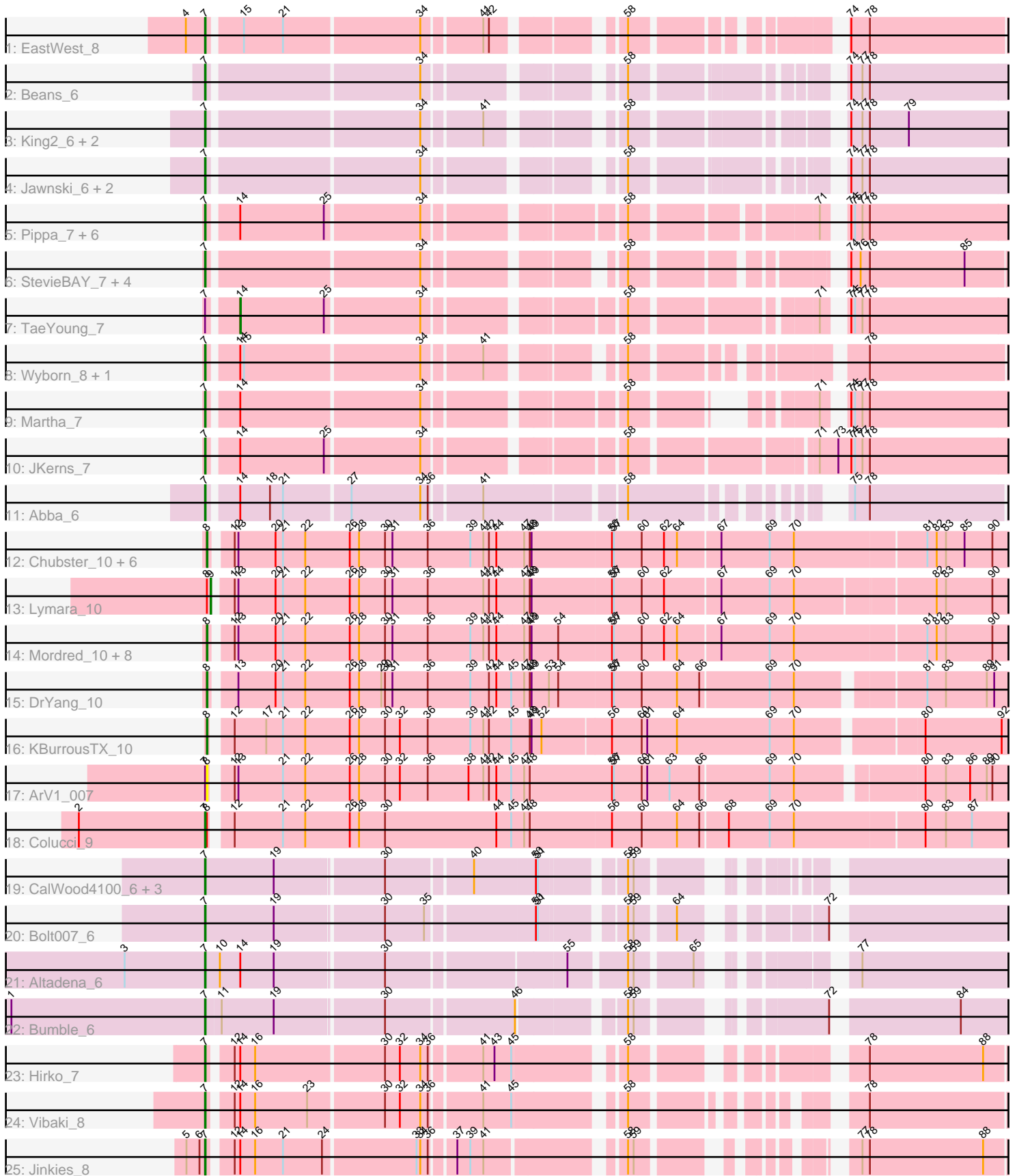


Zoomed Pham 192598



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 192598 Report

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

Pham number 192598 has 57 members, 4 are drafts.

Phages represented in each track:

- Track 1 : EastWest_8
- Track 2 : Beans_6
- Track 3 : King2_6, Franzy_6, Brent_6
- Track 4 : Jawnski_6, NathanVaag_6, Piccoletto_6
- Track 5 : Pippa_7, Shade_7, Grekaycon_7, Sonny_7, BossLady_7, Zartrosa_7, Jordan_7
- Track 6 : StevieBAY_7, GravityBall_7, Timinator_7, BarretLemon_7, LeeroyJ_7
- Track 7 : TaeYoung_7
- Track 8 : Wyborn_8, Sicarius2_8
- Track 9 : Martha_7
- Track 10 : JKerns_7
- Track 11 : Abba_6
- Track 12 : Chubster_10, RosiePosie_10, Linus_10, JayCookie_10, MoyaNatalis_10, Chocolat_10, PrincessTrina_10
- Track 13 : Lymara_10
- Track 14 : Mordred_10, EdgarPoe_10, Chipper1996_100, Tophat_10, HumptyDumpty_10, Conboy_10, Kabreeze_10, JaNo_10, Scavito_10
- Track 15 : DrYang_10
- Track 16 : KBurrousTX_10
- Track 17 : ArV1_007
- Track 18 : Colucci_9
- Track 19 : CalWood4100_6, Lilmac1015_6, Klevey_6, Prairie_6
- Track 20 : Bolt007_6
- Track 21 : Altadena_6
- Track 22 : Bumble_6
- Track 23 : Hirko_7
- Track 24 : Vibaki_8
- Track 25 : Jinkies_8

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 34 of the 53 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abba_6, Altadena_6, BarretLemon_7, Beans_6, Bolt007_6, BossLady_7, Brent_6, Bumble_6, CalWood4100_6, Colucci_9, EastWest_8, Franzy_6, GravityBall_7, Grekaycon_7, Hirko_7, JKerns_7, Jawnski_6, Jinkies_8, Jordan_7, King2_6, Klevey_6, LeeroyJ_7, Lilmac1015_6, Martha_7, NathanVaag_6, Piccoletto_6, Pippa_7, Prairie_6, Shade_7, Sicarius2_8, Sonny_7, StevieBAY_7, Timinator_7, Vibaki_8, Wyborn_8, Zartrosa_7,

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

- ArV1_007, TaeYoung_7,

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

- Chipper1996_100, Chocolat_10, Chubster_10, Conboy_10, DrYang_10, EdgarPoe_10, HumptyDumpty_10, JaNo_10, JayCookie_10, KBurrousTX_10, Kabreeze_10, Linus_10, Lymara_10, Mordred_10, MoyaNatalis_10, PrincessTrina_10, RosiePosie_10, Scavito_10, Tophat_10,

Summary by start number:

Start 7:

- Found in 38 of 57 (66.7%) of genes in pham
- Manual Annotations of this start: 34 of 53
- Called 94.7% of time when present
- Phage (with cluster) where this start called: Abba_6 (AO3), Altadena_6 (FH), BarretLemon_7 (AO2), Beans_6 (AO1), Bolt007_6 (FH), BossLady_7 (AO2), Brent_6 (AO1), Bumble_6 (FH), CalWood4100_6 (FH), Colucci_9 (AR), EastWest_8 (AO), Franzy_6 (AO1), GravityBall_7 (AO2), Grekaycon_7 (AO2), Hirko_7 (FL), JKerns_7 (AO2), Jawnski_6 (AO1), Jinkies_8 (FL), Jordan_7 (AO2), King2_6 (AO1), Klevey_6 (FH), LeeroyJ_7 (AO2), Lilmac1015_6 (FH), Martha_7 (AO2), NathanVaag_6 (AO1), Piccoletto_6 (AO1), Pippa_7 (AO2), Prairie_6 (FH), Shade_7 (AO2), Sicarius2_8 (AO2), Sonny_7 (AO2), StevieBAY_7 (AO2), Timinator_7 (AO2), Vibaki_8 (FL), Wyborn_8 (AO2), Zartrosa_7 (AO2),

Start 8:

- Found in 21 of 57 (36.8%) of genes in pham
- Manual Annotations of this start: 17 of 53
- Called 90.5% of time when present
- Phage (with cluster) where this start called: ArV1_007 (AR), Chipper1996_100 (AR), Chocolat_10 (AR), Chubster_10 (AR), Conboy_10 (AR), DrYang_10 (AR), EdgarPoe_10 (AR), HumptyDumpty_10 (AR), JaNo_10 (AR), JayCookie_10 (AR), KBurrousTX_10 (AR), Kabreeze_10 (AR), Linus_10 (AR), Mordred_10 (AR), MoyaNatalis_10 (AR), PrincessTrina_10 (AR), RosiePosie_10 (AR), Scavito_10 (AR), Tophat_10 (AR),

Start 9:

- Found in 1 of 57 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lymara_10 (AR),

Start 14:

- Found in 17 of 57 (29.8%) of genes in pham
- Manual Annotations of this start: 1 of 53

- Called 5.9% of time when present
- Phage (with cluster) where this start called: TaeYoung_7 (AO2),

Summary by clusters:

There are 7 clusters represented in this pham: AO, AR, AO3, AO2, AO1, FH, FL,

Info for manual annotations of cluster AO:

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

Info for manual annotations of cluster AO1:

- Start number 7 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 7 was manually annotated 15 times for cluster AO2.
- Start number 14 was manually annotated 1 time for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 7 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster AR:

- Start number 7 was manually annotated 1 time for cluster AR.
- Start number 8 was manually annotated 17 times for cluster AR.
- Start number 9 was manually annotated 1 time for cluster AR.

Info for manual annotations of cluster FH:

- Start number 7 was manually annotated 6 times for cluster FH.

Info for manual annotations of cluster FL:

- Start number 7 was manually annotated 3 times for cluster FL.

Gene Information:

Gene: Abba_6 Start: 5801, Stop: 6952, Start Num: 7

Candidate Starts for Abba_6:

(Start: 7 @5801 has 34 MA's), (Start: 14 @5840 has 1 MA's), (18, 5888), (21, 5909), (27, 6011), (34, 6122), (36, 6134), (41, 6209), (58, 6416), (75, 6656), (78, 6680),

Gene: Altadena_6 Start: 5581, Stop: 6747, Start Num: 7

Candidate Starts for Altadena_6:

(3, 5452), (Start: 7 @5581 has 34 MA's), (10, 5605), (Start: 14 @5638 has 1 MA's), (19, 5692), (30, 5857), (55, 6127), (58, 6211), (59, 6220), (65, 6301), (77, 6463),

Gene: ArV1_007 Start: 6192, Stop: 7631, Start Num: 8

Candidate Starts for ArV1_007:

(Start: 7 @6189 has 34 MA's), (Start: 8 @6192 has 17 MA's), (12, 6216), (13, 6222), (21, 6294), (22, 6330), (26, 6402), (28, 6417), (30, 6459), (32, 6483), (36, 6528), (38, 6594), (41, 6618), (42, 6627), (44, 6639), (45, 6663), (47, 6684), (48, 6693), (56, 6825), (57, 6828), (60, 6873), (61, 6882), (63, 6918), (66, 6966), (69, 7074), (70, 7113), (80, 7296), (83, 7329), (86, 7368), (89, 7395), (90, 7404), (97, 7527), (98, 7530), (99, 7551),

Gene: BarretLemon_7 Start: 5958, Stop: 7103, Start Num: 7
Candidate Starts for BarretLemon_7:
(Start: 7 @5958 has 34 MA's), (34, 6282), (58, 6534), (74, 6798), (76, 6813), (78, 6828), (85, 6981),

Gene: Beans_6 Start: 5622, Stop: 6770, Start Num: 7
Candidate Starts for Beans_6:
(Start: 7 @5622 has 34 MA's), (34, 5946), (58, 6198), (74, 6462), (77, 6480), (78, 6492),

Gene: Bolt007_6 Start: 5542, Stop: 6699, Start Num: 7
Candidate Starts for Bolt007_6:
(Start: 7 @5542 has 34 MA's), (19, 5653), (30, 5818), (35, 5881), (50, 6043), (51, 6046), (58, 6160),
(59, 6169), (64, 6223), (72, 6394),

Gene: BossLady_7 Start: 5943, Stop: 7118, Start Num: 7
Candidate Starts for BossLady_7:
(Start: 7 @5943 has 34 MA's), (Start: 14 @5985 has 1 MA's), (25, 6120), (34, 6267), (58, 6540), (71,
6789), (74, 6810), (75, 6816), (77, 6828), (78, 6840),

Gene: Brent_6 Start: 5617, Stop: 6768, Start Num: 7
Candidate Starts for Brent_6:
(Start: 7 @5617 has 34 MA's), (34, 5941), (41, 6028), (58, 6193), (74, 6460), (77, 6478), (78, 6490),
(79, 6553),

Gene: Bumble_6 Start: 5596, Stop: 6753, Start Num: 7
Candidate Starts for Bumble_6:
(1, 5284), (Start: 7 @5596 has 34 MA's), (11, 5620), (19, 5704), (30, 5869), (46, 6064), (58, 6211), (59,
6220), (72, 6448), (84, 6628),

Gene: CalWood4100_6 Start: 5536, Stop: 6678, Start Num: 7
Candidate Starts for CalWood4100_6:
(Start: 7 @5536 has 34 MA's), (19, 5647), (30, 5812), (40, 5941), (50, 6037), (51, 6040), (58, 6154),
(59, 6163),

Gene: Chipper1996_100 Start: 7819, Stop: 9273, Start Num: 8
Candidate Starts for Chipper1996_100:
(Start: 8 @7819 has 17 MA's), (12, 7846), (13, 7852), (20, 7912), (21, 7924), (22, 7960), (26, 8032),
(28, 8047), (30, 8089), (31, 8101), (36, 8158), (39, 8227), (41, 8248), (42, 8257), (44, 8269), (47,
8311), (48, 8320), (49, 8323), (54, 8365), (56, 8449), (57, 8452), (60, 8497), (62, 8533), (64, 8554),
(67, 8620), (69, 8698), (70, 8737), (81, 8944), (82, 8959), (83, 8974), (90, 9049), (93, 9094), (100,
9205),

Gene: Chocolat_10 Start: 7817, Stop: 9271, Start Num: 8
Candidate Starts for Chocolat_10:
(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030),
(28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47,
8309), (48, 8318), (49, 8321), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618),
(69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (85, 9002), (90, 9047), (93, 9092), (100,
9203),

Gene: Chubster_10 Start: 7587, Stop: 9041, Start Num: 8
Candidate Starts for Chubster_10:
(Start: 8 @7587 has 17 MA's), (12, 7614), (13, 7620), (20, 7680), (21, 7692), (22, 7728), (26, 7800),
(28, 7815), (30, 7857), (31, 7869), (36, 7926), (39, 7995), (41, 8016), (42, 8025), (44, 8037), (47,

8079), (48, 8088), (49, 8091), (56, 8217), (57, 8220), (60, 8265), (62, 8301), (64, 8322), (67, 8388), (69, 8466), (70, 8505), (81, 8712), (82, 8727), (83, 8742), (85, 8772), (90, 8817), (93, 8862), (100, 8973),

Gene: Colucci_9 Start: 7314, Stop: 8774, Start Num: 7

Candidate Starts for Colucci_9:

(2, 7113), (Start: 7 @7314 has 34 MA's), (Start: 8 @7317 has 17 MA's), (12, 7341), (21, 7419), (22, 7455), (26, 7527), (28, 7542), (30, 7584), (44, 7764), (45, 7788), (47, 7809), (48, 7818), (56, 7947), (60, 7995), (64, 8052), (66, 8088), (68, 8130), (69, 8196), (70, 8235), (80, 8439), (83, 8472), (87, 8514), (95, 8613), (96, 8637), (99, 8694), (100, 8703),

Gene: Conboy_10 Start: 7818, Stop: 9272, Start Num: 8

Candidate Starts for Conboy_10:

(Start: 8 @7818 has 17 MA's), (12, 7845), (13, 7851), (20, 7911), (21, 7923), (22, 7959), (26, 8031), (28, 8046), (30, 8088), (31, 8100), (36, 8157), (39, 8226), (41, 8247), (42, 8256), (44, 8268), (47, 8310), (48, 8319), (49, 8322), (54, 8364), (56, 8448), (57, 8451), (60, 8496), (62, 8532), (64, 8553), (67, 8619), (69, 8697), (70, 8736), (81, 8943), (82, 8958), (83, 8973), (90, 9048), (93, 9093), (100, 9204),

Gene: DrYang_10 Start: 7773, Stop: 9206, Start Num: 8

Candidate Starts for DrYang_10:

(Start: 8 @7773 has 17 MA's), (13, 7806), (20, 7866), (21, 7878), (22, 7914), (26, 7986), (28, 8001), (29, 8037), (30, 8043), (31, 8055), (36, 8112), (39, 8181), (42, 8211), (44, 8223), (45, 8247), (47, 8268), (48, 8277), (49, 8280), (53, 8307), (54, 8322), (56, 8406), (57, 8409), (60, 8454), (64, 8511), (66, 8547), (69, 8655), (70, 8694), (81, 8877), (83, 8907), (89, 8973), (91, 8985), (100, 9138),

Gene: EastWest_8 Start: 6051, Stop: 7193, Start Num: 7

Candidate Starts for EastWest_8:

(4, 6021), (Start: 7 @6051 has 34 MA's), (15, 6099), (21, 6162), (34, 6375), (41, 6462), (42, 6471), (58, 6633), (74, 6891), (78, 6921),

Gene: EdgarPoe_10 Start: 7818, Stop: 9272, Start Num: 8

Candidate Starts for EdgarPoe_10:

(Start: 8 @7818 has 17 MA's), (12, 7845), (13, 7851), (20, 7911), (21, 7923), (22, 7959), (26, 8031), (28, 8046), (30, 8088), (31, 8100), (36, 8157), (39, 8226), (41, 8247), (42, 8256), (44, 8268), (47, 8310), (48, 8319), (49, 8322), (54, 8364), (56, 8448), (57, 8451), (60, 8496), (62, 8532), (64, 8553), (67, 8619), (69, 8697), (70, 8736), (81, 8943), (82, 8958), (83, 8973), (90, 9048), (93, 9093), (100, 9204),

Gene: Franzy_6 Start: 5617, Stop: 6768, Start Num: 7

Candidate Starts for Franzy_6:

(Start: 7 @5617 has 34 MA's), (34, 5941), (41, 6028), (58, 6193), (74, 6460), (77, 6478), (78, 6490), (79, 6553),

Gene: GravityBall_7 Start: 5958, Stop: 7103, Start Num: 7

Candidate Starts for GravityBall_7:

(Start: 7 @5958 has 34 MA's), (34, 6282), (58, 6534), (74, 6798), (76, 6813), (78, 6828), (85, 6981),

Gene: Grekaycon_7 Start: 5943, Stop: 7127, Start Num: 7

Candidate Starts for Grekaycon_7:

(Start: 7 @5943 has 34 MA's), (Start: 14 @5985 has 1 MA's), (25, 6120), (34, 6267), (58, 6540), (71, 6798), (74, 6819), (75, 6825), (77, 6837), (78, 6849),

Gene: Hirko_7 Start: 7143, Stop: 8291, Start Num: 7

Candidate Starts for Hirko_7:

(Start: 7 @7143 has 34 MA's), (12, 7173), (Start: 14 @7182 has 1 MA's), (16, 7206), (30, 7407), (32, 7431), (34, 7464), (36, 7476), (41, 7551), (43, 7569), (45, 7596), (58, 7746), (78, 8019), (88, 8202), (94, 8259),

Gene: HumptyDumpty_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for HumptyDumpty_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47, 8309), (48, 8318), (49, 8321), (54, 8363), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (90, 9047), (93, 9092), (100, 9203),

Gene: JKerns_7 Start: 5940, Stop: 7157, Start Num: 7

Candidate Starts for JKerns_7:

(Start: 7 @5940 has 34 MA's), (Start: 14 @5982 has 1 MA's), (25, 6117), (34, 6264), (58, 6537), (71, 6798), (73, 6828), (74, 6849), (75, 6855), (77, 6867), (78, 6879),

Gene: JaNo_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for JaNo_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47, 8309), (48, 8318), (49, 8321), (54, 8363), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (90, 9047), (93, 9092), (100, 9203),

Gene: Jawnski_6 Start: 5617, Stop: 6765, Start Num: 7

Candidate Starts for Jawnski_6:

(Start: 7 @5617 has 34 MA's), (34, 5941), (58, 6193), (74, 6457), (77, 6475), (78, 6487),

Gene: JayCookie_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for JayCookie_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47, 8309), (48, 8318), (49, 8321), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (85, 9002), (90, 9047), (93, 9092), (100, 9203),

Gene: Jinkies_8 Start: 6526, Stop: 7632, Start Num: 7

Candidate Starts for Jinkies_8:

(5, 6496), (6, 6517), (Start: 7 @6526 has 34 MA's), (12, 6556), (Start: 14 @6565 has 1 MA's), (16, 6589), (21, 6634), (24, 6697), (33, 6841), (34, 6847), (36, 6859), (37, 6892), (39, 6913), (41, 6934), (58, 7123), (59, 7132), (77, 7351), (78, 7363), (88, 7546),

Gene: Jordan_7 Start: 5940, Stop: 7127, Start Num: 7

Candidate Starts for Jordan_7:

(Start: 7 @5940 has 34 MA's), (Start: 14 @5982 has 1 MA's), (25, 6117), (34, 6264), (58, 6537), (71, 6798), (74, 6819), (75, 6825), (77, 6837), (78, 6849),

Gene: KBurrousTX_10 Start: 7618, Stop: 9051, Start Num: 8

Candidate Starts for KBurrousTX_10:

(Start: 8 @7618 has 17 MA's), (12, 7642), (17, 7693), (21, 7720), (22, 7756), (26, 7828), (28, 7843), (30, 7885), (32, 7909), (36, 7954), (39, 8023), (41, 8044), (42, 8053), (45, 8089), (48, 8119), (49, 8122), (52, 8137), (56, 8245), (60, 8293), (61, 8302), (64, 8350), (69, 8500), (70, 8539), (80, 8722), (92, 8845), (97, 8953), (101, 9028),

Gene: Kabreeze_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for Kabreeze_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47, 8309), (48, 8318), (49, 8321), (54, 8363), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (90, 9047), (93, 9092), (100, 9203),

Gene: King2_6 Start: 5619, Stop: 6770, Start Num: 7

Candidate Starts for King2_6:

(Start: 7 @5619 has 34 MA's), (34, 5943), (41, 6030), (58, 6195), (74, 6462), (77, 6480), (78, 6492), (79, 6555),

Gene: Klevey_6 Start: 5536, Stop: 6687, Start Num: 7

Candidate Starts for Klevey_6:

(Start: 7 @5536 has 34 MA's), (19, 5647), (30, 5812), (40, 5941), (50, 6037), (51, 6040), (58, 6154), (59, 6163),

Gene: LeeroyJ_7 Start: 5957, Stop: 7102, Start Num: 7

Candidate Starts for LeeroyJ_7:

(Start: 7 @5957 has 34 MA's), (34, 6281), (58, 6533), (74, 6797), (76, 6812), (78, 6827), (85, 6980),

Gene: Lilmac1015_6 Start: 5536, Stop: 6678, Start Num: 7

Candidate Starts for Lilmac1015_6:

(Start: 7 @5536 has 34 MA's), (19, 5647), (30, 5812), (40, 5941), (50, 6037), (51, 6040), (58, 6154), (59, 6163),

Gene: Linus_10 Start: 7814, Stop: 9268, Start Num: 8

Candidate Starts for Linus_10:

(Start: 8 @7814 has 17 MA's), (12, 7841), (13, 7847), (20, 7907), (21, 7919), (22, 7955), (26, 8027), (28, 8042), (30, 8084), (31, 8096), (36, 8153), (39, 8222), (41, 8243), (42, 8252), (44, 8264), (47, 8306), (48, 8315), (49, 8318), (56, 8444), (57, 8447), (60, 8492), (62, 8528), (64, 8549), (67, 8615), (69, 8693), (70, 8732), (81, 8939), (82, 8954), (83, 8969), (85, 8999), (90, 9044), (93, 9089), (100, 9200),

Gene: Lymara_10 Start: 7816, Stop: 9258, Start Num: 9

Candidate Starts for Lymara_10:

(Start: 8 @7810 has 17 MA's), (Start: 9 @7816 has 1 MA's), (12, 7840), (13, 7846), (20, 7906), (21, 7918), (22, 7954), (26, 8026), (28, 8041), (30, 8083), (31, 8095), (36, 8152), (41, 8242), (42, 8251), (44, 8263), (47, 8305), (48, 8314), (49, 8317), (56, 8443), (57, 8446), (60, 8491), (62, 8527), (67, 8614), (69, 8692), (70, 8731), (82, 8944), (83, 8959), (90, 9034), (93, 9079), (100, 9190),

Gene: Martha_7 Start: 5943, Stop: 7064, Start Num: 7

Candidate Starts for Martha_7:

(Start: 7 @5943 has 34 MA's), (Start: 14 @5985 has 1 MA's), (34, 6267), (58, 6540), (71, 6735), (74, 6756), (75, 6762), (77, 6774), (78, 6786),

Gene: Mordred_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for Mordred_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47, 8309), (48, 8318), (49, 8321), (54, 8363), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (90, 9047), (93, 9092), (100, 9203),

Gene: MoyaNatalis_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for MoyaNatalis_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47, 8309), (48, 8318), (49, 8321), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (85, 9002), (90, 9047), (93, 9092), (100, 9203),

Gene: NathanVaag_6 Start: 5622, Stop: 6770, Start Num: 7

Candidate Starts for NathanVaag_6:

(Start: 7 @5622 has 34 MA's), (34, 5946), (58, 6198), (74, 6462), (77, 6480), (78, 6492),

Gene: Piccoletto_6 Start: 5623, Stop: 6771, Start Num: 7

Candidate Starts for Piccoletto_6:

(Start: 7 @5623 has 34 MA's), (34, 5947), (58, 6199), (74, 6463), (77, 6481), (78, 6493),

Gene: Pippa_7 Start: 5973, Stop: 7157, Start Num: 7

Candidate Starts for Pippa_7:

(Start: 7 @5973 has 34 MA's), (Start: 14 @6015 has 1 MA's), (25, 6150), (34, 6297), (58, 6570), (71, 6828), (74, 6849), (75, 6855), (77, 6867), (78, 6879),

Gene: Prairie_6 Start: 5536, Stop: 6687, Start Num: 7

Candidate Starts for Prairie_6:

(Start: 7 @5536 has 34 MA's), (19, 5647), (30, 5812), (40, 5941), (50, 6037), (51, 6040), (58, 6154), (59, 6163),

Gene: PrincessTrina_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for PrincessTrina_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47, 8309), (48, 8318), (49, 8321), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (85, 9002), (90, 9047), (93, 9092), (100, 9203),

Gene: RosiePosie_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for RosiePosie_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47, 8309), (48, 8318), (49, 8321), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (85, 9002), (90, 9047), (93, 9092), (100, 9203),

Gene: Scavito_10 Start: 7817, Stop: 9271, Start Num: 8

Candidate Starts for Scavito_10:

(Start: 8 @7817 has 17 MA's), (12, 7844), (13, 7850), (20, 7910), (21, 7922), (22, 7958), (26, 8030), (28, 8045), (30, 8087), (31, 8099), (36, 8156), (39, 8225), (41, 8246), (42, 8255), (44, 8267), (47,

8309), (48, 8318), (49, 8321), (54, 8363), (56, 8447), (57, 8450), (60, 8495), (62, 8531), (64, 8552), (67, 8618), (69, 8696), (70, 8735), (81, 8942), (82, 8957), (83, 8972), (90, 9047), (93, 9092), (100, 9203),

Gene: Shade_7 Start: 5940, Stop: 7106, Start Num: 7

Candidate Starts for Shade_7:

(Start: 7 @5940 has 34 MA's), (Start: 14 @5982 has 1 MA's), (25, 6117), (34, 6264), (58, 6537), (71, 6777), (74, 6798), (75, 6804), (77, 6816), (78, 6828),

Gene: Sicarius2_8 Start: 6515, Stop: 7660, Start Num: 7

Candidate Starts for Sicarius2_8:

(Start: 7 @6515 has 34 MA's), (Start: 14 @6557 has 1 MA's), (15, 6563), (34, 6839), (41, 6926), (58, 7094), (78, 7388),

Gene: Sonny_7 Start: 5940, Stop: 7127, Start Num: 7

Candidate Starts for Sonny_7:

(Start: 7 @5940 has 34 MA's), (Start: 14 @5982 has 1 MA's), (25, 6117), (34, 6264), (58, 6537), (71, 6798), (74, 6819), (75, 6825), (77, 6837), (78, 6849),

Gene: StevieBAY_7 Start: 5958, Stop: 7103, Start Num: 7

Candidate Starts for StevieBAY_7:

(Start: 7 @5958 has 34 MA's), (34, 6282), (58, 6534), (74, 6798), (76, 6813), (78, 6828), (85, 6981),

Gene: TaeYoung_7 Start: 5985, Stop: 7127, Start Num: 14

Candidate Starts for TaeYoung_7:

(Start: 7 @5943 has 34 MA's), (Start: 14 @5985 has 1 MA's), (25, 6120), (34, 6267), (58, 6540), (71, 6798), (74, 6819), (75, 6825), (77, 6837), (78, 6849),

Gene: Timinator_7 Start: 5957, Stop: 7102, Start Num: 7

Candidate Starts for Timinator_7:

(Start: 7 @5957 has 34 MA's), (34, 6281), (58, 6533), (74, 6797), (76, 6812), (78, 6827), (85, 6980),

Gene: Tophat_10 Start: 7819, Stop: 9273, Start Num: 8

Candidate Starts for Tophat_10:

(Start: 8 @7819 has 17 MA's), (12, 7846), (13, 7852), (20, 7912), (21, 7924), (22, 7960), (26, 8032), (28, 8047), (30, 8089), (31, 8101), (36, 8158), (39, 8227), (41, 8248), (42, 8257), (44, 8269), (47, 8311), (48, 8320), (49, 8323), (54, 8365), (56, 8449), (57, 8452), (60, 8497), (62, 8533), (64, 8554), (67, 8620), (69, 8698), (70, 8737), (81, 8944), (82, 8959), (83, 8974), (90, 9049), (93, 9094), (100, 9205),

Gene: Vibaki_8 Start: 7645, Stop: 8781, Start Num: 7

Candidate Starts for Vibaki_8:

(Start: 7 @7645 has 34 MA's), (12, 7675), (Start: 14 @7684 has 1 MA's), (16, 7708), (23, 7792), (30, 7909), (32, 7933), (34, 7966), (36, 7978), (41, 8053), (45, 8098), (58, 8248), (78, 8509),

Gene: Wyborn_8 Start: 6376, Stop: 7521, Start Num: 7

Candidate Starts for Wyborn_8:

(Start: 7 @6376 has 34 MA's), (Start: 14 @6418 has 1 MA's), (15, 6424), (34, 6700), (41, 6787), (58, 6955), (78, 7249),

Gene: Zartrosa_7 Start: 5940, Stop: 7127, Start Num: 7

Candidate Starts for Zartrosa_7:

(Start: 7 @5940 has 34 MA's), (Start: 14 @5982 has 1 MA's), (25, 6117), (34, 6264), (58, 6537), (71, 6798), (74, 6819), (75, 6825), (77, 6837), (78, 6849),