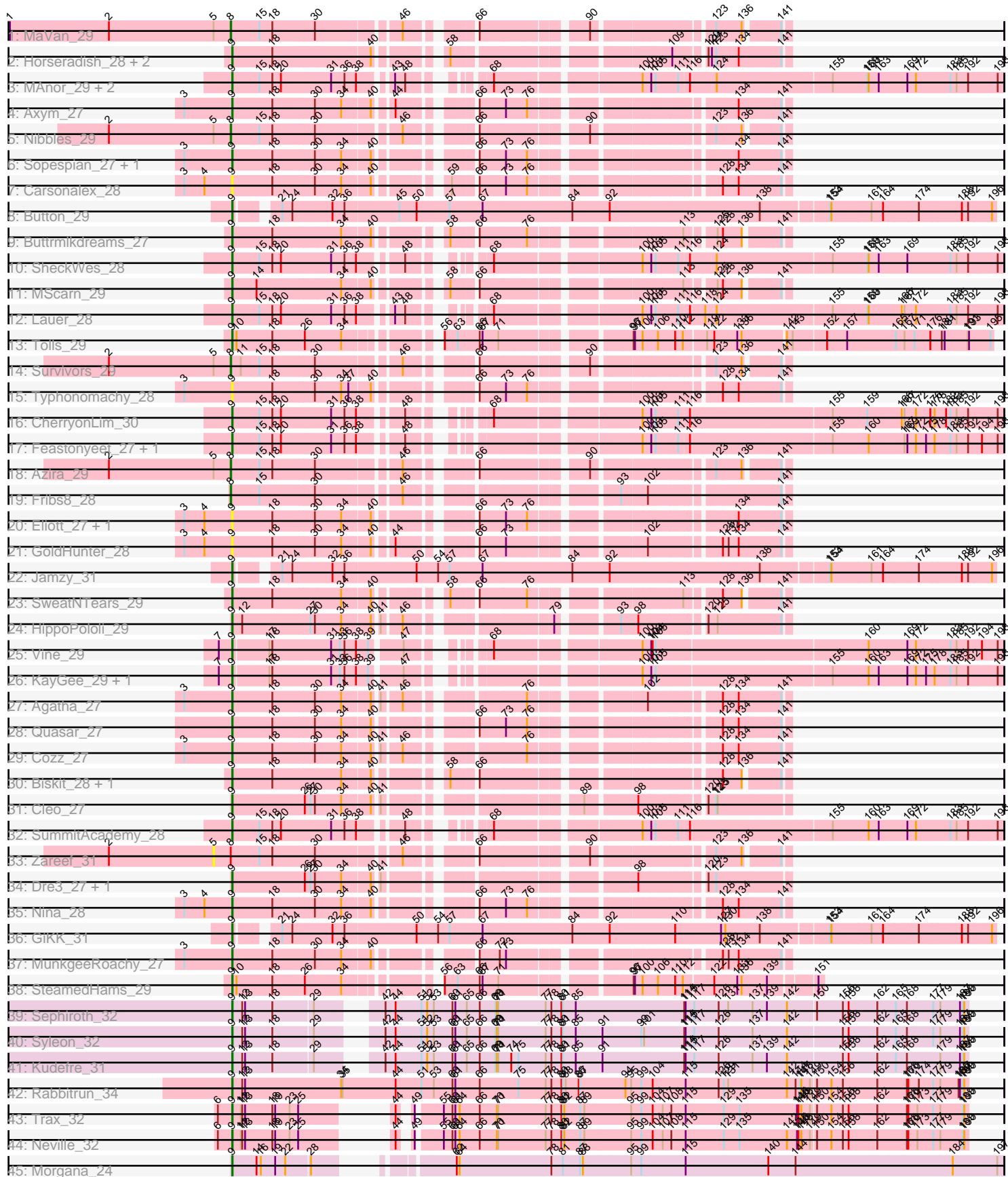


Pham 192605



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 192605 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192605 has 55 members, 7 are drafts.

Phages represented in each track:

- Track 1 : MaVan_29
- Track 2 : Horseradish_28, Yummy_28, Troje_27
- Track 3 : MAnor_29, Mayweather_30, Pons_29
- Track 4 : Axym_27
- Track 5 : Nibbles_29
- Track 6 : Sopespian_27, Burnsey_27
- Track 7 : Carsonalex_28
- Track 8 : Button_29
- Track 9 : Buttrmilkdreams_27
- Track 10 : SheckWes_28
- Track 11 : MScarn_29
- Track 12 : Lauer_28
- Track 13 : Tolls_29
- Track 14 : Survivors_29
- Track 15 : Typhonomachy_28
- Track 16 : CherryonLim_30
- Track 17 : Feastonyeet_27, BigChungus_27
- Track 18 : Azira_29
- Track 19 : Fribs8_28
- Track 20 : Elliott_27, PsychoKiller_27
- Track 21 : GoldHunter_28
- Track 22 : Jamzy_31
- Track 23 : SweatNTears_29
- Track 24 : HippoPololi_29
- Track 25 : Vine_29
- Track 26 : KayGee_29, Elinal_30
- Track 27 : Agatha_27
- Track 28 : Quasar_27
- Track 29 : Cozz_27
- Track 30 : Biskit_28, SketchMex_26
- Track 31 : Cleo_27
- Track 32 : SummitAcademy_28
- Track 33 : Zareef_31
- Track 34 : Dre3_27, Gibbous_27
- Track 35 : Nina_28
- Track 36 : GiKK_31
- Track 37 : MunkgeeRoachy_27

- Track 38 : SteamedHams_29
- Track 39 : Sephiroth_32
- Track 40 : Syleon_32
- Track 41 : Kudefre_31
- Track 42 : Rabbitrun_34
- Track 43 : Trax_32
- Track 44 : Neville_32
- Track 45 : Morgana_24

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

The start number called the most often in the published annotations is 9, it was called in 43 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_27, Axym_27, BigChungus_27, Biskit_28, Burnsey_27, Button_29, Buttrmldreams_27, Carsonalex_28, CherryonLim_30, Cleo_27, Cozz_27, Dre3_27, Elinal_30, Elliott_27, Feastonyeet_27, GiKK_31, Gibbous_27, GoldHunter_28, HippoPololi_29, Horseradish_28, Jamzy_31, KayGee_29, Kudefre_31, Lauer_28, MAnor_29, MScarn_29, Mayweather_30, Morgana_24, MunkgeeRoachy_27, Neville_32, Nina_28, Pons_29, PsychoKiller_27, Quasar_27, Rabbitrun_34, Sephiroth_32, SheckWes_28, SketchMex_26, Sopespian_27, SteamedHams_29, SummitAcademy_28, SweatNTears_29, Syleon_32, Tolls_29, Trax_32, Troje_27, Typhonomachy_28, Vine_29, Yummy_28,

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

-

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

- Azira_29, Fribs8_28, MaVan_29, Nibbles_29, Survivors_29, Zareef_31,

Summary by start number:

Start 5:

- Found in 5 of 55 (9.1%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Zareef_31 (CT),

Start 8:

- Found in 6 of 55 (10.9%) of genes in pham
- Manual Annotations of this start: 5 of 48
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Azira_29 (CT), Fribs8_28 (CT), MaVan_29 (CT), Nibbles_29 (CT), Survivors_29 (CT),

Start 9:

- Found in 49 of 55 (89.1%) of genes in pham
- Manual Annotations of this start: 43 of 48
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Agatha_27 (CT), Axym_27 (CT), BigChungus_27 (CT), Biskit_28 (CT), Burnsey_27 (CT), Button_29 (CT), Buttrmlkdreams_27 (CT), Carsonalex_28 (CT), CherryonLim_30 (CT), Cleo_27 (CT), Cozz_27 (CT), Dre3_27 (CT), Elinal_30 (CT), Elliott_27 (CT), Feastonyeet_27 (CT), GiKK_31 (CT), Gibbous_27 (CT), GoldHunter_28 (CT), HippoPololi_29 (CT), Horseradish_28 (CT), Jamzy_31 (CT), KayGee_29 (CT), Kudefre_31 (DU1), Lauer_28 (CT), MAnor_29 (CT), MScarn_29 (CT), Mayweather_30 (CT), Morgana_24 (DZ), MunkgeeRoachy_27 (CT), Neville_32 (DU2), Nina_28 (CT), Pons_29 (CT), PsychoKiller_27 (CT), Quasar_27 (CT), Rabbitrun_34 (DU2), Sephiroth_32 (DU1), SheckWes_28 (CT), SketchMex_26 (CT), Sopespian_27 (CT), SteamedHams_29 (CT), SummitAcademy_28 (CT), SweatNTears_29 (CT), Syleon_32 (DU1), Tolls_29 (CT), Trax_32 (DU2), Troje_27 (CT), Typhonmarchy_28 (CT), Vine_29 (CT), Yummy_28 (CT),

Summary by clusters:

There are 4 clusters represented in this pham: DU1, DU2, DZ, CT,

Info for manual annotations of cluster CT:

- Start number 8 was manually annotated 5 times for cluster CT.
- Start number 9 was manually annotated 36 times for cluster CT.

Info for manual annotations of cluster DU1:

- Start number 9 was manually annotated 3 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 9 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster DZ:

- Start number 9 was manually annotated 1 time for cluster DZ.

Gene Information:

Gene: Agatha_27 Start: 21963, Stop: 22928, Start Num: 9

Candidate Starts for Agatha_27:

(3, 21864), (Start: 9 @21963 has 43 MA's), (18, 22044), (30, 22128), (34, 22182), (40, 22239), (41, 22248), (46, 22284), (76, 22482), (102, 22677), (128, 22797), (134, 22830), (141, 22914),

Gene: Axym_27 Start: 21966, Stop: 22931, Start Num: 9

Candidate Starts for Axym_27:

(3, 21867), (Start: 9 @21966 has 43 MA's), (18, 22047), (30, 22131), (34, 22185), (40, 22242), (44, 22272), (66, 22395), (73, 22443), (76, 22485), (134, 22833), (141, 22917),

Gene: Azira_29 Start: 22942, Stop: 23892, Start Num: 8

Candidate Starts for Azira_29:

(2, 22687), (5, 22906), (Start: 8 @22942 has 5 MA's), (15, 22999), (18, 23023), (30, 23107), (46, 23263), (66, 23371), (90, 23557), (123, 23764), (136, 23815), (141, 23878),

Gene: BigChungus_27 Start: 21875, Stop: 23308, Start Num: 9

Candidate Starts for BigChungus_27:

(Start: 9 @21875 has 43 MA's), (15, 21932), (18, 21959), (20, 21977), (31, 22079), (36, 22106), (38, 22130), (48, 22199), (100, 22577), (103, 22595), (105, 22604), (111, 22649), (116, 22670), (155, 22955), (160, 23030), (167, 23105), (169, 23111), (172, 23129), (175, 23150), (178, 23168), (183, 23201), (185, 23213), (192, 23237), (194, 23264), (198, 23297),

Gene: Biskit_28 Start: 21620, Stop: 22570, Start Num: 9

Candidate Starts for Biskit_28:

(Start: 9 @21620 has 43 MA's), (18, 21701), (34, 21839), (40, 21896), (58, 22004), (66, 22049), (128, 22454), (136, 22493), (141, 22556),

Gene: Burnsey_27 Start: 21967, Stop: 22923, Start Num: 9

Candidate Starts for Burnsey_27:

(3, 21868), (Start: 9 @21967 has 43 MA's), (18, 22048), (30, 22132), (34, 22186), (40, 22234), (66, 22387), (73, 22435), (76, 22477), (134, 22825), (141, 22909),

Gene: Button_29 Start: 21375, Stop: 22883, Start Num: 9

Candidate Starts for Button_29:

(Start: 9 @21375 has 43 MA's), (21, 21441), (24, 21462), (32, 21543), (36, 21567), (45, 21675), (50, 21711), (57, 21780), (67, 21849), (84, 22032), (92, 22110), (138, 22422), (153, 22551), (154, 22554), (161, 22635), (164, 22659), (174, 22731), (188, 22818), (192, 22827), (196, 22875),

Gene: Buttrmlkdreams_27 Start: 21602, Stop: 22552, Start Num: 9

Candidate Starts for Buttrmlkdreams_27:

(Start: 9 @21602 has 43 MA's), (18, 21683), (34, 21821), (40, 21878), (58, 21986), (66, 22031), (76, 22121), (113, 22379), (125, 22427), (128, 22436), (136, 22475), (141, 22538),

Gene: Carsonalex_28 Start: 22024, Stop: 22989, Start Num: 9

Candidate Starts for Carsonalex_28:

(3, 21925), (4, 21967), (Start: 9 @22024 has 43 MA's), (18, 22105), (30, 22189), (34, 22243), (40, 22300), (59, 22411), (66, 22453), (73, 22501), (76, 22543), (128, 22858), (134, 22891), (141, 22975),

Gene: CherryonLim_30 Start: 23612, Stop: 25042, Start Num: 9

Candidate Starts for CherryonLim_30:

(Start: 9 @23612 has 43 MA's), (15, 23669), (18, 23696), (20, 23714), (31, 23816), (36, 23843), (38, 23867), (48, 23936), (68, 24041), (100, 24314), (103, 24332), (105, 24341), (111, 24386), (116, 24407), (155, 24692), (159, 24764), (166, 24836), (167, 24842), (172, 24866), (176, 24896), (178, 24905), (182, 24929), (183, 24938), (185, 24950), (192, 24971), (198, 25031),

Gene: Cleo_27 Start: 22293, Stop: 23258, Start Num: 9

Candidate Starts for Cleo_27:

(Start: 9 @22293 has 43 MA's), (26, 22440), (27, 22449), (30, 22458), (34, 22512), (40, 22569), (41, 22578), (89, 22896), (98, 22989), (120, 23100), (123, 23115), (125, 23118),

Gene: Cozz_27 Start: 21967, Stop: 22932, Start Num: 9

Candidate Starts for Cozz_27:

(3, 21868), (Start: 9 @21967 has 43 MA's), (18, 22048), (30, 22132), (34, 22186), (40, 22243), (41, 22252), (46, 22288), (76, 22486), (128, 22801), (134, 22834), (141, 22918),

Gene: Dre3_27 Start: 22219, Stop: 23184, Start Num: 9

Candidate Starts for Dre3_27:

(Start: 9 @22219 has 43 MA's), (26, 22366), (27, 22375), (30, 22384), (34, 22438), (40, 22495), (41, 22504), (98, 22915), (120, 23026), (123, 23041),

Gene: Elinal_30 Start: 22849, Stop: 24279, Start Num: 9

Candidate Starts for Elinal_30:

(7, 22822), (Start: 9 @22849 has 43 MA's), (17, 22921), (18, 22924), (31, 23044), (33, 23062), (36, 23071), (38, 23095), (39, 23116), (47, 23170), (100, 23551), (103, 23569), (105, 23578), (155, 23929), (160, 24004), (163, 24025), (169, 24085), (172, 24103), (175, 24124), (178, 24142), (183, 24175), (185, 24187), (192, 24208), (198, 24268),

Gene: Elliott_27 Start: 21966, Stop: 22931, Start Num: 9

Candidate Starts for Elliott_27:

(3, 21867), (4, 21909), (Start: 9 @21966 has 43 MA's), (18, 22047), (30, 22131), (34, 22185), (40, 22242), (66, 22395), (73, 22443), (76, 22485), (134, 22833), (141, 22917),

Gene: Feastonyeet_27 Start: 21875, Stop: 23308, Start Num: 9

Candidate Starts for Feastonyeet_27:

(Start: 9 @21875 has 43 MA's), (15, 21932), (18, 21959), (20, 21977), (31, 22079), (36, 22106), (38, 22130), (48, 22199), (100, 22577), (103, 22595), (105, 22604), (111, 22649), (116, 22670), (155, 22955), (160, 23030), (167, 23105), (169, 23111), (172, 23129), (175, 23150), (178, 23168), (183, 23201), (185, 23213), (192, 23237), (194, 23264), (198, 23297),

Gene: Fribs8_28 Start: 22797, Stop: 23762, Start Num: 8

Candidate Starts for Fribs8_28:

(Start: 8 @22797 has 5 MA's), (15, 22854), (30, 22962), (46, 23118), (93, 23460), (102, 23511), (141, 23748),

Gene: GiKK_31 Start: 21674, Stop: 23182, Start Num: 9

Candidate Starts for GiKK_31:

(Start: 9 @21674 has 43 MA's), (21, 21740), (24, 21761), (32, 21842), (36, 21866), (50, 22010), (54, 22055), (57, 22079), (67, 22148), (84, 22331), (92, 22409), (110, 22544), (127, 22640), (130, 22649), (138, 22721), (153, 22850), (154, 22853), (161, 22934), (164, 22958), (174, 23030), (188, 23117), (192, 23126), (196, 23174),

Gene: Gibbous_27 Start: 22219, Stop: 23184, Start Num: 9

Candidate Starts for Gibbous_27:

(Start: 9 @22219 has 43 MA's), (26, 22366), (27, 22375), (30, 22384), (34, 22438), (40, 22495), (41, 22504), (98, 22915), (120, 23026), (123, 23041),

Gene: GoldHunter_28 Start: 21967, Stop: 22932, Start Num: 9

Candidate Starts for GoldHunter_28:

(3, 21868), (4, 21910), (Start: 9 @21967 has 43 MA's), (18, 22048), (30, 22132), (34, 22186), (40, 22243), (44, 22273), (66, 22396), (73, 22444), (102, 22681), (128, 22801), (132, 22813), (134, 22834), (141, 22918),

Gene: HippoPololi_29 Start: 22868, Stop: 23833, Start Num: 9

Candidate Starts for HippoPololi_29:

(Start: 9 @22868 has 43 MA's), (12, 22889), (27, 23024), (30, 23033), (34, 23087), (40, 23144), (41, 23153), (46, 23189), (79, 23429), (93, 23531), (98, 23564), (120, 23675), (125, 23693), (141, 23819),

Gene: Horseradish_28 Start: 21441, Stop: 22406, Start Num: 9

Candidate Starts for Horseradish_28:

(Start: 9 @21441 has 43 MA's), (18, 21522), (40, 21717), (58, 21825), (109, 22197), (120, 22248), (121, 22254), (123, 22263), (134, 22308), (141, 22392),

Gene: Jamzy_31 Start: 21688, Stop: 23196, Start Num: 9

Candidate Starts for Jamzy_31:

(Start: 9 @21688 has 43 MA's), (21, 21754), (24, 21775), (32, 21856), (36, 21880), (50, 22024), (54, 22069), (57, 22093), (67, 22162), (84, 22345), (92, 22423), (138, 22735), (153, 22864), (154, 22867), (161, 22948), (164, 22972), (174, 23044), (188, 23131), (192, 23140), (196, 23188),

Gene: KayGee_29 Start: 22849, Stop: 24279, Start Num: 9

Candidate Starts for KayGee_29:

(7, 22822), (Start: 9 @22849 has 43 MA's), (17, 22921), (18, 22924), (31, 23044), (33, 23062), (36, 23071), (38, 23095), (39, 23116), (47, 23170), (100, 23551), (103, 23569), (105, 23578), (155, 23929), (160, 24004), (163, 24025), (169, 24085), (172, 24103), (175, 24124), (178, 24142), (183, 24175), (185, 24187), (192, 24208), (198, 24268),

Gene: Kudrefre_31 Start: 26003, Stop: 27445, Start Num: 9

Candidate Starts for Kudrefre_31:

(Start: 9 @26003 has 43 MA's), (12, 26024), (13, 26030), (18, 26084), (29, 26165), (42, 26258), (44, 26279), (51, 26333), (52, 26345), (53, 26357), (60, 26396), (61, 26402), (65, 26423), (66, 26450), (69, 26480), (70, 26483), (71, 26486), (74, 26513), (75, 26528), (77, 26585), (78, 26597), (80, 26618), (81, 26621), (85, 26648), (91, 26702), (114, 26870), (115, 26873), (117, 26888), (126, 26939), (137, 27008), (139, 27038), (142, 27077), (156, 27188), (158, 27200), (162, 27260), (165, 27299), (168, 27320), (179, 27389), (187, 27428), (189, 27434), (190, 27437),

Gene: Lauer_28 Start: 22905, Stop: 24338, Start Num: 9

Candidate Starts for Lauer_28:

(Start: 9 @22905 has 43 MA's), (15, 22962), (18, 22989), (20, 23007), (31, 23109), (36, 23136), (38, 23160), (43, 23208), (48, 23229), (68, 23334), (100, 23607), (103, 23625), (105, 23634), (111, 23679), (116, 23700), (118, 23727), (124, 23751), (155, 23985), (159, 24057), (160, 24060), (166, 24129), (167, 24135), (172, 24159), (183, 24231), (185, 24243), (192, 24267), (198, 24327),

Gene: MAnor_29 Start: 22872, Stop: 24305, Start Num: 9

Candidate Starts for MAnor_29:

(Start: 9 @22872 has 43 MA's), (15, 22929), (18, 22956), (20, 22974), (31, 23076), (36, 23103), (38, 23127), (43, 23175), (48, 23196), (68, 23301), (100, 23574), (103, 23592), (105, 23601), (111, 23646), (116, 23667), (124, 23718), (155, 23952), (159, 24024), (160, 24027), (163, 24048), (169, 24108), (172, 24126), (183, 24198), (185, 24210), (192, 24234), (198, 24294),

Gene: MScarn_29 Start: 21605, Stop: 22555, Start Num: 9

Candidate Starts for MScarn_29:

(Start: 9 @21605 has 43 MA's), (14, 21656), (34, 21824), (40, 21881), (58, 21989), (66, 22034), (113, 22382), (125, 22430), (128, 22439), (136, 22478), (141, 22541),

Gene: MaVan_29 Start: 22975, Stop: 23925, Start Num: 8

Candidate Starts for MaVan_29:

(1, 22513), (2, 22720), (5, 22939), (Start: 8 @22975 has 5 MA's), (15, 23032), (18, 23056), (30, 23140), (46, 23296), (66, 23404), (90, 23590), (123, 23797), (136, 23848), (141, 23911),

Gene: Mayweather_30 Start: 23488, Stop: 24921, Start Num: 9

Candidate Starts for Mayweather_30:

(Start: 9 @23488 has 43 MA's), (15, 23545), (18, 23572), (20, 23590), (31, 23692), (36, 23719), (38, 23743), (43, 23791), (48, 23812), (68, 23917), (100, 24190), (103, 24208), (105, 24217), (111, 24262), (116, 24283), (124, 24334), (155, 24568), (159, 24640), (160, 24643), (163, 24664), (169, 24724), (172, 24742), (183, 24814), (185, 24826), (192, 24850), (198, 24910),

Gene: Morgana_24 Start: 21426, Stop: 22886, Start Num: 9

Candidate Starts for Morgana_24:

(Start: 9 @21426 has 43 MA's), (14, 21477), (16, 21486), (19, 21513), (22, 21531), (28, 21579), (62, 21759), (64, 21765), (78, 21954), (81, 21978), (87, 22014), (88, 22020), (95, 22116), (99, 22137), (115, 22230), (140, 22398), (144, 22455), (184, 22779), (197, 22872),

Gene: MunkgeeRoachy_27 Start: 22044, Stop: 23009, Start Num: 9

Candidate Starts for MunkgeeRoachy_27:

(3, 21945), (Start: 9 @22044 has 43 MA's), (18, 22125), (30, 22209), (34, 22263), (40, 22320), (66, 22473), (72, 22512), (73, 22521), (128, 22878), (132, 22890), (134, 22911), (141, 22995),

Gene: Neville_32 Start: 27410, Stop: 28765, Start Num: 9

Candidate Starts for Neville_32:

(6, 27380), (Start: 9 @27410 has 43 MA's), (11, 27428), (12, 27431), (13, 27437), (18, 27491), (19, 27497), (23, 27527), (25, 27545), (44, 27638), (49, 27653), (55, 27698), (60, 27716), (61, 27722), (64, 27731), (66, 27770), (70, 27803), (71, 27806), (77, 27905), (78, 27917), (80, 27938), (81, 27941), (82, 27944), (87, 27977), (89, 27986), (95, 28079), (99, 28100), (104, 28124), (107, 28145), (108, 28163), (115, 28193), (129, 28268), (135, 28301), (142, 28397), (145, 28418), (146, 28421), (148, 28427), (149, 28445), (150, 28454), (154, 28484), (156, 28508), (158, 28520), (162, 28580), (168, 28640), (170, 28643), (173, 28661), (177, 28694), (179, 28709), (189, 28754), (190, 28757),

Gene: Nibbles_29 Start: 22974, Stop: 23924, Start Num: 8

Candidate Starts for Nibbles_29:

(2, 22719), (5, 22938), (Start: 8 @22974 has 5 MA's), (15, 23031), (18, 23055), (30, 23139), (46, 23295), (66, 23403), (90, 23589), (123, 23796), (136, 23847), (141, 23910),

Gene: Nina_28 Start: 23006, Stop: 23971, Start Num: 9

Candidate Starts for Nina_28:

(3, 22907), (4, 22949), (Start: 9 @23006 has 43 MA's), (18, 23087), (30, 23171), (34, 23225), (40, 23282), (66, 23435), (73, 23483), (76, 23525), (128, 23840), (134, 23873), (141, 23957),

Gene: Pons_29 Start: 22861, Stop: 24294, Start Num: 9

Candidate Starts for Pons_29:

(Start: 9 @22861 has 43 MA's), (15, 22918), (18, 22945), (20, 22963), (31, 23065), (36, 23092), (38, 23116), (43, 23164), (48, 23185), (68, 23290), (100, 23563), (103, 23581), (105, 23590), (111, 23635), (116, 23656), (124, 23707), (155, 23941), (159, 24013), (160, 24016), (163, 24037), (169, 24097), (172, 24115), (183, 24187), (185, 24199), (192, 24223), (198, 24283),

Gene: PsychoKiller_27 Start: 21966, Stop: 22931, Start Num: 9

Candidate Starts for PsychoKiller_27:

(3, 21867), (4, 21909), (Start: 9 @21966 has 43 MA's), (18, 22047), (30, 22131), (34, 22185), (40, 22242), (66, 22395), (73, 22443), (76, 22485), (134, 22833), (141, 22917),

Gene: Quasar_27 Start: 22575, Stop: 23540, Start Num: 9

Candidate Starts for Quasar_27:

(Start: 9 @22575 has 43 MA's), (18, 22656), (30, 22740), (34, 22794), (40, 22851), (66, 23004), (73, 23052), (76, 23094), (128, 23409), (134, 23442), (141, 23526),

Gene: Rabbitrun_34 Start: 27724, Stop: 29229, Start Num: 9

Candidate Starts for Rabbitrun_34:

(Start: 9 @27724 has 43 MA's), (12, 27745), (13, 27751), (34, 27949), (35, 27952), (44, 28063), (51, 28117), (53, 28141), (60, 28180), (61, 28186), (66, 28234), (75, 28312), (77, 28369), (78, 28381), (80, 28402), (81, 28405), (83, 28411), (86, 28438), (87, 28441), (94, 28531), (95, 28543), (99, 28564), (104, 28588), (115, 28657), (126, 28723), (129, 28732), (131, 28741), (142, 28861), (144, 28879),

(147, 28888), (148, 28891), (149, 28909), (150, 28918), (154, 28948), (156, 28972), (162, 29044), (168, 29104), (170, 29107), (174, 29128), (177, 29158), (179, 29173), (186, 29209), (187, 29212), (189, 29218), (190, 29221),

Gene: Sephiroth_32 Start: 26174, Stop: 27616, Start Num: 9

Candidate Starts for Sephiroth_32:

(Start: 9 @26174 has 43 MA's), (12, 26195), (13, 26201), (18, 26255), (29, 26336), (42, 26429), (44, 26450), (51, 26504), (52, 26516), (53, 26528), (60, 26567), (61, 26573), (65, 26594), (66, 26621), (69, 26651), (70, 26654), (71, 26657), (77, 26756), (78, 26768), (80, 26789), (81, 26792), (85, 26819), (114, 27041), (115, 27044), (117, 27059), (126, 27110), (131, 27128), (137, 27179), (139, 27209), (142, 27248), (150, 27305), (156, 27359), (158, 27371), (162, 27431), (165, 27470), (168, 27491), (177, 27545), (179, 27560), (187, 27599), (189, 27605), (190, 27608),

Gene: SheckWes_28 Start: 21838, Stop: 23271, Start Num: 9

Candidate Starts for SheckWes_28:

(Start: 9 @21838 has 43 MA's), (15, 21895), (18, 21922), (20, 21940), (31, 22042), (36, 22069), (38, 22093), (48, 22162), (68, 22267), (100, 22540), (103, 22558), (105, 22567), (111, 22612), (116, 22633), (124, 22684), (155, 22918), (159, 22990), (160, 22993), (163, 23014), (169, 23074), (183, 23164), (185, 23176), (192, 23200), (198, 23260),

Gene: SketchMex_26 Start: 21620, Stop: 22570, Start Num: 9

Candidate Starts for SketchMex_26:

(Start: 9 @21620 has 43 MA's), (18, 21701), (34, 21839), (40, 21896), (58, 22004), (66, 22049), (128, 22454), (136, 22493), (141, 22556),

Gene: Sopespian_27 Start: 21967, Stop: 22932, Start Num: 9

Candidate Starts for Sopespian_27:

(3, 21868), (Start: 9 @21967 has 43 MA's), (18, 22048), (30, 22132), (34, 22186), (40, 22243), (66, 22396), (73, 22444), (76, 22486), (134, 22834), (141, 22918),

Gene: SteamedHams_29 Start: 21624, Stop: 22667, Start Num: 9

Candidate Starts for SteamedHams_29:

(Start: 9 @21624 has 43 MA's), (10, 21633), (18, 21705), (26, 21771), (34, 21843), (56, 21990), (63, 22017), (66, 22056), (67, 22062), (71, 22092), (96, 22317), (97, 22320), (100, 22335), (106, 22365), (110, 22395), (112, 22410), (122, 22467), (133, 22515), (136, 22524), (139, 22572), (151, 22656),

Gene: SummitAcademy_28 Start: 21914, Stop: 23344, Start Num: 9

Candidate Starts for SummitAcademy_28:

(Start: 9 @21914 has 43 MA's), (15, 21971), (18, 21998), (20, 22016), (31, 22118), (36, 22145), (38, 22169), (48, 22238), (68, 22343), (100, 22616), (103, 22634), (105, 22643), (111, 22688), (116, 22709), (155, 22994), (160, 23069), (163, 23090), (169, 23150), (172, 23168), (183, 23240), (185, 23252), (192, 23273), (198, 23333),

Gene: Survivors_29 Start: 22791, Stop: 23741, Start Num: 8

Candidate Starts for Survivors_29:

(2, 22536), (5, 22755), (Start: 8 @22791 has 5 MA's), (11, 22809), (15, 22848), (18, 22872), (30, 22956), (46, 23112), (66, 23220), (90, 23406), (123, 23613), (136, 23664), (141, 23727),

Gene: SweatNTears_29 Start: 21888, Stop: 22838, Start Num: 9

Candidate Starts for SweatNTears_29:

(Start: 9 @21888 has 43 MA's), (18, 21969), (34, 22107), (40, 22164), (58, 22272), (66, 22317), (76, 22407), (113, 22665), (128, 22722), (136, 22761), (141, 22824),

Gene: Syleon_32 Start: 26096, Stop: 27538, Start Num: 9

Candidate Starts for Syleon_32:

(Start: 9 @26096 has 43 MA's), (12, 26117), (13, 26123), (18, 26177), (29, 26258), (42, 26351), (44, 26372), (51, 26426), (52, 26438), (53, 26450), (60, 26489), (61, 26495), (65, 26516), (66, 26543), (69, 26573), (70, 26576), (71, 26579), (77, 26678), (78, 26690), (80, 26711), (81, 26714), (85, 26741), (91, 26795), (99, 26873), (101, 26879), (114, 26963), (115, 26966), (117, 26981), (126, 27032), (137, 27101), (142, 27170), (156, 27281), (158, 27293), (162, 27353), (165, 27392), (168, 27413), (177, 27467), (179, 27482), (187, 27521), (189, 27527), (190, 27530),

Gene: Tolls_29 Start: 21618, Stop: 23021, Start Num: 9

Candidate Starts for Tolls_29:

(Start: 9 @21618 has 43 MA's), (10, 21627), (18, 21699), (26, 21765), (34, 21837), (56, 21984), (63, 22011), (66, 22050), (67, 22056), (71, 22086), (96, 22311), (97, 22314), (100, 22329), (106, 22359), (110, 22389), (112, 22404), (119, 22446), (122, 22461), (133, 22509), (136, 22518), (142, 22596), (143, 22608), (152, 22674), (157, 22716), (165, 22818), (167, 22836), (171, 22857), (176, 22890), (180, 22914), (181, 22920), (191, 22968), (193, 22971), (195, 23016),

Gene: Trax_32 Start: 27716, Stop: 29071, Start Num: 9

Candidate Starts for Trax_32:

(6, 27686), (Start: 9 @27716 has 43 MA's), (11, 27734), (12, 27737), (13, 27743), (18, 27797), (19, 27803), (23, 27833), (25, 27851), (44, 27944), (49, 27959), (55, 28004), (60, 28022), (61, 28028), (64, 28037), (66, 28076), (70, 28109), (71, 28112), (77, 28211), (78, 28223), (80, 28244), (81, 28247), (82, 28250), (87, 28283), (89, 28292), (95, 28385), (99, 28406), (104, 28430), (107, 28451), (108, 28469), (115, 28499), (129, 28574), (135, 28607), (145, 28724), (146, 28727), (148, 28733), (149, 28751), (150, 28760), (154, 28790), (156, 28814), (158, 28826), (162, 28886), (168, 28946), (170, 28949), (173, 28967), (177, 29000), (179, 29015), (189, 29060), (190, 29063),

Gene: Troje_27 Start: 21602, Stop: 22567, Start Num: 9

Candidate Starts for Troje_27:

(Start: 9 @21602 has 43 MA's), (18, 21683), (40, 21878), (58, 21986), (109, 22358), (120, 22409), (121, 22415), (123, 22424), (134, 22469), (141, 22553),

Gene: Typhonomachy_28 Start: 21999, Stop: 22964, Start Num: 9

Candidate Starts for Typhonomachy_28:

(3, 21900), (Start: 9 @21999 has 43 MA's), (18, 22080), (30, 22164), (34, 22218), (37, 22233), (40, 22275), (66, 22428), (73, 22476), (76, 22518), (128, 22833), (134, 22866), (141, 22950),

Gene: Vine_29 Start: 22832, Stop: 24265, Start Num: 9

Candidate Starts for Vine_29:

(7, 22805), (Start: 9 @22832 has 43 MA's), (17, 22904), (18, 22907), (31, 23027), (33, 23045), (36, 23054), (38, 23078), (39, 23099), (47, 23153), (68, 23261), (100, 23534), (103, 23552), (104, 23555), (105, 23561), (160, 23987), (169, 24068), (172, 24086), (183, 24158), (185, 24170), (192, 24194), (194, 24221), (198, 24254),

Gene: Yummy_28 Start: 21555, Stop: 22520, Start Num: 9

Candidate Starts for Yummy_28:

(Start: 9 @21555 has 43 MA's), (18, 21636), (40, 21831), (58, 21939), (109, 22311), (120, 22362), (121, 22368), (123, 22377), (134, 22422), (141, 22506),

Gene: Zareef_31 Start: 22907, Stop: 23893, Start Num: 5

Candidate Starts for Zareef_31:

(2, 22688), (5, 22907), (Start: 8 @22943 has 5 MA's), (15, 23000), (18, 23024), (30, 23108), (46, 23264), (66, 23372), (90, 23558), (123, 23765), (136, 23816), (141, 23879),

