 25273),