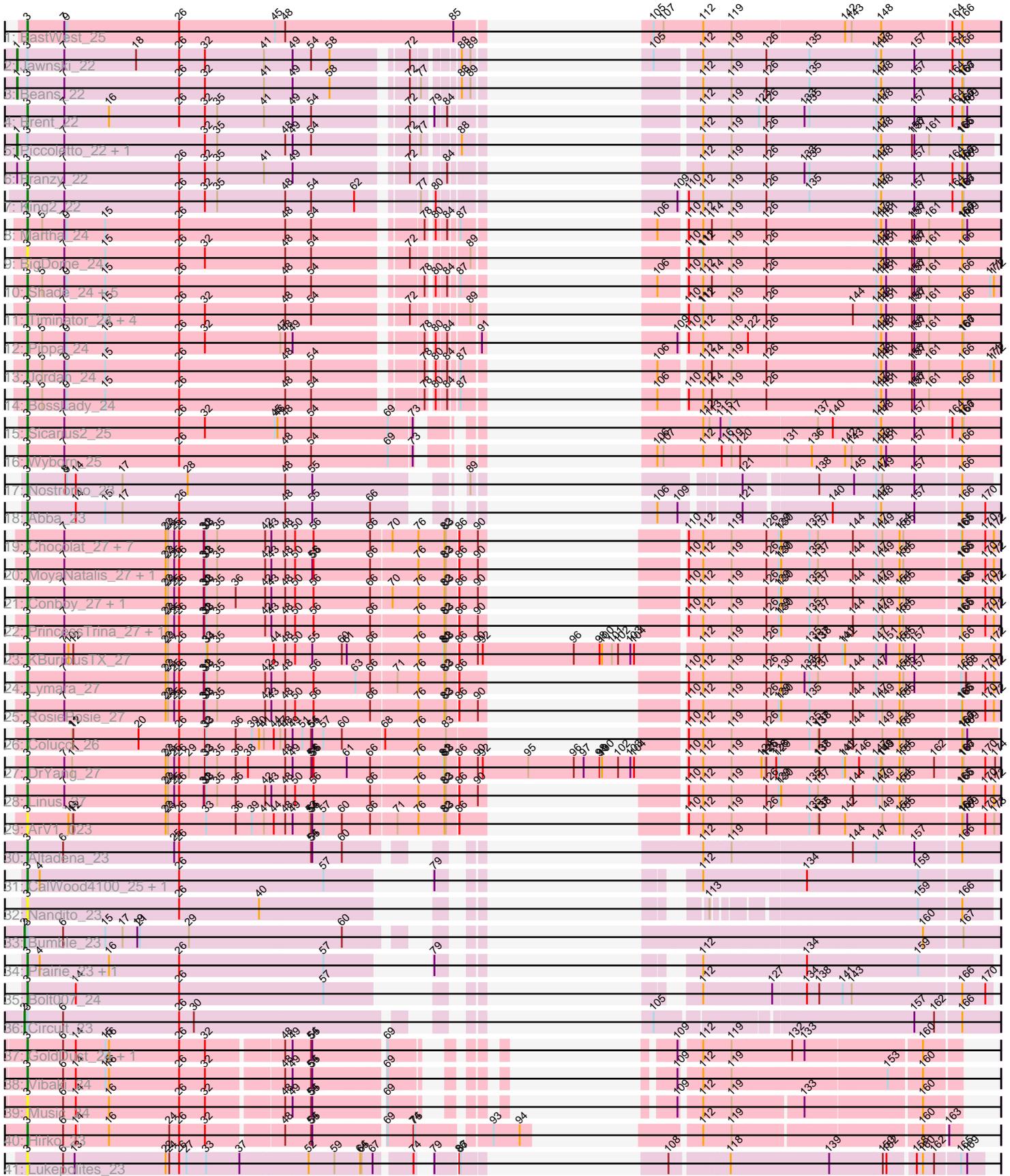Pham 287893

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 287893 Report

This analysis was run 03/28/26 on database version 641.

Pham number 287893 has 64 members, 8 are drafts.

Phages represented in each track:
• Track 1 : EastWest_25
• Track 2 : Jawnski_22
• Track 3 : Beans_22
• Track 4 : Brent_22
• Track 5 : Piccoletto_22, NathanVaag_22
• Track 6 : Franzy_22
• Track 7 : King2_22
• Track 8 : Martha_24
• Track 9 : BigDome_24
• Track 10 : Shade_24, Zartrosa_24, JKerns_24, Grekaycon_24, Sonny_24, TaeYoung_24
• Track 11 : Timinator_24, BarretLemon_24, LeeroyJ_24, GravityBall_24, StevieBAY_24
• Track 12 : Pippa_24
• Track 13 : Jordan_24
• Track 14 : BossLady_24
• Track 15 : Sicarius2_25
• Track 16 : Wyborn_25
• Track 17 : Nostromo_23
• Track 18 : Abba_23
• Track 19 : Chocolat_27, Kabreeze_27, Scavito_27, JaNo_27, Mordred_27, Chipper1996_270, Tophat_27, HumptyDumpty_27
• Track 20 : MoyaNatalis_27, JayCookie_27
• Track 21 : Conboy_27, EdgarPoe_27
• Track 22 : PrincessTrina_27, Chubster_27
• Track 23 : KBurrousTX_27
• Track 24 : Lymara_27
• Track 25 : RosiePosie_27
• Track 26 : Colucci_26
• Track 27 : DrYang_27
• Track 28 : Linus_27
• Track 29 : ArV1_023
• Track 30 : Altadena_23
• Track 31 : CalWood4100_25, Lilmac1015_25
• Track 32 : Nandito_23
• Track 33 : Bumble_23
• Track 34 : Prairie_23, Klevey_24

• Track 35 : Bolt007_24
• Track 36 : Circuit_23
• Track 37 : GoldDust_24, Gooberta_24
• Track 38 : Vibaki_24
• Track 39 : Music_24
• Track 40 : Hirko_23
• Track 41 : Lukepolites_23

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

The start number called the most often in the published annotations is 3, it was called in 50 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abba_23, Altadena_23, ArV1_023, BarretLemon_24, BigDome_24, Bolt007_24, BossLady_24, Brent_22, CalWood4100_25, Chipper1996_270, Chocolat_27, Chubster_27, Colucci_26, Conboy_27, DrYang_27, EastWest_25, EdgarPoe_27, Franzy_22, GoldDust_24, Gooberta_24, GravityBall_24, Grekaycon_24, Hirko_23, HumptyDumpty_27, JKerns_24, JaNo_27, JayCookie_27, Jordan_24, KBurrousTX_27, Kabreeze_27, King2_22, Klevey_24, LeeroyJ_24, Lilmac1015_25, Linus_27, Lukepolites_23, Lymara_27, Martha_24, Mordred_27, MoyaNatalis_27, Music_24, Nandito_23, Nostromo_23, Pippa_24, Prairie_23, PrincessTrina_27, RosiePosie_27, Scavito_27, Shade_24, Sicarius2_25, Sonny_24, StevieBAY_24, TaeYoung_24, Timinator_24, Tophat_27, Vibaki_24, Wyborn_25, Zartrosa_24,

Genes that have the "Most Annotated" start but do not call it:
• Beans_22, Bumble_23, Circuit_23, Jawnski_22, NathanVaag_22, Piccoletto_22,

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

Summary by start number:

Start 1:
• Found in 5 of 64 (7.8%) of genes in pham
• Manual Annotations of this start: 4 of 56
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Beans_22 (AO1), Jawnski_22 (AO1), NathanVaag_22 (AO1), Piccoletto_22 (AO1),

Start 2:
• Found in 2 of 64 (3.1%) of genes in pham
• Manual Annotations of this start: 2 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bumble_23 (FH), Circuit_23 (FH),

Start 3:
• Found in 64 of 64 (100.0%) of genes in pham
• Manual Annotations of this start: 50 of 56
• Called 90.6% of time when present

• Phage (with cluster) where this start called: Abba_23 (AO3), Altadena_23 (FH), ArV1_023 (AR), BarretLemon_24 (AO2), BigDome_24 (AO2), Bolt007_24 (FH), BossLady_24 (AO2), Brent_22 (AO1), CalWood4100_25 (FH), Chipper1996_270 (AR), Chocolat_27 (AR), Chubster_27 (AR), Colucci_26 (AR), Conboy_27 (AR), DrYang_27 (AR), EastWest_25 (AO), EdgarPoe_27 (AR), Franzy_22 (AO1), GoldDust_24 (FL), Gooberta_24 (FL), GravityBall_24 (AO2), Grekaycon_24 (AO2), Hirko_23 (FL), HumptyDumpty_27 (AR), JKerns_24 (AO2), JaNo_27 (AR), JayCookie_27 (AR), Jordan_24 (AO2), KBurrousTX_27 (AR), Kabreeze_27 (AR), King2_22 (AO1), Klevey_24 (FH), LeeroyJ_24 (AO2), Lilmac1015_25 (FH), Linus_27 (AR), Lukepolites_23 (singleton), Lymara_27 (AR), Martha_24 (AO2), Mordred_27 (AR), MoyaNatalis_27 (AR), Music_24 (FL), Nandito_23 (FH), Nostromo_23 (AO3), Pippa_24 (AO2), Prairie_23 (FH), PrincessTrina_27 (AR), RosiePosie_27 (AR), Scavito_27 (AR), Shade_24 (AO2), Sicarius2_25 (AO2), Sonny_24 (AO2), StevieBAY_24 (AO2), TaeYoung_24 (AO2), Timinator_24 (AO2), Tophat_27 (AR), Vibaki_24 (FL), Wyborn_25 (AO2), Zartrosa_24 (AO2),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, AO, AR, AO3, AO2, AO1, FH, FL,

Info for manual annotations of cluster AO:
•Start number 3 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:
•Start number 1 was manually annotated 4 times for cluster AO1.
•Start number 3 was manually annotated 3 times for cluster AO1.

Info for manual annotations of cluster AO2:
•Start number 3 was manually annotated 17 times for cluster AO2.

Info for manual annotations of cluster AO3:
•Start number 3 was manually annotated 2 times for cluster AO3.

Info for manual annotations of cluster AR:
•Start number 3 was manually annotated 19 times for cluster AR.

Info for manual annotations of cluster FH:
•Start number 2 was manually annotated 2 times for cluster FH.
•Start number 3 was manually annotated 5 times for cluster FH.

Info for manual annotations of cluster FL:
•Start number 3 was manually annotated 3 times for cluster FL.

Gene Information:

Gene: Abba_23 Start: 20919, Stop: 22694, Start Num: 3
Candidate Starts for Abba_23:
(Start: 3 @20919 has 50 MA's), (14, 21036), (15, 21108), (17, 21150), (26, 21288), (48, 21546), (55, 21612), (66, 21750), (106, 21948), (109, 21996), (121, 22107), (140, 22299), (147, 22404), (148, 22416), (157, 22497), (166, 22605), (170, 22659),

Gene: Altadena_23 Start: 20090, Stop: 21892, Start Num: 3
Candidate Starts for Altadena_23:
(Start: 3 @20090 has 50 MA's), (6, 20177), (25, 20447), (26, 20459), (54, 20780), (55, 20783), (60, 20855), (112, 21203), (119, 21269), (144, 21548), (147, 21602), (157, 21692), (166, 21800),

Gene: ArV1_023 Start: 22022, Stop: 23962, Start Num: 3
Candidate Starts for ArV1_023:
(Start: 3 @22022 has 50 MA's), (10, 22121), (11, 22130), (12, 22133), (22, 22358), (23, 22364), (26, 22391), (33, 22457), (36, 22529), (39, 22568), (41, 22598), (44, 22622), (48, 22649), (49, 22667), (53, 22709), (54, 22712), (55, 22715), (57, 22742), (60, 22787), (66, 22856), (71, 22916), (76, 22967), (82, 23030), (83, 23033), (86, 23060), (110, 23228), (112, 23261), (119, 23327), (126, 23411), (135, 23516), (137, 23537), (138, 23540), (142, 23603), (149, 23690), (154, 23732), (155, 23741), (166, 23876), (167, 23879), (169, 23888), (170, 23930), (173, 23951),

Gene: BarretLemon_24 Start: 20966, Stop: 22825, Start Num: 3
Candidate Starts for BarretLemon_24:
(Start: 3 @20966 has 50 MA's), (7, 21056), (15, 21155), (26, 21335), (32, 21398), (48, 21593), (54, 21656), (72, 21851), (89, 21956), (110, 22079), (111, 22109), (112, 22112), (119, 22178), (126, 22262), (144, 22472), (147, 22526), (148, 22538), (151, 22550), (156, 22613), (157, 22619), (161, 22655), (166, 22736),

Gene: Beans_22 Start: 20611, Stop: 22491, Start Num: 1
Candidate Starts for Beans_22:
(Start: 1 @20611 has 4 MA's), (Start: 3 @20635 has 50 MA's), (7, 20725), (26, 21004), (32, 21067), (41, 21211), (49, 21280), (58, 21370), (72, 21520), (77, 21541), (88, 21604), (89, 21625), (112, 21781), (119, 21847), (126, 21931), (135, 22036), (147, 22195), (148, 22207), (157, 22285), (164, 22378), (166, 22402), (167, 22405),

Gene: BigDome_24 Start: 20955, Stop: 22814, Start Num: 3
Candidate Starts for BigDome_24:
(Start: 3 @20955 has 50 MA's), (7, 21045), (15, 21144), (26, 21324), (32, 21387), (48, 21582), (54, 21645), (72, 21840), (89, 21945), (110, 22068), (111, 22098), (112, 22101), (119, 22167), (126, 22251), (147, 22515), (148, 22527), (151, 22539), (156, 22602), (157, 22608), (161, 22644), (166, 22725),

Gene: Bolt007_24 Start: 19247, Stop: 20917, Start Num: 3
Candidate Starts for Bolt007_24:
(Start: 3 @19247 has 50 MA's), (14, 19364), (26, 19616), (57, 19967), (112, 20246), (127, 20408), (134, 20486), (138, 20513), (141, 20570), (143, 20591), (166, 20849), (170, 20903),

Gene: BossLady_24 Start: 20943, Stop: 22802, Start Num: 3
Candidate Starts for BossLady_24:
(Start: 3 @20943 has 50 MA's), (5, 20979), (7, 21033), (9, 21039), (15, 21132), (26, 21312), (48, 21570), (54, 21633), (78, 21858), (80, 21870), (84, 21891), (87, 21909), (106, 21999), (110, 22056), (112, 22089), (114, 22110), (119, 22155), (126, 22239), (147, 22503), (148, 22515), (151, 22527), (156, 22590), (157, 22596), (161, 22632), (166, 22713),

Gene: Brent_22 Start: 20617, Stop: 22473, Start Num: 3
Candidate Starts for Brent_22:
(Start: 3 @20617 has 50 MA's), (7, 20707), (16, 20815), (26, 20986), (32, 21049), (35, 21079), (41, 21193), (49, 21262), (54, 21307), (72, 21502), (79, 21541), (84, 21565), (112, 21763), (119, 21829), (123, 21895), (126, 21913), (133, 22006), (135, 22018), (147, 22177), (148, 22189), (157, 22267),

(164, 22360), (166, 22384), (167, 22387), (169, 22396),

Gene: Bumble_23 Start: 19960, Stop: 21765, Start Num: 2
Candidate Starts for Bumble_23:
(Start: 2 @19960 has 2 MA's), (Start: 3 @19966 has 50 MA's), (6, 20053), (15, 20155), (17, 20197), (19, 20233), (21, 20239), (29, 20359), (60, 20731), (160, 21589), (167, 21679),

Gene: CalWood4100_25 Start: 19237, Stop: 20907, Start Num: 3
Candidate Starts for CalWood4100_25:
(Start: 3 @19237 has 50 MA's), (4, 19267), (26, 19606), (57, 19957), (79, 20077), (112, 20236), (134, 20476), (159, 20740),

Gene: Chipper1996_270 Start: 23710, Stop: 25647, Start Num: 3
Candidate Starts for Chipper1996_270:
(Start: 3 @23710 has 50 MA's), (7, 23800), (22, 24046), (23, 24052), (25, 24067), (26, 24079), (31, 24139), (32, 24142), (33, 24145), (35, 24172), (42, 24289), (43, 24304), (48, 24337), (50, 24361), (56, 24406), (66, 24544), (70, 24592), (76, 24655), (82, 24718), (83, 24721), (86, 24748), (90, 24793), (110, 24916), (112, 24949), (119, 25015), (126, 25099), (129, 25129), (130, 25135), (135, 25204), (137, 25225), (144, 25309), (147, 25363), (149, 25378), (154, 25420), (155, 25429), (165, 25558), (166, 25561), (170, 25615), (172, 25636),

Gene: Chocolat_27 Start: 23710, Stop: 25647, Start Num: 3
Candidate Starts for Chocolat_27:
(Start: 3 @23710 has 50 MA's), (7, 23800), (22, 24046), (23, 24052), (25, 24067), (26, 24079), (31, 24139), (32, 24142), (33, 24145), (35, 24172), (42, 24289), (43, 24304), (48, 24337), (50, 24361), (56, 24406), (66, 24544), (70, 24592), (76, 24655), (82, 24718), (83, 24721), (86, 24748), (90, 24793), (110, 24916), (112, 24949), (119, 25015), (126, 25099), (129, 25129), (130, 25135), (135, 25204), (137, 25225), (144, 25309), (147, 25363), (149, 25378), (154, 25420), (155, 25429), (165, 25558), (166, 25561), (170, 25615), (172, 25636),

Gene: Chubster_27 Start: 23481, Stop: 25418, Start Num: 3
Candidate Starts for Chubster_27:
(Start: 3 @23481 has 50 MA's), (7, 23571), (22, 23817), (23, 23823), (25, 23838), (26, 23850), (31, 23910), (32, 23913), (33, 23916), (35, 23943), (42, 24060), (43, 24075), (48, 24108), (50, 24132), (56, 24177), (66, 24315), (76, 24426), (82, 24489), (83, 24492), (86, 24519), (90, 24564), (110, 24687), (112, 24720), (119, 24786), (126, 24870), (129, 24900), (130, 24906), (135, 24975), (137, 24996), (144, 25080), (147, 25134), (149, 25149), (154, 25191), (155, 25200), (165, 25329), (166, 25332), (170, 25386), (172, 25407),

Gene: Circuit_23 Start: 20071, Stop: 21828, Start Num: 2
Candidate Starts for Circuit_23:
(Start: 2 @20071 has 2 MA's), (Start: 3 @20077 has 50 MA's), (6, 20164), (26, 20446), (30, 20482), (105, 21070), (157, 21631), (162, 21679), (166, 21739),

Gene: Colucci_26 Start: 23173, Stop: 25110, Start Num: 3
Candidate Starts for Colucci_26:
(Start: 3 @23173 has 50 MA's), (11, 23281), (12, 23284), (20, 23443), (26, 23542), (32, 23605), (33, 23608), (36, 23680), (39, 23719), (40, 23737), (41, 23749), (44, 23773), (47, 23788), (48, 23800), (49, 23818), (51, 23842), (54, 23863), (55, 23866), (57, 23893), (60, 23938), (68, 24037), (76, 24118), (83, 24184), (110, 24379), (112, 24412), (119, 24478), (126, 24562), (135, 24667), (137, 24688), (138, 24691), (144, 24772), (149, 24841), (154, 24883), (155, 24892), (166, 25027), (167, 25030), (169, 25039),

Gene: Conboy_27 Start: 23709, Stop: 25646, Start Num: 3
Candidate Starts for Conboy_27:
(Start: 3 @23709 has 50 MA's), (7, 23799), (22, 24045), (23, 24051), (25, 24066), (26, 24078), (31, 24138), (32, 24141), (33, 24144), (35, 24171), (36, 24216), (42, 24288), (43, 24303), (48, 24336), (50, 24360), (56, 24405), (66, 24543), (70, 24591), (76, 24654), (82, 24717), (83, 24720), (86, 24747), (90, 24792), (110, 24915), (112, 24948), (119, 25014), (126, 25098), (129, 25128), (130, 25134), (135, 25203), (137, 25224), (144, 25308), (147, 25362), (149, 25377), (154, 25419), (155, 25428), (165, 25557), (166, 25560), (170, 25614), (172, 25635),

Gene: DrYang_27 Start: 24422, Stop: 26734, Start Num: 3
Candidate Starts for DrYang_27:
(Start: 3 @24422 has 50 MA's), (7, 24512), (11, 24530), (22, 24758), (23, 24764), (25, 24779), (26, 24791), (29, 24815), (32, 24854), (33, 24857), (35, 24884), (36, 24929), (38, 24959), (48, 25049), (49, 25067), (54, 25112), (55, 25115), (56, 25118), (61, 25199), (66, 25256), (76, 25367), (81, 25427), (82, 25430), (83, 25433), (86, 25460), (90, 25505), (92, 25517), (95, 25628), (96, 25739), (97, 25763), (98, 25802), (99, 25805), (100, 25808), (102, 25847), (103, 25877), (104, 25886), (110, 26000), (112, 26033), (119, 26099), (124, 26171), (125, 26180), (126, 26183), (128, 26207), (129, 26213), (137, 26309), (138, 26312), (141, 26369), (142, 26375), (146, 26405), (147, 26447), (148, 26459), (149, 26462), (154, 26504), (155, 26513), (162, 26588), (166, 26648), (167, 26651), (170, 26702), (174, 26726),

Gene: EastWest_25 Start: 20811, Stop: 22751, Start Num: 3
Candidate Starts for EastWest_25:
(Start: 3 @20811 has 50 MA's), (7, 20901), (9, 20907), (26, 21180), (45, 21414), (48, 21438), (85, 21843), (105, 21942), (107, 21966), (112, 22062), (119, 22128), (142, 22392), (143, 22407), (148, 22476), (164, 22638), (166, 22662),

Gene: EdgarPoe_27 Start: 23709, Stop: 25646, Start Num: 3
Candidate Starts for EdgarPoe_27:
(Start: 3 @23709 has 50 MA's), (7, 23799), (22, 24045), (23, 24051), (25, 24066), (26, 24078), (31, 24138), (32, 24141), (33, 24144), (35, 24171), (36, 24216), (42, 24288), (43, 24303), (48, 24336), (50, 24360), (56, 24405), (66, 24543), (70, 24591), (76, 24654), (82, 24717), (83, 24720), (86, 24747), (90, 24792), (110, 24915), (112, 24948), (119, 25014), (126, 25098), (129, 25128), (130, 25134), (135, 25203), (137, 25224), (144, 25308), (147, 25362), (149, 25377), (154, 25419), (155, 25428), (165, 25557), (166, 25560), (170, 25614), (172, 25635),

Gene: Franzy_22 Start: 20616, Stop: 22472, Start Num: 3
Candidate Starts for Franzy_22:
(Start: 1 @20592 has 4 MA's), (Start: 3 @20616 has 50 MA's), (7, 20706), (26, 20985), (32, 21048), (35, 21078), (41, 21192), (49, 21261), (72, 21501), (84, 21564), (112, 21762), (119, 21828), (126, 21912), (133, 22005), (135, 22017), (147, 22176), (148, 22188), (157, 22266), (164, 22359), (166, 22383), (167, 22386), (169, 22395),

Gene: GoldDust_24 Start: 23019, Stop: 24686, Start Num: 3
Candidate Starts for GoldDust_24:
(Start: 3 @23019 has 50 MA's), (6, 23106), (14, 23136), (15, 23208), (16, 23217), (26, 23388), (32, 23451), (48, 23625), (49, 23643), (54, 23688), (55, 23691), (69, 23850), (109, 24066), (112, 24108), (119, 24174), (132, 24315), (133, 24345), (160, 24600),

Gene: Gooberta_24 Start: 23018, Stop: 24685, Start Num: 3
Candidate Starts for Gooberta_24:
(Start: 3 @23018 has 50 MA's), (6, 23105), (14, 23135), (15, 23207), (16, 23216), (26, 23387), (32, 23450), (48, 23624), (49, 23642), (54, 23687), (55, 23690), (69, 23849), (109, 24065), (112, 24107),

(119, 24173), (132, 24314), (133, 24344), (160, 24599),

Gene: GravityBall_24 Start: 20965, Stop: 22824, Start Num: 3
Candidate Starts for GravityBall_24:
(Start: 3 @20965 has 50 MA's), (7, 21055), (15, 21154), (26, 21334), (32, 21397), (48, 21592), (54, 21655), (72, 21850), (89, 21955), (110, 22078), (111, 22108), (112, 22111), (119, 22177), (126, 22261), (144, 22471), (147, 22525), (148, 22537), (151, 22549), (156, 22612), (157, 22618), (161, 22654), (166, 22735),

Gene: Grekaycon_24 Start: 20952, Stop: 22811, Start Num: 3
Candidate Starts for Grekaycon_24:
(Start: 3 @20952 has 50 MA's), (5, 20988), (7, 21042), (9, 21048), (15, 21141), (26, 21321), (48, 21579), (54, 21642), (78, 21867), (80, 21879), (84, 21900), (87, 21918), (106, 22008), (110, 22065), (112, 22098), (114, 22119), (119, 22164), (126, 22248), (147, 22512), (148, 22524), (151, 22536), (156, 22599), (157, 22605), (161, 22641), (166, 22722), (171, 22788), (172, 22797),

Gene: Hirko_23 Start: 22789, Stop: 24627, Start Num: 3
Candidate Starts for Hirko_23:
(Start: 3 @22789 has 50 MA's), (6, 22876), (14, 22906), (16, 22981), (24, 23128), (26, 23152), (32, 23215), (48, 23389), (54, 23452), (55, 23455), (69, 23614), (74, 23677), (75, 23680), (93, 23839), (94, 23902), (112, 24064), (119, 24130), (160, 24544), (163, 24598),

Gene: HumptyDumpty_27 Start: 23708, Stop: 25645, Start Num: 3
Candidate Starts for HumptyDumpty_27:
(Start: 3 @23708 has 50 MA's), (7, 23798), (22, 24044), (23, 24050), (25, 24065), (26, 24077), (31, 24137), (32, 24140), (33, 24143), (35, 24170), (42, 24287), (43, 24302), (48, 24335), (50, 24359), (56, 24404), (66, 24542), (70, 24590), (76, 24653), (82, 24716), (83, 24719), (86, 24746), (90, 24791), (110, 24914), (112, 24947), (119, 25013), (126, 25097), (129, 25127), (130, 25133), (135, 25202), (137, 25223), (144, 25307), (147, 25361), (149, 25376), (154, 25418), (155, 25427), (165, 25556), (166, 25559), (170, 25613), (172, 25634),

Gene: JKerns_24 Start: 20979, Stop: 22838, Start Num: 3
Candidate Starts for JKerns_24:
(Start: 3 @20979 has 50 MA's), (5, 21015), (7, 21069), (9, 21075), (15, 21168), (26, 21348), (48, 21606), (54, 21669), (78, 21894), (80, 21906), (84, 21927), (87, 21945), (106, 22035), (110, 22092), (112, 22125), (114, 22146), (119, 22191), (126, 22275), (147, 22539), (148, 22551), (151, 22563), (156, 22626), (157, 22632), (161, 22668), (166, 22749), (171, 22815), (172, 22824),

Gene: JaNo_27 Start: 23708, Stop: 25645, Start Num: 3
Candidate Starts for JaNo_27:
(Start: 3 @23708 has 50 MA's), (7, 23798), (22, 24044), (23, 24050), (25, 24065), (26, 24077), (31, 24137), (32, 24140), (33, 24143), (35, 24170), (42, 24287), (43, 24302), (48, 24335), (50, 24359), (56, 24404), (66, 24542), (70, 24590), (76, 24653), (82, 24716), (83, 24719), (86, 24746), (90, 24791), (110, 24914), (112, 24947), (119, 25013), (126, 25097), (129, 25127), (130, 25133), (135, 25202), (137, 25223), (144, 25307), (147, 25361), (149, 25376), (154, 25418), (155, 25427), (165, 25556), (166, 25559), (170, 25613), (172, 25634),

Gene: Jawnski_22 Start: 20606, Stop: 22486, Start Num: 1
Candidate Starts for Jawnski_22:
(Start: 1 @20606 has 4 MA's), (Start: 3 @20630 has 50 MA's), (7, 20720), (18, 20894), (26, 20999), (32, 21062), (41, 21206), (49, 21275), (54, 21320), (58, 21365), (72, 21515), (88, 21599), (89, 21620), (105, 21677), (112, 21776), (119, 21842), (126, 21926), (135, 22031), (147, 22190), (148, 22202), (157, 22280), (164, 22373), (166, 22397),

Gene: JayCookie_27 Start: 23711, Stop: 25648, Start Num: 3
Candidate Starts for JayCookie_27:
(Start: 3 @23711 has 50 MA's), (7, 23801), (22, 24047), (23, 24053), (25, 24068), (26, 24080), (31, 24140), (32, 24143), (33, 24146), (35, 24173), (42, 24290), (43, 24305), (48, 24338), (50, 24362), (55, 24404), (56, 24407), (66, 24545), (76, 24656), (82, 24719), (83, 24722), (86, 24749), (90, 24794), (110, 24917), (112, 24950), (119, 25016), (126, 25100), (129, 25130), (130, 25136), (135, 25205), (137, 25226), (144, 25310), (147, 25364), (149, 25379), (154, 25421), (155, 25430), (165, 25559), (166, 25562), (170, 25616), (172, 25637),

Gene: Jordan_24 Start: 20949, Stop: 22808, Start Num: 3
Candidate Starts for Jordan_24:
(Start: 3 @20949 has 50 MA's), (5, 20985), (7, 21039), (9, 21045), (15, 21138), (26, 21318), (48, 21576), (54, 21639), (78, 21864), (80, 21876), (84, 21897), (87, 21915), (106, 22005), (112, 22095), (114, 22116), (119, 22161), (126, 22245), (147, 22509), (148, 22521), (151, 22533), (156, 22596), (157, 22602), (161, 22638), (166, 22719), (171, 22785), (172, 22794),

Gene: KBurrousTX_27 Start: 24247, Stop: 26559, Start Num: 3
Candidate Starts for KBurrousTX_27:
(Start: 3 @24247 has 50 MA's), (7, 24337), (10, 24346), (12, 24358), (22, 24583), (23, 24589), (26, 24616), (33, 24682), (34, 24685), (35, 24709), (44, 24847), (48, 24874), (50, 24898), (55, 24940), (60, 25012), (61, 25024), (66, 25081), (76, 25192), (81, 25252), (82, 25255), (83, 25258), (86, 25285), (90, 25330), (92, 25342), (96, 25564), (98, 25627), (100, 25633), (101, 25657), (102, 25672), (103, 25702), (104, 25711), (112, 25858), (119, 25924), (126, 26008), (135, 26113), (137, 26134), (138, 26137), (141, 26194), (142, 26200), (147, 26272), (151, 26296), (154, 26329), (155, 26338), (157, 26362), (166, 26470), (172, 26545),

Gene: Kabreeze_27 Start: 23708, Stop: 25645, Start Num: 3
Candidate Starts for Kabreeze_27:
(Start: 3 @23708 has 50 MA's), (7, 23798), (22, 24044), (23, 24050), (25, 24065), (26, 24077), (31, 24137), (32, 24140), (33, 24143), (35, 24170), (42, 24287), (43, 24302), (48, 24335), (50, 24359), (56, 24404), (66, 24542), (70, 24590), (76, 24653), (82, 24716), (83, 24719), (86, 24746), (90, 24791), (110, 24914), (112, 24947), (119, 25013), (126, 25097), (129, 25127), (130, 25133), (135, 25202), (137, 25223), (144, 25307), (147, 25361), (149, 25376), (154, 25418), (155, 25427), (165, 25556), (166, 25559), (170, 25613), (172, 25634),

Gene: King2_22 Start: 20620, Stop: 22476, Start Num: 3
Candidate Starts for King2_22:
(Start: 3 @20620 has 50 MA's), (7, 20710), (26, 20989), (32, 21052), (35, 21082), (48, 21247), (54, 21310), (62, 21415), (77, 21526), (80, 21547), (109, 21724), (110, 21733), (112, 21766), (119, 21832), (126, 21916), (135, 22021), (147, 22180), (148, 22192), (157, 22270), (164, 22363), (166, 22387), (167, 22390),

Gene: Klevey_24 Start: 19247, Stop: 20917, Start Num: 3
Candidate Starts for Klevey_24:
(Start: 3 @19247 has 50 MA's), (4, 19277), (16, 19445), (26, 19616), (57, 19967), (79, 20087), (112, 20246), (134, 20486), (159, 20750),

Gene: LeeroyJ_24 Start: 20965, Stop: 22824, Start Num: 3
Candidate Starts for LeeroyJ_24:
(Start: 3 @20965 has 50 MA's), (7, 21055), (15, 21154), (26, 21334), (32, 21397), (48, 21592), (54, 21655), (72, 21850), (89, 21955), (110, 22078), (111, 22108), (112, 22111), (119, 22177), (126, 22261), (144, 22471), (147, 22525), (148, 22537), (151, 22549), (156, 22612), (157, 22618), (161,

22654), (166, 22735),

Gene: Lilmac1015_25 Start: 19237, Stop: 20907, Start Num: 3
Candidate Starts for Lilmac1015_25:
(Start: 3 @19237 has 50 MA's), (4, 19267), (26, 19606), (57, 19957), (79, 20077), (112, 20236), (134, 20476), (159, 20740),

Gene: Linus_27 Start: 23708, Stop: 25645, Start Num: 3
Candidate Starts for Linus_27:
(Start: 3 @23708 has 50 MA's), (7, 23798), (22, 24044), (23, 24050), (25, 24065), (26, 24077), (31, 24137), (32, 24140), (33, 24143), (35, 24170), (36, 24215), (42, 24287), (43, 24302), (48, 24335), (50, 24359), (56, 24404), (66, 24542), (76, 24653), (82, 24716), (83, 24719), (86, 24746), (90, 24791), (110, 24914), (112, 24947), (119, 25013), (126, 25097), (129, 25127), (130, 25133), (135, 25202), (137, 25223), (144, 25307), (147, 25361), (149, 25376), (154, 25418), (155, 25427), (165, 25556), (166, 25559), (170, 25613), (172, 25634),

Gene: Lukepolites_23 Start: 19724, Stop: 21529, Start Num: 3
Candidate Starts for Lukepolites_23:
(Start: 3 @19724 has 50 MA's), (6, 19811), (13, 19838), (22, 20057), (24, 20066), (26, 20090), (27, 20108), (33, 20156), (37, 20237), (52, 20399), (59, 20462), (64, 20525), (65, 20528), (67, 20555), (74, 20633), (79, 20642), (86, 20690), (87, 20693), (108, 20816), (118, 20948), (139, 21188), (150, 21311), (152, 21320), (158, 21377), (160, 21392), (162, 21416), (165, 21473), (169, 21488),

Gene: Lymara_27 Start: 23706, Stop: 25643, Start Num: 3
Candidate Starts for Lymara_27:
(Start: 3 @23706 has 50 MA's), (7, 23796), (22, 24042), (23, 24048), (25, 24063), (26, 24075), (31, 24135), (32, 24138), (33, 24141), (35, 24168), (42, 24285), (43, 24300), (48, 24333), (56, 24402), (63, 24504), (66, 24540), (71, 24600), (76, 24651), (82, 24714), (83, 24717), (86, 24744), (110, 24912), (112, 24945), (119, 25011), (126, 25095), (130, 25131), (133, 25188), (135, 25200), (137, 25221), (144, 25305), (147, 25359), (154, 25416), (155, 25425), (157, 25449), (165, 25554), (168, 25566), (170, 25611), (172, 25632),

Gene: Martha_24 Start: 20890, Stop: 22749, Start Num: 3
Candidate Starts for Martha_24:
(Start: 3 @20890 has 50 MA's), (5, 20926), (7, 20980), (9, 20986), (15, 21079), (26, 21259), (48, 21517), (54, 21580), (78, 21805), (80, 21817), (84, 21838), (87, 21856), (106, 21946), (110, 22003), (112, 22036), (114, 22057), (119, 22102), (126, 22186), (147, 22450), (148, 22462), (151, 22474), (156, 22537), (157, 22543), (161, 22579), (166, 22660), (167, 22663), (169, 22672),

Gene: Mordred_27 Start: 23708, Stop: 25645, Start Num: 3
Candidate Starts for Mordred_27:
(Start: 3 @23708 has 50 MA's), (7, 23798), (22, 24044), (23, 24050), (25, 24065), (26, 24077), (31, 24137), (32, 24140), (33, 24143), (35, 24170), (42, 24287), (43, 24302), (48, 24335), (50, 24359), (56, 24404), (66, 24542), (70, 24590), (76, 24653), (82, 24716), (83, 24719), (86, 24746), (90, 24791), (110, 24914), (112, 24947), (119, 25013), (126, 25097), (129, 25127), (130, 25133), (135, 25202), (137, 25223), (144, 25307), (147, 25361), (149, 25376), (154, 25418), (155, 25427), (165, 25556), (166, 25559), (170, 25613), (172, 25634),

Gene: MoyaNatalis_27 Start: 23711, Stop: 25648, Start Num: 3
Candidate Starts for MoyaNatalis_27:
(Start: 3 @23711 has 50 MA's), (7, 23801), (22, 24047), (23, 24053), (25, 24068), (26, 24080), (31, 24140), (32, 24143), (33, 24146), (35, 24173), (42, 24290), (43, 24305), (48, 24338), (50, 24362), (55, 24404), (56, 24407), (66, 24545), (76, 24656), (82, 24719), (83, 24722), (86, 24749), (90, 24794), (110,

24917), (112, 24950), (119, 25016), (126, 25100), (129, 25130), (130, 25136), (135, 25205), (137, 25226), (144, 25310), (147, 25364), (149, 25379), (154, 25421), (155, 25430), (165, 25559), (166, 25562), (170, 25616), (172, 25637),

Gene: Music_24 Start: 22881, Stop: 24536, Start Num: 3
Candidate Starts for Music_24:
(Start: 3 @22881 has 50 MA's), (6, 22968), (14, 22998), (16, 23079), (26, 23250), (32, 23313), (48, 23487), (49, 23505), (54, 23550), (55, 23553), (69, 23712), (109, 23928), (112, 23970), (119, 24036), (133, 24195), (160, 24450),

Gene: Nandito_23 Start: 18292, Stop: 19902, Start Num: 3
Candidate Starts for Nandito_23:
(Start: 3 @18292 has 50 MA's), (26, 18661), (40, 18856), (113, 19294), (159, 19735), (166, 19831),

Gene: NathanVaag_22 Start: 20602, Stop: 22467, Start Num: 1
Candidate Starts for NathanVaag_22:
(Start: 1 @20602 has 4 MA's), (Start: 3 @20626 has 50 MA's), (7, 20716), (32, 21058), (35, 21088), (48, 21253), (49, 21271), (54, 21316), (72, 21511), (77, 21532), (88, 21595), (112, 21772), (119, 21838), (126, 21922), (147, 22186), (148, 22198), (156, 22273), (157, 22279), (161, 22315), (165, 22393), (166, 22396),

Gene: Nostromo_23 Start: 20794, Stop: 22545, Start Num: 3
Candidate Starts for Nostromo_23:
(Start: 3 @20794 has 50 MA's), (8, 20887), (9, 20890), (14, 20911), (17, 21025), (28, 21184), (48, 21421), (55, 21487), (89, 21757), (121, 21982), (138, 22144), (145, 22225), (147, 22279), (149, 22294), (157, 22372), (166, 22480),

Gene: Piccoletto_22 Start: 20601, Stop: 22466, Start Num: 1
Candidate Starts for Piccoletto_22:
(Start: 1 @20601 has 4 MA's), (Start: 3 @20625 has 50 MA's), (7, 20715), (32, 21057), (35, 21087), (48, 21252), (49, 21270), (54, 21315), (72, 21510), (77, 21531), (88, 21594), (112, 21771), (119, 21837), (126, 21921), (147, 22185), (148, 22197), (156, 22272), (157, 22278), (161, 22314), (165, 22392), (166, 22395),

Gene: Pippa_24 Start: 20988, Stop: 22847, Start Num: 3
Candidate Starts for Pippa_24:
(Start: 3 @20988 has 50 MA's), (5, 21024), (7, 21078), (9, 21084), (15, 21177), (26, 21357), (32, 21420), (47, 21603), (48, 21615), (49, 21633), (78, 21903), (80, 21915), (84, 21936), (91, 21996), (109, 22092), (110, 22101), (112, 22134), (119, 22200), (122, 22239), (126, 22284), (147, 22548), (148, 22560), (151, 22572), (156, 22635), (157, 22641), (161, 22677), (166, 22758), (167, 22761),

Gene: Prairie_23 Start: 19265, Stop: 20935, Start Num: 3
Candidate Starts for Prairie_23:
(Start: 3 @19265 has 50 MA's), (4, 19295), (16, 19463), (26, 19634), (57, 19985), (79, 20105), (112, 20264), (134, 20504), (159, 20768),

Gene: PrincessTrina_27 Start: 23711, Stop: 25648, Start Num: 3
Candidate Starts for PrincessTrina_27:
(Start: 3 @23711 has 50 MA's), (7, 23801), (22, 24047), (23, 24053), (25, 24068), (26, 24080), (31, 24140), (32, 24143), (33, 24146), (35, 24173), (42, 24290), (43, 24305), (48, 24338), (50, 24362), (56, 24407), (66, 24545), (76, 24656), (82, 24719), (83, 24722), (86, 24749), (90, 24794), (110, 24917), (112, 24950), (119, 25016), (126, 25100), (129, 25130), (130, 25136), (135, 25205), (137, 25226), (144, 25310), (147, 25364), (149, 25379), (154, 25421), (155, 25430), (165, 25559), (166, 25562),

(170, 25616), (172, 25637),

Gene: RosiePosie_27 Start: 23711, Stop: 25648, Start Num: 3
Candidate Starts for RosiePosie_27:
(Start: 3 @23711 has 50 MA's), (7, 23801), (22, 24047), (23, 24053), (25, 24068), (26, 24080), (31, 24140), (32, 24143), (33, 24146), (35, 24173), (42, 24290), (43, 24305), (48, 24338), (50, 24362), (56, 24407), (66, 24545), (76, 24656), (82, 24719), (83, 24722), (86, 24749), (90, 24794), (110, 24917), (112, 24950), (119, 25016), (126, 25100), (129, 25130), (130, 25136), (135, 25205), (144, 25310), (147, 25364), (149, 25379), (154, 25421), (155, 25430), (165, 25559), (166, 25562), (170, 25616), (172, 25637),

Gene: Scavito_27 Start: 23708, Stop: 25645, Start Num: 3
Candidate Starts for Scavito_27:
(Start: 3 @23708 has 50 MA's), (7, 23798), (22, 24044), (23, 24050), (25, 24065), (26, 24077), (31, 24137), (32, 24140), (33, 24143), (35, 24170), (42, 24287), (43, 24302), (48, 24335), (50, 24359), (56, 24404), (66, 24542), (70, 24590), (76, 24653), (82, 24716), (83, 24719), (86, 24746), (90, 24791), (110, 24914), (112, 24947), (119, 25013), (126, 25097), (129, 25127), (130, 25133), (135, 25202), (137, 25223), (144, 25307), (147, 25361), (149, 25376), (154, 25418), (155, 25427), (165, 25556), (166, 25559), (170, 25613), (172, 25634),

Gene: Shade_24 Start: 20928, Stop: 22787, Start Num: 3
Candidate Starts for Shade_24:
(Start: 3 @20928 has 50 MA's), (5, 20964), (7, 21018), (9, 21024), (15, 21117), (26, 21297), (48, 21555), (54, 21618), (78, 21843), (80, 21855), (84, 21876), (87, 21894), (106, 21984), (110, 22041), (112, 22074), (114, 22095), (119, 22140), (126, 22224), (147, 22488), (148, 22500), (151, 22512), (156, 22575), (157, 22581), (161, 22617), (166, 22698), (171, 22764), (172, 22773),

Gene: Sicarius2_25 Start: 21364, Stop: 23226, Start Num: 3
Candidate Starts for Sicarius2_25:
(Start: 3 @21364 has 50 MA's), (7, 21454), (26, 21733), (32, 21796), (45, 21967), (46, 21973), (48, 21991), (54, 22054), (69, 22237), (73, 22291), (112, 22531), (113, 22546), (115, 22573), (117, 22594), (137, 22795), (140, 22828), (147, 22933), (148, 22945), (157, 23026), (164, 23110), (166, 23134), (167, 23137),

Gene: Sonny_24 Start: 20949, Stop: 22808, Start Num: 3
Candidate Starts for Sonny_24:
(Start: 3 @20949 has 50 MA's), (5, 20985), (7, 21039), (9, 21045), (15, 21138), (26, 21318), (48, 21576), (54, 21639), (78, 21864), (80, 21876), (84, 21897), (87, 21915), (106, 22005), (110, 22062), (112, 22095), (114, 22116), (119, 22161), (126, 22245), (147, 22509), (148, 22521), (151, 22533), (156, 22596), (157, 22602), (161, 22638), (166, 22719), (171, 22785), (172, 22794),

Gene: StevieBAY_24 Start: 20965, Stop: 22824, Start Num: 3
Candidate Starts for StevieBAY_24:
(Start: 3 @20965 has 50 MA's), (7, 21055), (15, 21154), (26, 21334), (32, 21397), (48, 21592), (54, 21655), (72, 21850), (89, 21955), (110, 22078), (111, 22108), (112, 22111), (119, 22177), (126, 22261), (144, 22471), (147, 22525), (148, 22537), (151, 22549), (156, 22612), (157, 22618), (161, 22654), (166, 22735),

Gene: TaeYoung_24 Start: 20953, Stop: 22812, Start Num: 3
Candidate Starts for TaeYoung_24:
(Start: 3 @20953 has 50 MA's), (5, 20989), (7, 21043), (9, 21049), (15, 21142), (26, 21322), (48, 21580), (54, 21643), (78, 21868), (80, 21880), (84, 21901), (87, 21919), (106, 22009), (110, 22066), (112, 22099), (114, 22120), (119, 22165), (126, 22249), (147, 22513), (148, 22525), (151, 22537),

(156, 22600), (157, 22606), (161, 22642), (166, 22723), (171, 22789), (172, 22798),

Gene: Timinator_24 Start: 20965, Stop: 22824, Start Num: 3
Candidate Starts for Timinator_24:
(Start: 3 @20965 has 50 MA's), (7, 21055), (15, 21154), (26, 21334), (32, 21397), (48, 21592), (54, 21655), (72, 21850), (89, 21955), (110, 22078), (111, 22108), (112, 22111), (119, 22177), (126, 22261), (144, 22471), (147, 22525), (148, 22537), (151, 22549), (156, 22612), (157, 22618), (161, 22654), (166, 22735),

Gene: Tophat_27 Start: 23710, Stop: 25647, Start Num: 3
Candidate Starts for Tophat_27:
(Start: 3 @23710 has 50 MA's), (7, 23800), (22, 24046), (23, 24052), (25, 24067), (26, 24079), (31, 24139), (32, 24142), (33, 24145), (35, 24172), (42, 24289), (43, 24304), (48, 24337), (50, 24361), (56, 24406), (66, 24544), (70, 24592), (76, 24655), (82, 24718), (83, 24721), (86, 24748), (90, 24793), (110, 24916), (112, 24949), (119, 25015), (126, 25099), (129, 25129), (130, 25135), (135, 25204), (137, 25225), (144, 25309), (147, 25363), (149, 25378), (154, 25420), (155, 25429), (165, 25558), (166, 25561), (170, 25615), (172, 25636),

Gene: Vibaki_24 Start: 22894, Stop: 24561, Start Num: 3
Candidate Starts for Vibaki_24:
(Start: 3 @22894 has 50 MA's), (6, 22981), (14, 23011), (15, 23083), (16, 23092), (26, 23263), (32, 23326), (48, 23500), (49, 23518), (54, 23563), (55, 23566), (69, 23725), (109, 23941), (112, 23983), (119, 24049), (153, 24403), (160, 24475),

Gene: Wyborn_25 Start: 21342, Stop: 23201, Start Num: 3
Candidate Starts for Wyborn_25:
(Start: 3 @21342 has 50 MA's), (7, 21432), (26, 21711), (48, 21969), (54, 22032), (69, 22215), (73, 22269), (106, 22398), (107, 22413), (112, 22509), (116, 22554), (119, 22575), (120, 22596), (131, 22701), (136, 22758), (142, 22836), (143, 22851), (147, 22908), (148, 22920), (151, 22932), (157, 23001), (166, 23109),

Gene: Zartrosa_24 Start: 20952, Stop: 22811, Start Num: 3
Candidate Starts for Zartrosa_24:
(Start: 3 @20952 has 50 MA's), (5, 20988), (7, 21042), (9, 21048), (15, 21141), (26, 21321), (48, 21579), (54, 21642), (78, 21867), (80, 21879), (84, 21900), (87, 21918), (106, 22008), (110, 22065), (112, 22098), (114, 22119), (119, 22164), (126, 22248), (147, 22512), (148, 22524), (151, 22536), (156, 22599), (157, 22605), (161, 22641), (166, 22722), (171, 22788), (172, 22797),