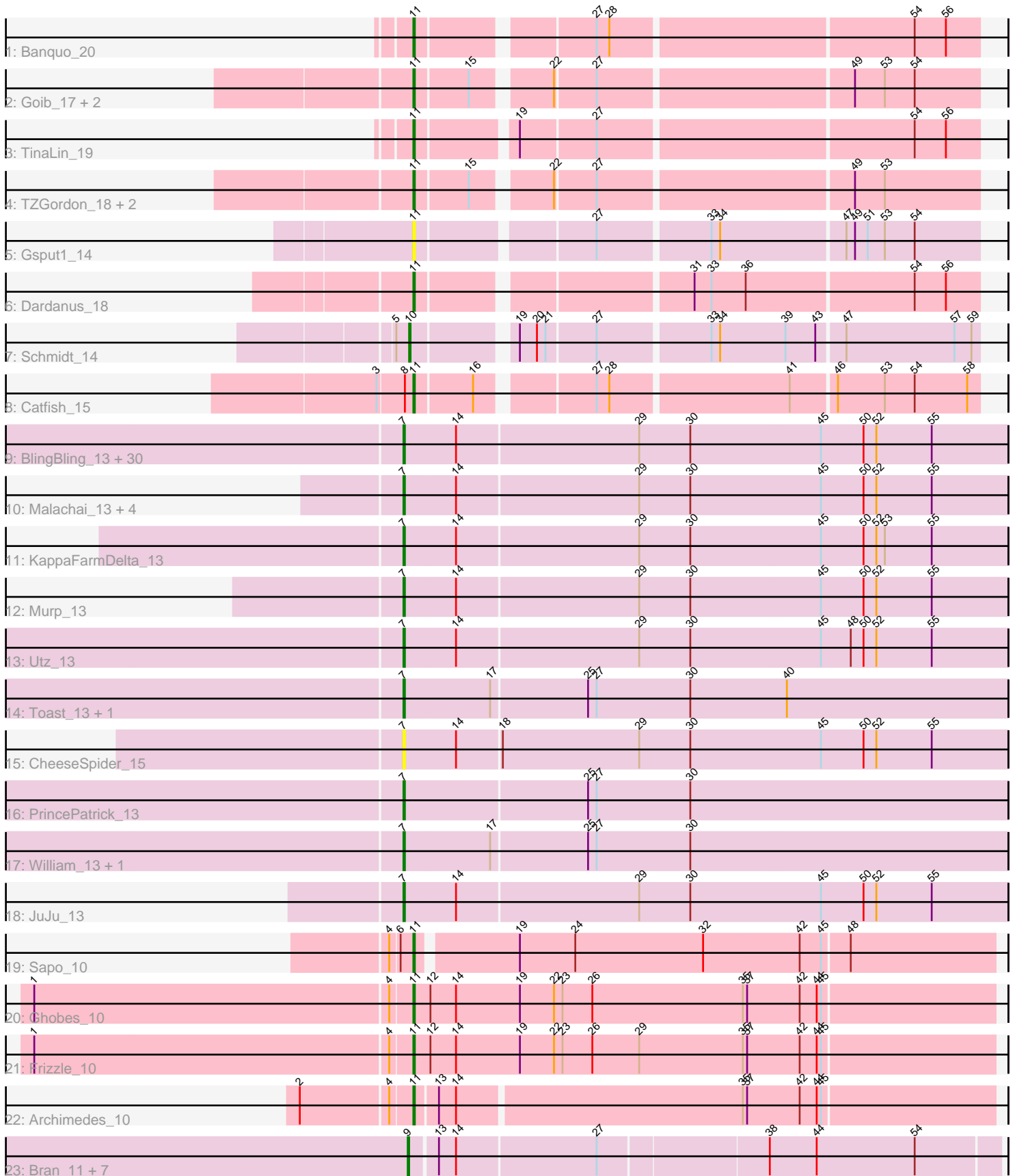


Pham 308551



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 308551 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308551 has 70 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Banquo_20
- Track 2 : Goib_17, Vendetta_16, Splinter_16
- Track 3 : TinaLin_19
- Track 4 : TZGordon_18, Huffy_18, DinoDaryn_18
- Track 5 : Gspu1_14
- Track 6 : Dardanus_18
- Track 7 : Schmidt_14
- Track 8 : Catfish_15
- Track 9 : BlingBling_13, Lysidious_13, Hitter_13, PhrostedPhlake_14, Fenry_12, Barco_13, Soilmate_13, MissRona_15, Jalammah_14, MintFen_13, Guacamole_13, CaptainKirk2_13, Blino_13, Walrus_14, Mellie_12, Obliviate_12, Zarbodnamra_13, JasperJr_13, Delian_13, Frokostdame_13, Gambino_15, Melba_13, Wocket_14, UmaThurman_13, Zilla_13, Petra_15, CarolAnn_13, Blueberry_15, Azula_15, ZiggyZoo_12, Samba_13
- Track 10 : Malachai_13, Begonia_13, Wisp_12, Pipp_13, Archis_14
- Track 11 : KappaFarmDelta_13
- Track 12 : Murp_13
- Track 13 : Utz_13
- Track 14 : Toast_13, PCoral7_13
- Track 15 : CheeseSpider_15
- Track 16 : PrincePatrick_13
- Track 17 : William_13, Fairfaxidum_13
- Track 18 : JuJu_13
- Track 19 : Sapo_10
- Track 20 : Ghobes_10
- Track 21 : Frizzle_10
- Track 22 : Archimedes_10
- Track 23 : Bran_11, Troy_11, SamW_11, Stiles_11, Lederberg_11, Dina_11, Adelaide_11, StAB_11

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 43 of the 66 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archis_14, Azula_15, Barco_13, Begonia_13, BlingBling_13, Blino_13, Blueberry_15, CaptainKirk2_13, CarolAnn_13, CheeseSpider_15, Delian_13, Fairfaxidum_13, Fenry_12, Frokostdame_13, Gambino_15, Guacamole_13, Hitter_13, Jalammah_14, JasperJr_13, JuJu_13, KappaFarmDelta_13, Lysidious_13, Malachai_13, Melba_13, Mellie_12, MintFen_13, MissRona_15, Murp_13, Obliviate_12, PCoral7_13, Petra_15, PhrostedPhlake_14, Pipp_13, PrincePatrick_13, Samba_13, Soilmate_13, Toast_13, UmaThurman_13, Utz_13, Walrus_14, William_13, Wisp_12, Wocket_14, Zarbodnamra_13, ZiggyZoo_12, Zilla_13,

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

-

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

- Adelaide_11, Archimedes_10, Banquo_20, Bran_11, Catfish_15, Dardanus_18, Dina_11, DinoDaryn_18, Frizzle_10, Ghobes_10, Goib_17, Gspu1_14, Huffy_18, Lederberg_11, SamW_11, Sapo_10, Schmidt_14, Splinter_16, StAB_11, Stiles_11, TZGordon_18, TinaLin_19, Troy_11, Vendetta_16,

Summary by start number:

Start 7:

- Found in 46 of 70 (65.7%) of genes in pham
- Manual Annotations of this start: 43 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archis_14 (CV), Azula_15 (CV), Barco_13 (CV), Begonia_13 (CV), BlingBling_13 (CV), Blino_13 (CV), Blueberry_15 (CV), CaptainKirk2_13 (CV), CarolAnn_13 (CV), CheeseSpider_15 (CV), Delian_13 (CV), Fairfaxidum_13 (CV), Fenry_12 (CV), Frokostdame_13 (CV), Gambino_15 (CV), Guacamole_13 (CV), Hitter_13 (CV), Jalammah_14 (CV), JasperJr_13 (CV), JuJu_13 (CV), KappaFarmDelta_13 (CV), Lysidious_13 (CV), Malachai_13 (CV), Melba_13 (CV), Mellie_12 (CV), MintFen_13 (CV), MissRona_15 (CV), Murp_13 (CV), Obliviate_12 (CV), PCoral7_13 (CV), Petra_15 (CV), PhrostedPhlake_14 (CV), Pipp_13 (CV), PrincePatrick_13 (CV), Samba_13 (CV), Soilmate_13 (CV), Toast_13 (CV), UmaThurman_13 (CV), Utz_13 (CV), Walrus_14 (CV), William_13 (CV), Wisp_12 (CV), Wocket_14 (CV), Zarbodnamra_13 (CV), ZiggyZoo_12 (CV), Zilla_13 (CV),

Start 9:

- Found in 8 of 70 (11.4%) of genes in pham
- Manual Annotations of this start: 8 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adelaide_11 (EP), Bran_11 (EP), Dina_11 (EP), Lederberg_11 (EP), SamW_11 (EP), StAB_11 (EP), Stiles_11 (EP), Troy_11 (EP),

Start 10:

- Found in 1 of 70 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schmidt_14 (CU4),

Start 11:

- Found in 15 of 70 (21.4%) of genes in pham
- Manual Annotations of this start: 14 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archimedes_10 (DA), Banquo_20 (CU1), Catfish_15 (CU5), Dardanus_18 (CU3), DinoDaryn_18 (CU1), Frizzle_10 (DA), Ghobes_10 (DA), Goib_17 (CU1), Gspu1_14 (CU2), Huffy_18 (CU1), Sapo_10 (DA), Splinter_16 (CU1), TZGordon_18 (CU1), TinaLin_19 (CU1), Vendetta_16 (CU1),

Summary by clusters:

There are 8 clusters represented in this pham: CU5, CU4, CU3, CU2, CU1, DA, CV, EP,

Info for manual annotations of cluster CU1:

- Start number 11 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 11 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 10 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 11 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:

- Start number 7 was manually annotated 43 times for cluster CV.

Info for manual annotations of cluster DA:

- Start number 11 was manually annotated 4 times for cluster DA.

Info for manual annotations of cluster EP:

- Start number 9 was manually annotated 8 times for cluster EP.

Gene Information:

Gene: Adelaide_11 Start: 7497, Stop: 7895, Start Num: 9

Candidate Starts for Adelaide_11:

(Start: 9 @7497 has 8 MA's), (13, 7515), (14, 7527), (27, 7623), (38, 7737), (44, 7770), (54, 7839),

Gene: Archimedes_10 Start: 6926, Stop: 7321, Start Num: 11

Candidate Starts for Archimedes_10:

(2, 6851), (4, 6911), (Start: 11 @6926 has 14 MA's), (13, 6941), (14, 6953), (35, 7148), (37, 7151), (42, 7187), (44, 7199), (45, 7202),

Gene: Archis_14 Start: 8366, Stop: 8785, Start Num: 7

Candidate Starts for Archis_14:

(Start: 7 @8366 has 43 MA's), (14, 8402), (29, 8528), (30, 8564), (45, 8654), (50, 8684), (52, 8693), (55, 8732),

Gene: Azula_15 Start: 8498, Stop: 8917, Start Num: 7

Candidate Starts for Azula_15:

(Start: 7 @8498 has 43 MA's), (14, 8534), (29, 8660), (30, 8696), (45, 8786), (50, 8816), (52, 8825), (55, 8864),

Gene: Banquo_20 Start: 11335, Stop: 11703, Start Num: 11

Candidate Starts for Banquo_20:

(Start: 11 @11335 has 14 MA's), (27, 11446), (28, 11455), (54, 11659), (56, 11680),

Gene: Barco_13 Start: 8154, Stop: 8573, Start Num: 7

Candidate Starts for Barco_13:

(Start: 7 @8154 has 43 MA's), (14, 8190), (29, 8316), (30, 8352), (45, 8442), (50, 8472), (52, 8481), (55, 8520),

Gene: Begonia_13 Start: 8157, Stop: 8576, Start Num: 7

Candidate Starts for Begonia_13:

(Start: 7 @8157 has 43 MA's), (14, 8193), (29, 8319), (30, 8355), (45, 8445), (50, 8475), (52, 8484), (55, 8523),

Gene: BlingBling_13 Start: 8154, Stop: 8573, Start Num: 7

Candidate Starts for BlingBling_13:

(Start: 7 @8154 has 43 MA's), (14, 8190), (29, 8316), (30, 8352), (45, 8442), (50, 8472), (52, 8481), (55, 8520),

Gene: Blino_13 Start: 8054, Stop: 8473, Start Num: 7

Candidate Starts for Blino_13:

(Start: 7 @8054 has 43 MA's), (14, 8090), (29, 8216), (30, 8252), (45, 8342), (50, 8372), (52, 8381), (55, 8420),

Gene: Blueberry_15 Start: 8498, Stop: 8917, Start Num: 7

Candidate Starts for Blueberry_15:

(Start: 7 @8498 has 43 MA's), (14, 8534), (29, 8660), (30, 8696), (45, 8786), (50, 8816), (52, 8825), (55, 8864),

Gene: Bran_11 Start: 7502, Stop: 7900, Start Num: 9

Candidate Starts for Bran_11:

(Start: 9 @7502 has 8 MA's), (13, 7520), (14, 7532), (27, 7628), (38, 7742), (44, 7775), (54, 7844),

Gene: CaptainKirk2_13 Start: 8157, Stop: 8576, Start Num: 7

Candidate Starts for CaptainKirk2_13:

(Start: 7 @8157 has 43 MA's), (14, 8193), (29, 8319), (30, 8355), (45, 8445), (50, 8475), (52, 8484), (55, 8523),

Gene: CarolAnn_13 Start: 8053, Stop: 8472, Start Num: 7

Candidate Starts for CarolAnn_13:

(Start: 7 @8053 has 43 MA's), (14, 8089), (29, 8215), (30, 8251), (45, 8341), (50, 8371), (52, 8380), (55, 8419),

Gene: Catfish_15 Start: 9309, Stop: 9677, Start Num: 11

Candidate Starts for Catfish_15:

(3, 9285), (8, 9303), (Start: 11 @9309 has 14 MA's), (16, 9348), (27, 9420), (28, 9429), (41, 9549), (46, 9579), (53, 9612), (54, 9633), (58, 9669),

Gene: CheeseSpider_15 Start: 8497, Stop: 8916, Start Num: 7

Candidate Starts for CheeseSpider_15:

(Start: 7 @8497 has 43 MA's), (14, 8533), (18, 8563), (29, 8659), (30, 8695), (45, 8785), (50, 8815), (52, 8824), (55, 8863),

Gene: Dardanus_18 Start: 10378, Stop: 10746, Start Num: 11

Candidate Starts for Dardanus_18:

(Start: 11 @10378 has 14 MA's), (31, 10552), (33, 10564), (36, 10588), (54, 10702), (56, 10723),

Gene: Delian_13 Start: 8157, Stop: 8576, Start Num: 7

Candidate Starts for Delian_13:

(Start: 7 @8157 has 43 MA's), (14, 8193), (29, 8319), (30, 8355), (45, 8445), (50, 8475), (52, 8484), (55, 8523),

Gene: Dina_11 Start: 7485, Stop: 7883, Start Num: 9

Candidate Starts for Dina_11:

(Start: 9 @7485 has 8 MA's), (13, 7503), (14, 7515), (27, 7611), (38, 7725), (44, 7758), (54, 7827),

Gene: DinoDaryn_18 Start: 10469, Stop: 10837, Start Num: 11

Candidate Starts for DinoDaryn_18:

(Start: 11 @10469 has 14 MA's), (15, 10505), (22, 10553), (27, 10580), (49, 10751), (53, 10772),

Gene: Fairfaxidum_13 Start: 8186, Stop: 8605, Start Num: 7

Candidate Starts for Fairfaxidum_13:

(Start: 7 @8186 has 43 MA's), (17, 8246), (25, 8312), (27, 8318), (30, 8384),

Gene: Fenry_12 Start: 7903, Stop: 8322, Start Num: 7

Candidate Starts for Fenry_12:

(Start: 7 @7903 has 43 MA's), (14, 7939), (29, 8065), (30, 8101), (45, 8191), (50, 8221), (52, 8230), (55, 8269),

Gene: Frizzle_10 Start: 7000, Stop: 7404, Start Num: 11

Candidate Starts for Frizzle_10:

(1, 6739), (4, 6985), (Start: 11 @7000 has 14 MA's), (12, 7012), (14, 7030), (19, 7075), (22, 7099), (23, 7105), (26, 7126), (29, 7159), (35, 7231), (37, 7234), (42, 7270), (44, 7282), (45, 7285),

Gene: Frokostdame_13 Start: 8149, Stop: 8568, Start Num: 7

Candidate Starts for Frokostdame_13:

(Start: 7 @8149 has 43 MA's), (14, 8185), (29, 8311), (30, 8347), (45, 8437), (50, 8467), (52, 8476), (55, 8515),

Gene: Gambino_15 Start: 8498, Stop: 8917, Start Num: 7

Candidate Starts for Gambino_15:

(Start: 7 @8498 has 43 MA's), (14, 8534), (29, 8660), (30, 8696), (45, 8786), (50, 8816), (52, 8825), (55, 8864),

Gene: Ghobes_10 Start: 7000, Stop: 7404, Start Num: 11

Candidate Starts for Ghobes_10:

(1, 6739), (4, 6985), (Start: 11 @7000 has 14 MA's), (12, 7012), (14, 7030), (19, 7075), (22, 7099), (23, 7105), (26, 7126), (35, 7231), (37, 7234), (42, 7270), (44, 7282), (45, 7285),

Gene: Goib_17 Start: 10244, Stop: 10612, Start Num: 11

Candidate Starts for Goib_17:

(Start: 11 @10244 has 14 MA's), (15, 10280), (22, 10328), (27, 10355), (49, 10526), (53, 10547), (54, 10568),

Gene: Gspu1_14 Start: 8688, Stop: 9059, Start Num: 11

Candidate Starts for Gspu1_14:

(Start: 11 @8688 has 14 MA's), (27, 8802), (33, 8877), (34, 8883), (47, 8967), (49, 8973), (51, 8982), (53, 8994), (54, 9015),

Gene: Guacamole_13 Start: 8158, Stop: 8577, Start Num: 7

Candidate Starts for Guacamole_13:

(Start: 7 @8158 has 43 MA's), (14, 8194), (29, 8320), (30, 8356), (45, 8446), (50, 8476), (52, 8485), (55, 8524),

Gene: Hitter_13 Start: 8154, Stop: 8573, Start Num: 7

Candidate Starts for Hitter_13:

(Start: 7 @8154 has 43 MA's), (14, 8190), (29, 8316), (30, 8352), (45, 8442), (50, 8472), (52, 8481), (55, 8520),

Gene: Huff_18 Start: 10469, Stop: 10837, Start Num: 11

Candidate Starts for Huff_18:

(Start: 11 @10469 has 14 MA's), (15, 10505), (22, 10553), (27, 10580), (49, 10751), (53, 10772),

Gene: Jalamah_14 Start: 8425, Stop: 8844, Start Num: 7

Candidate Starts for Jalamah_14:

(Start: 7 @8425 has 43 MA's), (14, 8461), (29, 8587), (30, 8623), (45, 8713), (50, 8743), (52, 8752), (55, 8791),

Gene: JasperJr_13 Start: 8158, Stop: 8577, Start Num: 7

Candidate Starts for JasperJr_13:

(Start: 7 @8158 has 43 MA's), (14, 8194), (29, 8320), (30, 8356), (45, 8446), (50, 8476), (52, 8485), (55, 8524),

Gene: JuJu_13 Start: 8082, Stop: 8501, Start Num: 7

Candidate Starts for JuJu_13:

(Start: 7 @8082 has 43 MA's), (14, 8118), (29, 8244), (30, 8280), (45, 8370), (50, 8400), (52, 8409), (55, 8448),

Gene: KappaFarmDelta_13 Start: 8307, Stop: 8726, Start Num: 7

Candidate Starts for KappaFarmDelta_13:

(Start: 7 @8307 has 43 MA's), (14, 8343), (29, 8469), (30, 8505), (45, 8595), (50, 8625), (52, 8634), (53, 8640), (55, 8673),

Gene: Lederberg_11 Start: 7485, Stop: 7883, Start Num: 9

Candidate Starts for Lederberg_11:

(Start: 9 @7485 has 8 MA's), (13, 7503), (14, 7515), (27, 7611), (38, 7725), (44, 7758), (54, 7827),

Gene: Lysidious_13 Start: 8154, Stop: 8573, Start Num: 7

Candidate Starts for Lysidious_13:

(Start: 7 @8154 has 43 MA's), (14, 8190), (29, 8316), (30, 8352), (45, 8442), (50, 8472), (52, 8481), (55, 8520),

Gene: Malachai_13 Start: 8157, Stop: 8576, Start Num: 7

Candidate Starts for Malachai_13:

(Start: 7 @8157 has 43 MA's), (14, 8193), (29, 8319), (30, 8355), (45, 8445), (50, 8475), (52, 8484), (55, 8523),

Gene: Melba_13 Start: 8154, Stop: 8573, Start Num: 7

Candidate Starts for Melba_13:

(Start: 7 @8154 has 43 MA's), (14, 8190), (29, 8316), (30, 8352), (45, 8442), (50, 8472), (52, 8481), (55, 8520),

Gene: Mellie_12 Start: 7894, Stop: 8313, Start Num: 7

Candidate Starts for Mellie_12:

(Start: 7 @7894 has 43 MA's), (14, 7930), (29, 8056), (30, 8092), (45, 8182), (50, 8212), (52, 8221), (55, 8260),

Gene: MintFen_13 Start: 8154, Stop: 8573, Start Num: 7

Candidate Starts for MintFen_13:

(Start: 7 @8154 has 43 MA's), (14, 8190), (29, 8316), (30, 8352), (45, 8442), (50, 8472), (52, 8481), (55, 8520),

Gene: MissRona_15 Start: 8498, Stop: 8917, Start Num: 7

Candidate Starts for MissRona_15:

(Start: 7 @8498 has 43 MA's), (14, 8534), (29, 8660), (30, 8696), (45, 8786), (50, 8816), (52, 8825), (55, 8864),

Gene: Murp_13 Start: 8147, Stop: 8566, Start Num: 7

Candidate Starts for Murp_13:

(Start: 7 @8147 has 43 MA's), (14, 8183), (29, 8309), (30, 8345), (45, 8435), (50, 8465), (52, 8474), (55, 8513),

Gene: Obliviate_12 Start: 7923, Stop: 8342, Start Num: 7

Candidate Starts for Obliviate_12:

(Start: 7 @7923 has 43 MA's), (14, 7959), (29, 8085), (30, 8121), (45, 8211), (50, 8241), (52, 8250), (55, 8289),

Gene: PCoral7_13 Start: 8129, Stop: 8548, Start Num: 7

Candidate Starts for PCoral7_13:

(Start: 7 @8129 has 43 MA's), (17, 8189), (25, 8255), (27, 8261), (30, 8327), (40, 8393),

Gene: Petra_15 Start: 8534, Stop: 8953, Start Num: 7

Candidate Starts for Petra_15:

(Start: 7 @8534 has 43 MA's), (14, 8570), (29, 8696), (30, 8732), (45, 8822), (50, 8852), (52, 8861), (55, 8900),

Gene: PhrostedPhlake_14 Start: 8512, Stop: 8931, Start Num: 7

Candidate Starts for PhrostedPhlake_14:

(Start: 7 @8512 has 43 MA's), (14, 8548), (29, 8674), (30, 8710), (45, 8800), (50, 8830), (52, 8839), (55, 8878),

Gene: Pipp_13 Start: 8130, Stop: 8549, Start Num: 7

Candidate Starts for Pipp_13:

(Start: 7 @8130 has 43 MA's), (14, 8166), (29, 8292), (30, 8328), (45, 8418), (50, 8448), (52, 8457), (55, 8496),

Gene: PrincePatrick_13 Start: 8187, Stop: 8606, Start Num: 7

Candidate Starts for PrincePatrick_13:

(Start: 7 @8187 has 43 MA's), (25, 8313), (27, 8319), (30, 8385),

Gene: SamW_11 Start: 7485, Stop: 7883, Start Num: 9

Candidate Starts for SamW_11:

(Start: 9 @7485 has 8 MA's), (13, 7503), (14, 7515), (27, 7611), (38, 7725), (44, 7758), (54, 7827),

Gene: Samba_13 Start: 8262, Stop: 8681, Start Num: 7

Candidate Starts for Samba_13:

(Start: 7 @8262 has 43 MA's), (14, 8298), (29, 8424), (30, 8460), (45, 8550), (50, 8580), (52, 8589), (55, 8628),

Gene: Sapo_10 Start: 6997, Stop: 7392, Start Num: 11

Candidate Starts for Sapo_10:

(4, 6982), (6, 6988), (Start: 11 @6997 has 14 MA's), (19, 7063), (24, 7102), (32, 7192), (42, 7258), (45, 7273), (48, 7291),

Gene: Schmidt_14 Start: 8663, Stop: 9034, Start Num: 10

Candidate Starts for Schmidt_14:

(5, 8654), (Start: 10 @8663 has 1 MA's), (19, 8726), (20, 8738), (21, 8744), (27, 8777), (33, 8852), (34, 8858), (39, 8903), (43, 8924), (47, 8942), (57, 9017), (59, 9029),

Gene: Soilmate_13 Start: 8053, Stop: 8472, Start Num: 7

Candidate Starts for Soilmate_13:

(Start: 7 @8053 has 43 MA's), (14, 8089), (29, 8215), (30, 8251), (45, 8341), (50, 8371), (52, 8380), (55, 8419),

Gene: Splinter_16 Start: 10244, Stop: 10612, Start Num: 11

Candidate Starts for Splinter_16:

(Start: 11 @10244 has 14 MA's), (15, 10280), (22, 10328), (27, 10355), (49, 10526), (53, 10547), (54, 10568),

Gene: StAB_11 Start: 7490, Stop: 7888, Start Num: 9

Candidate Starts for StAB_11:

(Start: 9 @7490 has 8 MA's), (13, 7508), (14, 7520), (27, 7616), (38, 7730), (44, 7763), (54, 7832),

Gene: Stiles_11 Start: 7484, Stop: 7882, Start Num: 9

Candidate Starts for Stiles_11:

(Start: 9 @7484 has 8 MA's), (13, 7502), (14, 7514), (27, 7610), (38, 7724), (44, 7757), (54, 7826),

Gene: TZGordon_18 Start: 10386, Stop: 10754, Start Num: 11

Candidate Starts for TZGordon_18:

(Start: 11 @10386 has 14 MA's), (15, 10422), (22, 10470), (27, 10497), (49, 10668), (53, 10689),

Gene: TinaLin_19 Start: 10956, Stop: 11327, Start Num: 11

Candidate Starts for TinaLin_19:

(Start: 11 @10956 has 14 MA's), (19, 11019), (27, 11070), (54, 11283), (56, 11304),

Gene: Toast_13 Start: 8129, Stop: 8548, Start Num: 7

Candidate Starts for Toast_13:

(Start: 7 @8129 has 43 MA's), (17, 8189), (25, 8255), (27, 8261), (30, 8327), (40, 8393),

Gene: Troy_11 Start: 7485, Stop: 7883, Start Num: 9

Candidate Starts for Troy_11:

(Start: 9 @7485 has 8 MA's), (13, 7503), (14, 7515), (27, 7611), (38, 7725), (44, 7758), (54, 7827),

Gene: UmaThurman_13 Start: 8261, Stop: 8680, Start Num: 7

Candidate Starts for UmaThurman_13:

(Start: 7 @8261 has 43 MA's), (14, 8297), (29, 8423), (30, 8459), (45, 8549), (50, 8579), (52, 8588), (55, 8627),

Gene: Utz_13 Start: 8127, Stop: 8546, Start Num: 7

Candidate Starts for Utz_13:

(Start: 7 @8127 has 43 MA's), (14, 8163), (29, 8289), (30, 8325), (45, 8415), (48, 8436), (50, 8445), (52, 8454), (55, 8493),

Gene: Vendetta_16 Start: 10244, Stop: 10612, Start Num: 11

Candidate Starts for Vendetta_16:

(Start: 11 @10244 has 14 MA's), (15, 10280), (22, 10328), (27, 10355), (49, 10526), (53, 10547), (54, 10568),

Gene: Walrus_14 Start: 8356, Stop: 8775, Start Num: 7

Candidate Starts for Walrus_14:

(Start: 7 @8356 has 43 MA's), (14, 8392), (29, 8518), (30, 8554), (45, 8644), (50, 8674), (52, 8683), (55, 8722),

Gene: William_13 Start: 8075, Stop: 8494, Start Num: 7

Candidate Starts for William_13:

(Start: 7 @8075 has 43 MA's), (17, 8135), (25, 8201), (27, 8207), (30, 8273),

Gene: Wisp_12 Start: 7894, Stop: 8313, Start Num: 7

Candidate Starts for Wisp_12:

(Start: 7 @7894 has 43 MA's), (14, 7930), (29, 8056), (30, 8092), (45, 8182), (50, 8212), (52, 8221), (55, 8260),

Gene: Wocket_14 Start: 8380, Stop: 8799, Start Num: 7

Candidate Starts for Wocket_14:

(Start: 7 @8380 has 43 MA's), (14, 8416), (29, 8542), (30, 8578), (45, 8668), (50, 8698), (52, 8707), (55, 8746),

Gene: Zarbodnamra_13 Start: 8153, Stop: 8572, Start Num: 7

Candidate Starts for Zarbodnamra_13:

(Start: 7 @8153 has 43 MA's), (14, 8189), (29, 8315), (30, 8351), (45, 8441), (50, 8471), (52, 8480), (55, 8519),

Gene: ZiggyZoo_12 Start: 7923, Stop: 8342, Start Num: 7

Candidate Starts for ZiggyZoo_12:

(Start: 7 @7923 has 43 MA's), (14, 7959), (29, 8085), (30, 8121), (45, 8211), (50, 8241), (52, 8250), (55, 8289),

Gene: Zilla_13 Start: 8203, Stop: 8622, Start Num: 7

Candidate Starts for Zilla_13:

(Start: 7 @8203 has 43 MA's), (14, 8239), (29, 8365), (30, 8401), (45, 8491), (50, 8521), (52, 8530), (55, 8569),