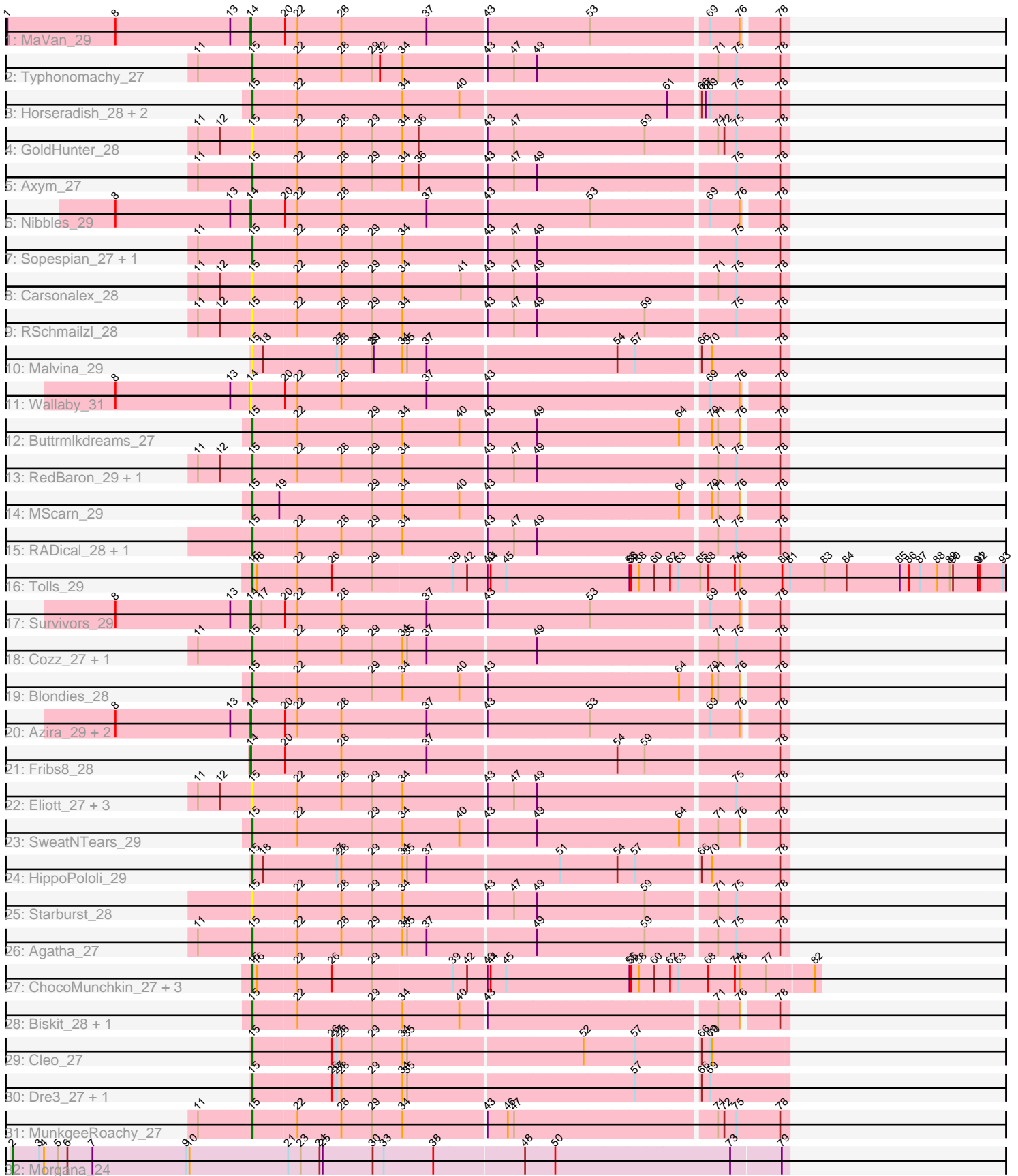


# Pham 305092



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 305092 Report

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

Pham number 305092 has 48 members, 15 are drafts.

Phages represented in each track:

- Track 1 : MaVan\_29
- Track 2 : Typhonmachy\_27
- Track 3 : Horseradish\_28, Yummy\_28, Troje\_27
- Track 4 : GoldHunter\_28
- Track 5 : Axym\_27
- Track 6 : Nibbles\_29
- Track 7 : Sopespian\_27, Burnsey\_27
- Track 8 : Carsonalex\_28
- Track 9 : RSchmailzl\_28
- Track 10 : Malvina\_29
- Track 11 : Wallaby\_31
- Track 12 : Buttrmlkdreams\_27
- Track 13 : RedBaron\_29, Nina\_28
- Track 14 : MScarn\_29
- Track 15 : RADical\_28, Quasar\_27
- Track 16 : Tolls\_29
- Track 17 : Survivors\_29
- Track 18 : Cozz\_27, Bubble\_27
- Track 19 : Blondies\_28
- Track 20 : Azira\_29, Wolfwood\_29, Zareef\_29
- Track 21 : Fribs8\_28
- Track 22 : Elliott\_27, ChickenTender\_30, Socotra\_28, PsychoKiller\_27
- Track 23 : SweatNTears\_29
- Track 24 : HippoPololi\_29
- Track 25 : Starburst\_28
- Track 26 : Agatha\_27
- Track 27 : ChocoMunchkin\_27, CanesSauce\_27, CaramelLatte\_27, SteamedHams\_29
- Track 28 : Biskit\_28, SketchMex\_26
- Track 29 : Cleo\_27
- Track 30 : Dre3\_27, Gibbous\_27
- Track 31 : MunkgeeRoachy\_27
- Track 32 : 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 15, it was called in 25 of the 33 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha\_27, Axym\_27, Biskit\_28, Blondies\_28, Bubble\_27, Burnsey\_27, Buttrmlkdreams\_27, CanesSauce\_27, CaramelLatte\_27, Carsonalex\_28, ChickenTender\_30, ChocoMunchkin\_27, Cleo\_27, Cozz\_27, Dre3\_27, Elliott\_27, Gibbous\_27, GoldHunter\_28, HippoPololi\_29, Horseradish\_28, MScarn\_29, Malvina\_29, MunkgeeRoachy\_27, Nina\_28, PsychoKiller\_27, Quasar\_27, RADical\_28, RSchmailzl\_28, RedBaron\_29, SketchMex\_26, Socotra\_28, Sopespian\_27, Starburst\_28, SteamedHams\_29, SweatNTears\_29, Tolls\_29, Troje\_27, Typhonmarchy\_27, 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, Morgana\_24, Nibbles\_29, Survivors\_29, Wallaby\_31, Wolfwood\_29, Zareef\_29,

### Summary by start number:

Start 2:

- Found in 1 of 48 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Morgana\_24 (DZ),

Start 14:

- Found in 8 of 48 ( 16.7% ) of genes in pham
- Manual Annotations of this start: 7 of 33
- Called 100.0% 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), Wallaby\_31 (CT), Wolfwood\_29 (CT), Zareef\_29 (CT),

Start 15:

- Found in 39 of 48 ( 81.2% ) of genes in pham
- Manual Annotations of this start: 25 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agatha\_27 (CT), Axym\_27 (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), Cleo\_27 (CT), Cozz\_27 (CT), Dre3\_27 (CT), Elliott\_27 (CT), Gibbous\_27 (CT), GoldHunter\_28 (CT), HippoPololi\_29 (CT), Horseradish\_28 (CT), MScarn\_29 (CT), Malvina\_29 (CT), MunkgeeRoachy\_27 (CT), Nina\_28 (CT), PsychoKiller\_27 (CT), Quasar\_27 (CT), RADical\_28 (CT), RSchmailzl\_28 (CT), RedBaron\_29 (CT), SketchMex\_26 (CT), Socotra\_28 (CT), Sopespian\_27 (CT), Starburst\_28 (CT), SteamedHams\_29 (CT), SweatNTears\_29 (CT), Tolls\_29 (CT), Troje\_27 (CT), Typhonmarchy\_27 (CT), Yummy\_28 (CT),

## Summary by clusters:

There are 2 clusters represented in this pham: DZ, CT,

Info for manual annotations of cluster CT:

- Start number 14 was manually annotated 7 times for cluster CT.
- Start number 15 was manually annotated 25 times for cluster CT.

Info for manual annotations of cluster DZ:

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

### **Gene Information:**

Gene: Agatha\_27 Start: 21963, Stop: 22928, Start Num: 15

Candidate Starts for Agatha\_27:

(11, 21864), (Start: 15 @21963 has 25 MA's), (22, 22044), (28, 22128), (29, 22182), (34, 22239), (35, 22248), (37, 22284), (49, 22482), (59, 22677), (71, 22797), (75, 22830), (78, 22914),

Gene: Axym\_27 Start: 21966, Stop: 22931, Start Num: 15

Candidate Starts for Axym\_27:

(11, 21867), (Start: 15 @21966 has 25 MA's), (22, 22047), (28, 22131), (29, 22185), (34, 22242), (36, 22272), (43, 22395), (47, 22443), (49, 22485), (75, 22833), (78, 22917),

Gene: Azira\_29 Start: 22942, Stop: 23892, Start Num: 14

Candidate Starts for Azira\_29:

(8, 22687), (13, 22906), (Start: 14 @22942 has 7 MA's), (20, 22999), (22, 23023), (28, 23107), (37, 23263), (43, 23371), (53, 23557), (69, 23764), (76, 23815), (78, 23878),

Gene: Biskit\_28 Start: 21620, Stop: 22570, Start Num: 15

Candidate Starts for Biskit\_28:

(Start: 15 @21620 has 25 MA's), (22, 21701), (29, 21839), (34, 21896), (40, 22004), (43, 22049), (71, 22454), (76, 22493), (78, 22556),

Gene: Blondies\_28 Start: 21603, Stop: 22553, Start Num: 15

Candidate Starts for Blondies\_28:

(Start: 15 @21603 has 25 MA's), (22, 21684), (29, 21822), (34, 21879), (40, 21987), (43, 22032), (64, 22380), (70, 22428), (71, 22437), (76, 22476), (78, 22539),

Gene: Bubble\_27 Start: 21966, Stop: 22931, Start Num: 15

Candidate Starts for Bubble\_27:

(11, 21867), (Start: 15 @21966 has 25 MA's), (22, 22047), (28, 22131), (29, 22185), (34, 22242), (35, 22251), (37, 22287), (49, 22485), (71, 22800), (75, 22833), (78, 22917),

Gene: Burnsey\_27 Start: 21967, Stop: 22923, Start Num: 15

Candidate Starts for Burnsey\_27:

(11, 21868), (Start: 15 @21967 has 25 MA's), (22, 22048), (28, 22132), (29, 22186), (34, 22234), (43, 22387), (47, 22435), (49, 22477), (75, 22825), (78, 22909),

Gene: Buttrmlkdreams\_27 Start: 21602, Stop: 22552, Start Num: 15

Candidate Starts for Buttrmlkdreams\_27:

(Start: 15 @21602 has 25 MA's), (22, 21683), (29, 21821), (34, 21878), (40, 21986), (43, 22031), (49, 22121), (64, 22379), (70, 22427), (71, 22436), (76, 22475), (78, 22538),

Gene: CanesSauce\_27 Start: 21648, Stop: 22691, Start Num: 15

Candidate Starts for CanesSauce\_27:

(Start: 15 @21648 has 25 MA's), (16, 21657), (22, 21729), (26, 21795), (29, 21867), (39, 22014), (42, 22041), (43, 22080), (44, 22086), (45, 22116), (55, 22341), (56, 22344), (58, 22359), (60, 22389), (62, 22419), (63, 22434), (68, 22491), (74, 22539), (76, 22548), (77, 22596), (82, 22680),

Gene: CaramellLatte\_27 Start: 21648, Stop: 22691, Start Num: 15

Candidate Starts for CaramellLatte\_27:

(Start: 15 @21648 has 25 MA's), (16, 21657), (22, 21729), (26, 21795), (29, 21867), (39, 22014), (42, 22041), (43, 22080), (44, 22086), (45, 22116), (55, 22341), (56, 22344), (58, 22359), (60, 22389), (62, 22419), (63, 22434), (68, 22491), (74, 22539), (76, 22548), (77, 22596), (82, 22680),

Gene: Carsonalex\_28 Start: 22024, Stop: 22989, Start Num: 15

Candidate Starts for Carsonalex\_28:

(11, 21925), (12, 21967), (Start: 15 @22024 has 25 MA's), (22, 22105), (28, 22189), (29, 22243), (34, 22300), (41, 22411), (43, 22453), (47, 22501), (49, 22543), (71, 22858), (75, 22891), (78, 22975),

Gene: ChickenTender\_30 Start: 22240, Stop: 23205, Start Num: 15

Candidate Starts for ChickenTender\_30:

(11, 22141), (12, 22183), (Start: 15 @22240 has 25 MA's), (22, 22321), (28, 22405), (29, 22459), (34, 22516), (43, 22669), (47, 22717), (49, 22759), (75, 23107), (78, 23191),

Gene: ChocoMunchkin\_27 Start: 21648, Stop: 22691, Start Num: 15

Candidate Starts for ChocoMunchkin\_27:

(Start: 15 @21648 has 25 MA's), (16, 21657), (22, 21729), (26, 21795), (29, 21867), (39, 22014), (42, 22041), (43, 22080), (44, 22086), (45, 22116), (55, 22341), (56, 22344), (58, 22359), (60, 22389), (62, 22419), (63, 22434), (68, 22491), (74, 22539), (76, 22548), (77, 22596), (82, 22680),

Gene: Cleo\_27 Start: 22293, Stop: 23258, Start Num: 15

Candidate Starts for Cleo\_27:

(Start: 15 @22293 has 25 MA's), (26, 22440), (27, 22449), (28, 22458), (29, 22512), (34, 22569), (35, 22578), (52, 22896), (57, 22989), (66, 23100), (69, 23115), (70, 23118),

Gene: Cozz\_27 Start: 21967, Stop: 22932, Start Num: 15

Candidate Starts for Cozz\_27:

(11, 21868), (Start: 15 @21967 has 25 MA's), (22, 22048), (28, 22132), (29, 22186), (34, 22243), (35, 22252), (37, 22288), (49, 22486), (71, 22801), (75, 22834), (78, 22918),

Gene: Dre3\_27 Start: 22219, Stop: 23184, Start Num: 15

Candidate Starts for Dre3\_27:

(Start: 15 @22219 has 25 MA's), (26, 22366), (27, 22375), (28, 22384), (29, 22438), (34, 22495), (35, 22504), (57, 22915), (66, 23026), (69, 23041),

Gene: Elliott\_27 Start: 21966, Stop: 22931, Start Num: 15

Candidate Starts for Elliott\_27:

(11, 21867), (12, 21909), (Start: 15 @21966 has 25 MA's), (22, 22047), (28, 22131), (29, 22185), (34, 22242), (43, 22395), (47, 22443), (49, 22485), (75, 22833), (78, 22917),

Gene: Fribs8\_28 Start: 22797, Stop: 23762, Start Num: 14

Candidate Starts for Fribs8\_28:

(Start: 14 @22797 has 7 MA's), (20, 22854), (28, 22962), (37, 23118), (54, 23460), (59, 23511), (78, 23748),

Gene: Gibbous\_27 Start: 22219, Stop: 23184, Start Num: 15

Candidate Starts for Gibbous\_27:

(Start: 15 @22219 has 25 MA's), (26, 22366), (27, 22375), (28, 22384), (29, 22438), (34, 22495), (35, 22504), (57, 22915), (66, 23026), (69, 23041),

Gene: GoldHunter\_28 Start: 21967, Stop: 22932, Start Num: 15

Candidate Starts for GoldHunter\_28:

(11, 21868), (12, 21910), (Start: 15 @21967 has 25 MA's), (22, 22048), (28, 22132), (29, 22186), (34, 22243), (36, 22273), (43, 22396), (47, 22444), (59, 22681), (71, 22801), (72, 22813), (75, 22834), (78, 22918),

Gene: HippoPololi\_29 Start: 22868, Stop: 23833, Start Num: 15

Candidate Starts for HippoPololi\_29:

(Start: 15 @22868 has 25 MA's), (18, 22889), (27, 23024), (28, 23033), (29, 23087), (34, 23144), (35, 23153), (37, 23189), (51, 23429), (54, 23531), (57, 23564), (66, 23675), (70, 23693), (78, 23819),

Gene: Horseradish\_28 Start: 21441, Stop: 22406, Start Num: 15

Candidate Starts for Horseradish\_28:

(Start: 15 @21441 has 25 MA's), (22, 21522), (34, 21717), (40, 21825), (61, 22197), (66, 22248), (67, 22254), (69, 22263), (75, 22308), (78, 22392),

Gene: MScarn\_29 Start: 21605, Stop: 22555, Start Num: 15

Candidate Starts for MScarn\_29:

(Start: 15 @21605 has 25 MA's), (19, 21656), (29, 21824), (34, 21881), (40, 21989), (43, 22034), (64, 22382), (70, 22430), (71, 22439), (76, 22478), (78, 22541),

Gene: MaVan\_29 Start: 22975, Stop: 23925, Start Num: 14

Candidate Starts for MaVan\_29:

(1, 22513), (8, 22720), (13, 22939), (Start: 14 @22975 has 7 MA's), (20, 23032), (22, 23056), (28, 23140), (37, 23296), (43, 23404), (53, 23590), (69, 23797), (76, 23848), (78, 23911),

Gene: Malvina\_29 Start: 22871, Stop: 23836, Start Num: 15

Candidate Starts for Malvina\_29:

(Start: 15 @22871 has 25 MA's), (18, 22892), (27, 23027), (28, 23036), (29, 23090), (31, 23093), (34, 23147), (35, 23156), (37, 23192), (54, 23534), (57, 23567), (66, 23678), (70, 23696), (78, 23822),

Gene: Morgana\_24 Start: 21426, Stop: 22886, Start Num: 2

Candidate Starts for Morgana\_24:

(Start: 2 @21426 has 1 MA's), (3, 21477), (4, 21486), (5, 21513), (6, 21531), (7, 21579), (9, 21759), (10, 21765), (21, 21954), (23, 21978), (24, 22014), (25, 22020), (30, 22116), (33, 22137), (38, 22230), (48, 22398), (50, 22455), (73, 22779), (79, 22872),

Gene: MunkgeeRoachy\_27 Start: 22044, Stop: 23009, Start Num: 15

Candidate Starts for MunkgeeRoachy\_27:

(11, 21945), (Start: 15 @22044 has 25 MA's), (22, 22125), (28, 22209), (29, 22263), (34, 22320), (43, 22473), (46, 22512), (47, 22521), (71, 22878), (72, 22890), (75, 22911), (78, 22995),

Gene: Nibbles\_29 Start: 22974, Stop: 23924, Start Num: 14

Candidate Starts for Nibbles\_29:

(8, 22719), (13, 22938), (Start: 14 @22974 has 7 MA's), (20, 23031), (22, 23055), (28, 23139), (37, 23295), (43, 23403), (53, 23589), (69, 23796), (76, 23847), (78, 23910),

Gene: Nina\_28 Start: 23006, Stop: 23971, Start Num: 15

Candidate Starts for Nina\_28:

(11, 22907), (12, 22949), (Start: 15 @23006 has 25 MA's), (22, 23087), (28, 23171), (29, 23225), (34, 23282), (43, 23435), (47, 23483), (49, 23525), (71, 23840), (75, 23873), (78, 23957),

Gene: PsychoKiller\_27 Start: 21966, Stop: 22931, Start Num: 15

Candidate Starts for PsychoKiller\_27:

(11, 21867), (12, 21909), (Start: 15 @21966 has 25 MA's), (22, 22047), (28, 22131), (29, 22185), (34, 22242), (43, 22395), (47, 22443), (49, 22485), (75, 22833), (78, 22917),

Gene: Quasar\_27 Start: 22575, Stop: 23540, Start Num: 15

Candidate Starts for Quasar\_27:

(Start: 15 @22575 has 25 MA's), (22, 22656), (28, 22740), (29, 22794), (34, 22851), (43, 23004), (47, 23052), (49, 23094), (71, 23409), (75, 23442), (78, 23526),

Gene: RADical\_28 Start: 21967, Stop: 22932, Start Num: 15

Candidate Starts for RADical\_28:

(Start: 15 @21967 has 25 MA's), (22, 22048), (28, 22132), (29, 22186), (34, 22243), (43, 22396), (47, 22444), (49, 22486), (71, 22801), (75, 22834), (78, 22918),

Gene: RSchmailzl\_28 Start: 22110, Stop: 23075, Start Num: 15

Candidate Starts for RSchmailzl\_28:

(11, 22011), (12, 22053), (Start: 15 @22110 has 25 MA's), (22, 22191), (28, 22275), (29, 22329), (34, 22386), (43, 22539), (47, 22587), (49, 22629), (59, 22824), (75, 22977), (78, 23061),

Gene: RedBaron\_29 Start: 22010, Stop: 22975, Start Num: 15

Candidate Starts for RedBaron\_29:

(11, 21911), (12, 21953), (Start: 15 @22010 has 25 MA's), (22, 22091), (28, 22175), (29, 22229), (34, 22286), (43, 22439), (47, 22487), (49, 22529), (71, 22844), (75, 22877), (78, 22961),

Gene: SketchMex\_26 Start: 21620, Stop: 22570, Start Num: 15

Candidate Starts for SketchMex\_26:

(Start: 15 @21620 has 25 MA's), (22, 21701), (29, 21839), (34, 21896), (40, 22004), (43, 22049), (71, 22454), (76, 22493), (78, 22556),

Gene: Socotra\_28 Start: 21966, Stop: 22931, Start Num: 15

Candidate Starts for Socotra\_28:

(11, 21867), (12, 21909), (Start: 15 @21966 has 25 MA's), (22, 22047), (28, 22131), (29, 22185), (34, 22242), (43, 22395), (47, 22443), (49, 22485), (75, 22833), (78, 22917),

Gene: Sopespian\_27 Start: 21967, Stop: 22932, Start Num: 15

Candidate Starts for Sopespian\_27:

(11, 21868), (Start: 15 @21967 has 25 MA's), (22, 22048), (28, 22132), (29, 22186), (34, 22243), (43, 22396), (47, 22444), (49, 22486), (75, 22834), (78, 22918),

Gene: Starburst\_28 Start: 21967, Stop: 22932, Start Num: 15

Candidate Starts for Starburst\_28:

(Start: 15 @21967 has 25 MA's), (22, 22048), (28, 22132), (29, 22186), (34, 22243), (43, 22396), (47, 22444), (49, 22486), (59, 22681), (71, 22801), (75, 22834), (78, 22918),

Gene: SteamedHams\_29 Start: 21624, Stop: 22667, Start Num: 15

Candidate Starts for SteamedHams\_29:

(Start: 15 @21624 has 25 MA's), (16, 21633), (22, 21705), (26, 21771), (29, 21843), (39, 21990), (42, 22017), (43, 22056), (44, 22062), (45, 22092), (55, 22317), (56, 22320), (58, 22335), (60, 22365), (62, 22395), (63, 22410), (68, 22467), (74, 22515), (76, 22524), (77, 22572), (82, 22656),

Gene: Survivors\_29 Start: 22791, Stop: 23741, Start Num: 14

Candidate Starts for Survivors\_29:

(8, 22536), (13, 22755), (Start: 14 @22791 has 7 MA's), (17, 22809), (20, 22848), (22, 22872), (28, 22956), (37, 23112), (43, 23220), (53, 23406), (69, 23613), (76, 23664), (78, 23727),

Gene: SweatNTears\_29 Start: 21888, Stop: 22838, Start Num: 15

Candidate Starts for SweatNTears\_29:

(Start: 15 @21888 has 25 MA's), (22, 21969), (29, 22107), (34, 22164), (40, 22272), (43, 22317), (49, 22407), (64, 22665), (71, 22722), (76, 22761), (78, 22824),

Gene: Tolls\_29 Start: 21618, Stop: 23021, Start Num: 15

Candidate Starts for Tolls\_29:

(Start: 15 @21618 has 25 MA's), (16, 21627), (22, 21699), (26, 21765), (29, 21837), (39, 21984), (42, 22011), (43, 22050), (44, 22056), (45, 22086), (55, 22311), (56, 22314), (58, 22329), (60, 22359), (62, 22389), (63, 22404), (65, 22446), (68, 22461), (74, 22509), (76, 22518), (80, 22596), (81, 22608), (83, 22674), (84, 22716), (85, 22818), (86, 22836), (87, 22857), (88, 22890), (89, 22914), (90, 22920), (91, 22968), (92, 22971), (93, 23016),

Gene: Troje\_27 Start: 21602, Stop: 22567, Start Num: 15

Candidate Starts for Troje\_27:

(Start: 15 @21602 has 25 MA's), (22, 21683), (34, 21878), (40, 21986), (61, 22358), (66, 22409), (67, 22415), (69, 22424), (75, 22469), (78, 22553),

Gene: Typhonomachy\_27 Start: 21999, Stop: 22964, Start Num: 15

Candidate Starts for Typhonomachy\_27:

(11, 21900), (Start: 15 @21999 has 25 MA's), (22, 22080), (28, 22164), (29, 22218), (32, 22233), (34, 22275), (43, 22428), (47, 22476), (49, 22518), (71, 22833), (75, 22866), (78, 22950),

Gene: Wallaby\_31 Start: 22935, Stop: 23885, Start Num: 14

Candidate Starts for Wallaby\_31:

(8, 22680), (13, 22899), (Start: 14 @22935 has 7 MA's), (20, 22992), (22, 23016), (28, 23100), (37, 23256), (43, 23364), (69, 23757), (76, 23808), (78, 23871),

Gene: Wolfwood\_29 Start: 22935, Stop: 23885, Start Num: 14

Candidate Starts for Wolfwood\_29:

(8, 22680), (13, 22899), (Start: 14 @22935 has 7 MA's), (20, 22992), (22, 23016), (28, 23100), (37, 23256), (43, 23364), (53, 23550), (69, 23757), (76, 23808), (78, 23871),

Gene: Yummy\_28 Start: 21555, Stop: 22520, Start Num: 15

Candidate Starts for Yummy\_28:

(Start: 15 @21555 has 25 MA's), (22, 21636), (34, 21831), (40, 21939), (61, 22311), (66, 22362), (67, 22368), (69, 22377), (75, 22422), (78, 22506),

Gene: Zareef\_29 Start: 22943, Stop: 23893, Start Num: 14

Candidate Starts for Zareef\_29:

(8, 22688), (13, 22907), (Start: 14 @22943 has 7 MA's), (20, 23000), (22, 23024), (28, 23108), (37, 23264), (43, 23372), (53, 23558), (69, 23765), (76, 23816), (78, 23879),

