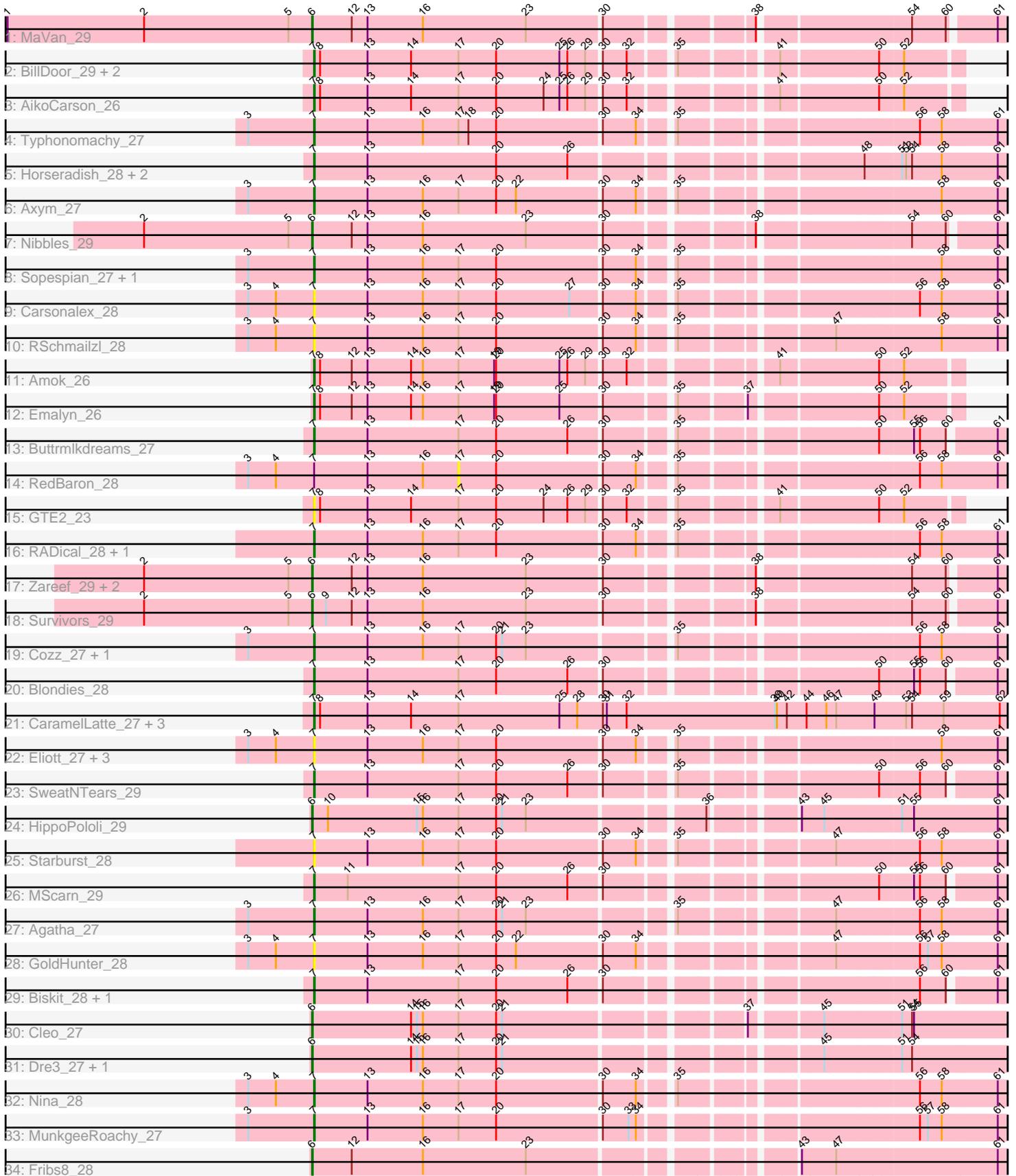# Pham 283896

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 283896 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283896 has 51 members, 16 are drafts.

Phages represented in each track:
• Track 1 : MaVan_29
• Track 2 : BillDoor_29, AndPeggy_26, Yarn_26
• Track 3 : AikoCarson_26
• Track 4 : Typhonomachy_27
• Track 5 : Horseradish_28, Yummy_28, Troje_27
• Track 6 : Axym_27
• Track 7 : Nibbles_29
• Track 8 : Sopespian_27, Burnsey_27
• Track 9 : Carsonalex_28
• Track 10 : RSchmailzl_28
• Track 11 : Amok_26
• Track 12 : Emalyn_26
• Track 13 : Buttrmlkdreams_27
• Track 14 : RedBaron_28
• Track 15 : GTE2_23
• Track 16 : RADical_28, Quasar_27
• Track 17 : Zareef_29, Wolfwood_31, Azira_29
• Track 18 : Survivors_29
• Track 19 : Cozz_27, Bubble_27
• Track 20 : Blondies_28
• Track 21 : CaramelLatte_27, ChocoMunchkin_27, CanesSauce_27, SteamedHams_29
• Track 22 : Eliott_27, ChickenTender_30, Socotra_28, PsychoKiller_27
• Track 23 : SweatNTears_29
• Track 24 : HippoPololi_29
• Track 25 : Starburst_28
• Track 26 : MScarn_29
• Track 27 : Agatha_27
• Track 28 : GoldHunter_28
• Track 29 : Biskit_28, SketchMex_26
• Track 30 : Cleo_27
• Track 31 : Dre3_27, Gibbous_27
• Track 32 : Nina_28
• Track 33 : MunkgeeRoachy_27
• Track 34 : Fribs8_28

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

The start number called the most often in the published annotations is 7, it was called in 25 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Agatha_27, AikoCarson_26, Amok_26, AndPeggy_26, Axym_27, BillDoor_29, Biskit_28, Blondies_28, Bubble_27, Burnsey_27, Buttrmlkdreams_27, CanesSauce_27, CaramelLatte_27, Carsonalex_28, ChickenTender_30, ChocoMunchkin_27, Cozz_27, Eliott_27, Emalyn_26, GTE2_23, GoldHunter_28, Horseradish_28, MScarn_29, MunkgeeRoachy_27, Nina_28, PsychoKiller_27, Quasar_27, RADical_28, RSchmailzl_28, SketchMex_26, Socotra_28, Sopespian_27, Starburst_28, SteamedHams_29, SweatNTears_29, Troje_27, Typhonomachy_27, Yarn_26, Yummy_28,

Genes that have the "Most Annotated" start but do not call it:
• RedBaron_28,

Genes that do not have the "Most Annotated" start:
• Azira_29, Cleo_27, Dre3_27, Fribs8_28, Gibbous_27, HippoPololi_29, MaVan_29, Nibbles_29, Survivors_29, Wolfwood_31, Zareef_29,

Summary by start number:

Start 6:
• Found in 11 of 51 (21.6%) of genes in pham
• Manual Annotations of this start: 10 of 35
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Azira_29 (CT), Cleo_27 (CT), Dre3_27 (CT), Fribs8_28 (CT), Gibbous_27 (CT), HippoPololi_29 (CT), MaVan_29 (CT), Nibbles_29 (CT), Survivors_29 (CT), Wolfwood_31 (CT), Zareef_29 (CT),

Start 7:
• Found in 40 of 51 (78.4%) of genes in pham
• Manual Annotations of this start: 25 of 35
• Called 97.5% of time when present
• Phage (with cluster) where this start called: Agatha_27 (CT), AikoCarson_26 (CT), Amok_26 (CT), AndPeggy_26 (CT), Axym_27 (CT), BillDoor_29 (CT), Biskit_28 (CT), Blondies_28 (CT), Bubble_27 (CT), Burnsey_27 (CT), Buttrmlkdreams_27 (CT), CanesSauce_27 (CT), CaramelLatte_27 (CT), Carsonalex_28 (CT), ChickenTender_30 (CT), ChocoMunchkin_27 (CT), Cozz_27 (CT), Eliott_27 (CT), Emalyn_26 (CT), GTE2_23 (CT), GoldHunter_28 (CT), Horseradish_28 (CT), MScarn_29 (CT), MunkgeeRoachy_27 (CT), Nina_28 (CT), PsychoKiller_27 (CT), Quasar_27 (CT), RADical_28 (CT), RSchmailzl_28 (CT), SketchMex_26 (CT), Socotra_28 (CT), Sopespian_27 (CT), Starburst_28 (CT), SteamedHams_29 (CT), SweatNTears_29 (CT), Troje_27 (CT), Typhonomachy_27 (CT), Yarn_26 (CT), Yummy_28 (CT),

Start 17:
• Found in 41 of 51 (80.4%) of genes in pham
• No Manual Annotations of this start.
• Called 2.4% of time when present

• Phage (with cluster) where this start called: RedBaron_28 (CT),

Summary by clusters:

There is one cluster represented in this pham: CT

Info for manual annotations of cluster CT:
•Start number 6 was manually annotated 10 times for cluster CT.
•Start number 7 was manually annotated 25 times for cluster CT.

Gene Information:

Gene: Agatha_27 Start: 21963, Stop: 22928, Start Num: 7
Candidate Starts for Agatha_27:
(3, 21864), (Start: 7 @21963 has 25 MA's), (13, 22044), (16, 22128), (17, 22182), (20, 22239), (21, 22248), (23, 22284), (35, 22482), (47, 22677), (56, 22797), (58, 22830), (61, 22914),

Gene: AikoCarson_26 Start: 21241, Stop: 22128, Start Num: 7
Candidate Starts for AikoCarson_26:
(Start: 7 @21241 has 25 MA's), (8, 21250), (13, 21322), (14, 21388), (17, 21460), (20, 21517), (24, 21589), (25, 21613), (26, 21625), (29, 21652), (30, 21670), (32, 21706), (41, 21880), (50, 22018), (52, 22048),

Gene: Amok_26 Start: 21201, Stop: 22088, Start Num: 7
Candidate Starts for Amok_26:
(Start: 7 @21201 has 25 MA's), (8, 21210), (12, 21258), (13, 21282), (14, 21348), (16, 21366), (17, 21420), (19, 21474), (20, 21477), (25, 21573), (26, 21585), (29, 21612), (30, 21630), (32, 21666), (41, 21840), (50, 21978), (52, 22008),

Gene: AndPeggy_26 Start: 21647, Stop: 22534, Start Num: 7
Candidate Starts for AndPeggy_26:
(Start: 7 @21647 has 25 MA's), (8, 21656), (13, 21728), (14, 21794), (17, 21866), (20, 21923), (25, 22019), (26, 22031), (29, 22058), (30, 22076), (32, 22112), (35, 22166), (41, 22286), (50, 22424), (52, 22454),

Gene: Axym_27 Start: 21966, Stop: 22931, Start Num: 7
Candidate Starts for Axym_27:
(3, 21867), (Start: 7 @21966 has 25 MA's), (13, 22047), (16, 22131), (17, 22185), (20, 22242), (22, 22272), (30, 22395), (34, 22443), (35, 22485), (58, 22833), (61, 22917),

Gene: Azira_29 Start: 22942, Stop: 23892, Start Num: 6
Candidate Starts for Azira_29:
(2, 22687), (5, 22906), (Start: 6 @22942 has 10 MA's), (12, 22999), (13, 23023), (16, 23107), (23, 23263), (30, 23371), (38, 23557), (54, 23764), (60, 23815), (61, 23878),

Gene: BillDoor_29 Start: 21594, Stop: 22481, Start Num: 7
Candidate Starts for BillDoor_29:
(Start: 7 @21594 has 25 MA's), (8, 21603), (13, 21675), (14, 21741), (17, 21813), (20, 21870), (25, 21966), (26, 21978), (29, 22005), (30, 22023), (32, 22059), (35, 22113), (41, 22233), (50, 22371), (52, 22401),

Gene: Biskit_28 Start: 21620, Stop: 22570, Start Num: 7
Candidate Starts for Biskit_28:
(Start: 7 @21620 has 25 MA's), (13, 21701), (17, 21839), (20, 21896), (26, 22004), (30, 22049), (56, 22454), (60, 22493), (61, 22556),

Gene: Blondies_28 Start: 21603, Stop: 22553, Start Num: 7
Candidate Starts for Blondies_28:
(Start: 7 @21603 has 25 MA's), (13, 21684), (17, 21822), (20, 21879), (26, 21987), (30, 22032), (50, 22380), (55, 22428), (56, 22437), (60, 22476), (61, 22539),

Gene: Bubble_27 Start: 21966, Stop: 22931, Start Num: 7
Candidate Starts for Bubble_27:
(3, 21867), (Start: 7 @21966 has 25 MA's), (13, 22047), (16, 22131), (17, 22185), (20, 22242), (21, 22251), (23, 22287), (35, 22485), (56, 22800), (58, 22833), (61, 22917),

Gene: Burnsey_27 Start: 21967, Stop: 22923, Start Num: 7
Candidate Starts for Burnsey_27:
(3, 21868), (Start: 7 @21967 has 25 MA's), (13, 22048), (16, 22132), (17, 22186), (20, 22234), (30, 22387), (34, 22435), (35, 22477), (58, 22825), (61, 22909),

Gene: Buttrmlkdreams_27 Start: 21602, Stop: 22552, Start Num: 7
Candidate Starts for Buttrmlkdreams_27:
(Start: 7 @21602 has 25 MA's), (13, 21683), (17, 21821), (20, 21878), (26, 21986), (30, 22031), (35, 22121), (50, 22379), (55, 22427), (56, 22436), (60, 22475), (61, 22538),

Gene: CanesSauce_27 Start: 21648, Stop: 22691, Start Num: 7
Candidate Starts for CanesSauce_27:
(Start: 7 @21648 has 25 MA's), (8, 21657), (13, 21729), (14, 21795), (17, 21867), (25, 22014), (28, 22041), (30, 22080), (31, 22086), (32, 22116), (39, 22341), (40, 22344), (42, 22359), (44, 22389), (46, 22419), (47, 22434), (49, 22491), (53, 22539), (54, 22548), (59, 22596), (62, 22680),

Gene: CaramelLatte_27 Start: 21648, Stop: 22691, Start Num: 7
Candidate Starts for CaramelLatte_27:
(Start: 7 @21648 has 25 MA's), (8, 21657), (13, 21729), (14, 21795), (17, 21867), (25, 22014), (28, 22041), (30, 22080), (31, 22086), (32, 22116), (39, 22341), (40, 22344), (42, 22359), (44, 22389), (46, 22419), (47, 22434), (49, 22491), (53, 22539), (54, 22548), (59, 22596), (62, 22680),

Gene: Carsonalex_28 Start: 22024, Stop: 22989, Start Num: 7
Candidate Starts for Carsonalex_28:
(3, 21925), (4, 21967), (Start: 7 @22024 has 25 MA's), (13, 22105), (16, 22189), (17, 22243), (20, 22300), (27, 22411), (30, 22453), (34, 22501), (35, 22543), (56, 22858), (58, 22891), (61, 22975),

Gene: ChickenTender_30 Start: 22240, Stop: 23205, Start Num: 7
Candidate Starts for ChickenTender_30:
(3, 22141), (4, 22183), (Start: 7 @22240 has 25 MA's), (13, 22321), (16, 22405), (17, 22459), (20, 22516), (30, 22669), (34, 22717), (35, 22759), (58, 23107), (61, 23191),

Gene: ChocoMunchkin_27 Start: 21648, Stop: 22691, Start Num: 7
Candidate Starts for ChocoMunchkin_27:
(Start: 7 @21648 has 25 MA's), (8, 21657), (13, 21729), (14, 21795), (17, 21867), (25, 22014), (28, 22041), (30, 22080), (31, 22086), (32, 22116), (39, 22341), (40, 22344), (42, 22359), (44, 22389), (46, 22419), (47, 22434), (49, 22491), (53, 22539), (54, 22548), (59, 22596), (62, 22680),

Gene: Cleo_27 Start: 22293, Stop: 23258, Start Num: 6
Candidate Starts for Cleo_27:
(Start: 6 @22293 has 10 MA's), (14, 22440), (15, 22449), (16, 22458), (17, 22512), (20, 22569), (21, 22578), (37, 22896), (45, 22989), (51, 23100), (54, 23115), (55, 23118),

Gene: Cozz_27 Start: 21967, Stop: 22932, Start Num: 7
Candidate Starts for Cozz_27:
(3, 21868), (Start: 7 @21967 has 25 MA's), (13, 22048), (16, 22132), (17, 22186), (20, 22243), (21, 22252), (23, 22288), (35, 22486), (56, 22801), (58, 22834), (61, 22918),

Gene: Dre3_27 Start: 22219, Stop: 23184, Start Num: 6
Candidate Starts for Dre3_27:
(Start: 6 @22219 has 10 MA's), (14, 22366), (15, 22375), (16, 22384), (17, 22438), (20, 22495), (21, 22504), (45, 22915), (51, 23026), (54, 23041),

Gene: Eliott_27 Start: 21966, Stop: 22931, Start Num: 7
Candidate Starts for Eliott_27:
(3, 21867), (4, 21909), (Start: 7 @21966 has 25 MA's), (13, 22047), (16, 22131), (17, 22185), (20, 22242), (30, 22395), (34, 22443), (35, 22485), (58, 22833), (61, 22917),

Gene: Emalyn_26 Start: 21242, Stop: 22129, Start Num: 7
Candidate Starts for Emalyn_26:
(Start: 7 @21242 has 25 MA's), (8, 21251), (12, 21299), (13, 21323), (14, 21389), (16, 21407), (17, 21461), (19, 21515), (20, 21518), (25, 21614), (30, 21671), (35, 21761), (37, 21845), (50, 22019), (52, 22049),

Gene: Fribs8_28 Start: 22797, Stop: 23762, Start Num: 6
Candidate Starts for Fribs8_28:
(Start: 6 @22797 has 10 MA's), (12, 22854), (16, 22962), (23, 23118), (43, 23460), (47, 23511), (61, 23748),

Gene: GTE2_23 Start: 21320, Stop: 22207, Start Num: 7
Candidate Starts for GTE2_23:
(Start: 7 @21320 has 25 MA's), (8, 21329), (13, 21401), (14, 21467), (17, 21539), (20, 21596), (24, 21668), (26, 21704), (29, 21731), (30, 21749), (32, 21785), (35, 21839), (41, 21959), (50, 22097), (52, 22127),

Gene: Gibbous_27 Start: 22219, Stop: 23184, Start Num: 6
Candidate Starts for Gibbous_27:
(Start: 6 @22219 has 10 MA's), (14, 22366), (15, 22375), (16, 22384), (17, 22438), (20, 22495), (21, 22504), (45, 22915), (51, 23026), (54, 23041),

Gene: GoldHunter_28 Start: 21967, Stop: 22932, Start Num: 7
Candidate Starts for GoldHunter_28:
(3, 21868), (4, 21910), (Start: 7 @21967 has 25 MA's), (13, 22048), (16, 22132), (17, 22186), (20, 22243), (22, 22273), (30, 22396), (34, 22444), (47, 22681), (56, 22801), (57, 22813), (58, 22834), (61, 22918),

Gene: HippoPololi_29 Start: 22868, Stop: 23833, Start Num: 6
Candidate Starts for HippoPololi_29:
(Start: 6 @22868 has 10 MA's), (10, 22889), (15, 23024), (16, 23033), (17, 23087), (20, 23144), (21, 23153), (23, 23189), (36, 23429), (43, 23531), (45, 23564), (51, 23675), (55, 23693), (61, 23819),

Gene: Horseradish_28 Start: 21441, Stop: 22406, Start Num: 7
Candidate Starts for Horseradish_28:
(Start: 7 @21441 has 25 MA's), (13, 21522), (20, 21717), (26, 21825), (48, 22197), (51, 22248), (53, 22254), (54, 22263), (58, 22308), (61, 22392),

Gene: MScarn_29 Start: 21605, Stop: 22555, Start Num: 7
Candidate Starts for MScarn_29:
(Start: 7 @21605 has 25 MA's), (11, 21656), (17, 21824), (20, 21881), (26, 21989), (30, 22034), (50, 22382), (55, 22430), (56, 22439), (60, 22478), (61, 22541),

Gene: MaVan_29 Start: 22975, Stop: 23925, Start Num: 6
Candidate Starts for MaVan_29:
(1, 22513), (2, 22720), (5, 22939), (Start: 6 @22975 has 10 MA's), (12, 23032), (13, 23056), (16, 23140), (23, 23296), (30, 23404), (38, 23590), (54, 23797), (60, 23848), (61, 23911),

Gene: MunkgeeRoachy_27 Start: 22044, Stop: 23009, Start Num: 7
Candidate Starts for MunkgeeRoachy_27:
(3, 21945), (Start: 7 @22044 has 25 MA's), (13, 22125), (16, 22209), (17, 22263), (20, 22320), (30, 22473), (33, 22512), (34, 22521), (56, 22878), (57, 22890), (58, 22911), (61, 22995),

Gene: Nibbles_29 Start: 22974, Stop: 23924, Start Num: 6
Candidate Starts for Nibbles_29:
(2, 22719), (5, 22938), (Start: 6 @22974 has 10 MA's), (12, 23031), (13, 23055), (16, 23139), (23, 23295), (30, 23403), (38, 23589), (54, 23796), (60, 23847), (61, 23910),

Gene: Nina_28 Start: 23006, Stop: 23971, Start Num: 7
Candidate Starts for Nina_28:
(3, 22907), (4, 22949), (Start: 7 @23006 has 25 MA's), (13, 23087), (16, 23171), (17, 23225), (20, 23282), (30, 23435), (34, 23483), (35, 23525), (56, 23840), (58, 23873), (61, 23957),

Gene: PsychoKiller_27 Start: 21966, Stop: 22931, Start Num: 7
Candidate Starts for PsychoKiller_27:
(3, 21867), (4, 21909), (Start: 7 @21966 has 25 MA's), (13, 22047), (16, 22131), (17, 22185), (20, 22242), (30, 22395), (34, 22443), (35, 22485), (58, 22833), (61, 22917),

Gene: Quasar_27 Start: 22575, Stop: 23540, Start Num: 7
Candidate Starts for Quasar_27:
(Start: 7 @22575 has 25 MA's), (13, 22656), (16, 22740), (17, 22794), (20, 22851), (30, 23004), (34, 23052), (35, 23094), (56, 23409), (58, 23442), (61, 23526),

Gene: RADical_28 Start: 21967, Stop: 22932, Start Num: 7
Candidate Starts for RADical_28:
(Start: 7 @21967 has 25 MA's), (13, 22048), (16, 22132), (17, 22186), (20, 22243), (30, 22396), (34, 22444), (35, 22486), (56, 22801), (58, 22834), (61, 22918),

Gene: RSchmailzl_28 Start: 22110, Stop: 23075, Start Num: 7
Candidate Starts for RSchmailzl_28:
(3, 22011), (4, 22053), (Start: 7 @22110 has 25 MA's), (13, 22191), (16, 22275), (17, 22329), (20, 22386), (30, 22539), (34, 22587), (35, 22629), (47, 22824), (58, 22977), (61, 23061),

Gene: RedBaron_28 Start: 22229, Stop: 22975, Start Num: 17
Candidate Starts for RedBaron_28:

(3, 21911), (4, 21953), (Start: 7 @22010 has 25 MA's), (13, 22091), (16, 22175), (17, 22229), (20, 22286), (30, 22439), (34, 22487), (35, 22529), (56, 22844), (58, 22877), (61, 22961),

Gene: SketchMex_26 Start: 21620, Stop: 22570, Start Num: 7
Candidate Starts for SketchMex_26:
(Start: 7 @21620 has 25 MA's), (13, 21701), (17, 21839), (20, 21896), (26, 22004), (30, 22049), (56, 22454), (60, 22493), (61, 22556),

Gene: Socotra_28 Start: 21966, Stop: 22931, Start Num: 7
Candidate Starts for Socotra_28:
(3, 21867), (4, 21909), (Start: 7 @21966 has 25 MA's), (13, 22047), (16, 22131), (17, 22185), (20, 22242), (30, 22395), (34, 22443), (35, 22485), (58, 22833), (61, 22917),

Gene: Sopespian_27 Start: 21967, Stop: 22932, Start Num: 7
Candidate Starts for Sopespian_27:
(3, 21868), (Start: 7 @21967 has 25 MA's), (13, 22048), (16, 22132), (17, 22186), (20, 22243), (30, 22396), (34, 22444), (35, 22486), (58, 22834), (61, 22918),

Gene: Starburst_28 Start: 21967, Stop: 22932, Start Num: 7
Candidate Starts for Starburst_28:
(Start: 7 @21967 has 25 MA's), (13, 22048), (16, 22132), (17, 22186), (20, 22243), (30, 22396), (34, 22444), (35, 22486), (47, 22681), (56, 22801), (58, 22834), (61, 22918),

Gene: SteamedHams_29 Start: 21624, Stop: 22667, Start Num: 7
Candidate Starts for SteamedHams_29:
(Start: 7 @21624 has 25 MA's), (8, 21633), (13, 21705), (14, 21771), (17, 21843), (25, 21990), (28, 22017), (30, 22056), (31, 22062), (32, 22092), (39, 22317), (40, 22320), (42, 22335), (44, 22365), (46, 22395), (47, 22410), (49, 22467), (53, 22515), (54, 22524), (59, 22572), (62, 22656),

Gene: Survivors_29 Start: 22791, Stop: 23741, Start Num: 6
Candidate Starts for Survivors_29:
(2, 22536), (5, 22755), (Start: 6 @22791 has 10 MA's), (9, 22809), (12, 22848), (13, 22872), (16, 22956), (23, 23112), (30, 23220), (38, 23406), (54, 23613), (60, 23664), (61, 23727),

Gene: SweatNTears_29 Start: 21888, Stop: 22838, Start Num: 7
Candidate Starts for SweatNTears_29:
(Start: 7 @21888 has 25 MA's), (13, 21969), (17, 22107), (20, 22164), (26, 22272), (30, 22317), (35, 22407), (50, 22665), (56, 22722), (60, 22761), (61, 22824),

Gene: Troje_27 Start: 21602, Stop: 22567, Start Num: 7
Candidate Starts for Troje_27:
(Start: 7 @21602 has 25 MA's), (13, 21683), (20, 21878), (26, 21986), (48, 22358), (51, 22409), (53, 22415), (54, 22424), (58, 22469), (61, 22553),

Gene: Typhonomachy_27 Start: 21999, Stop: 22964, Start Num: 7
Candidate Starts for Typhonomachy_27:
(3, 21900), (Start: 7 @21999 has 25 MA's), (13, 22080), (16, 22164), (17, 22218), (18, 22233), (20, 22275), (30, 22428), (34, 22476), (35, 22518), (56, 22833), (58, 22866), (61, 22950),

Gene: Wolfwood_31 Start: 22935, Stop: 23885, Start Num: 6
Candidate Starts for Wolfwood_31:
(2, 22680), (5, 22899), (Start: 6 @22935 has 10 MA's), (12, 22992), (13, 23016), (16, 23100), (23, 23256), (30, 23364), (38, 23550), (54, 23757), (60, 23808), (61, 23871),

Gene: Yarn_26 Start: 21641, Stop: 22528, Start Num: 7
Candidate Starts for Yarn_26:
(Start: 7 @21641 has 25 MA's), (8, 21650), (13, 21722), (14, 21788), (17, 21860), (20, 21917), (25, 22013), (26, 22025), (29, 22052), (30, 22070), (32, 22106), (35, 22160), (41, 22280), (50, 22418), (52, 22448),

Gene: Yummy_28 Start: 21555, Stop: 22520, Start Num: 7
Candidate Starts for Yummy_28:
(Start: 7 @21555 has 25 MA's), (13, 21636), (20, 21831), (26, 21939), (48, 22311), (51, 22362), (53, 22368), (54, 22377), (58, 22422), (61, 22506),

Gene: Zareef_29 Start: 22943, Stop: 23893, Start Num: 6
Candidate Starts for Zareef_29:
(2, 22688), (5, 22907), (Start: 6 @22943 has 10 MA's), (12, 23000), (13, 23024), (16, 23108), (23, 23264), (30, 23372), (38, 23558), (54, 23765), (60, 23816), (61, 23879),