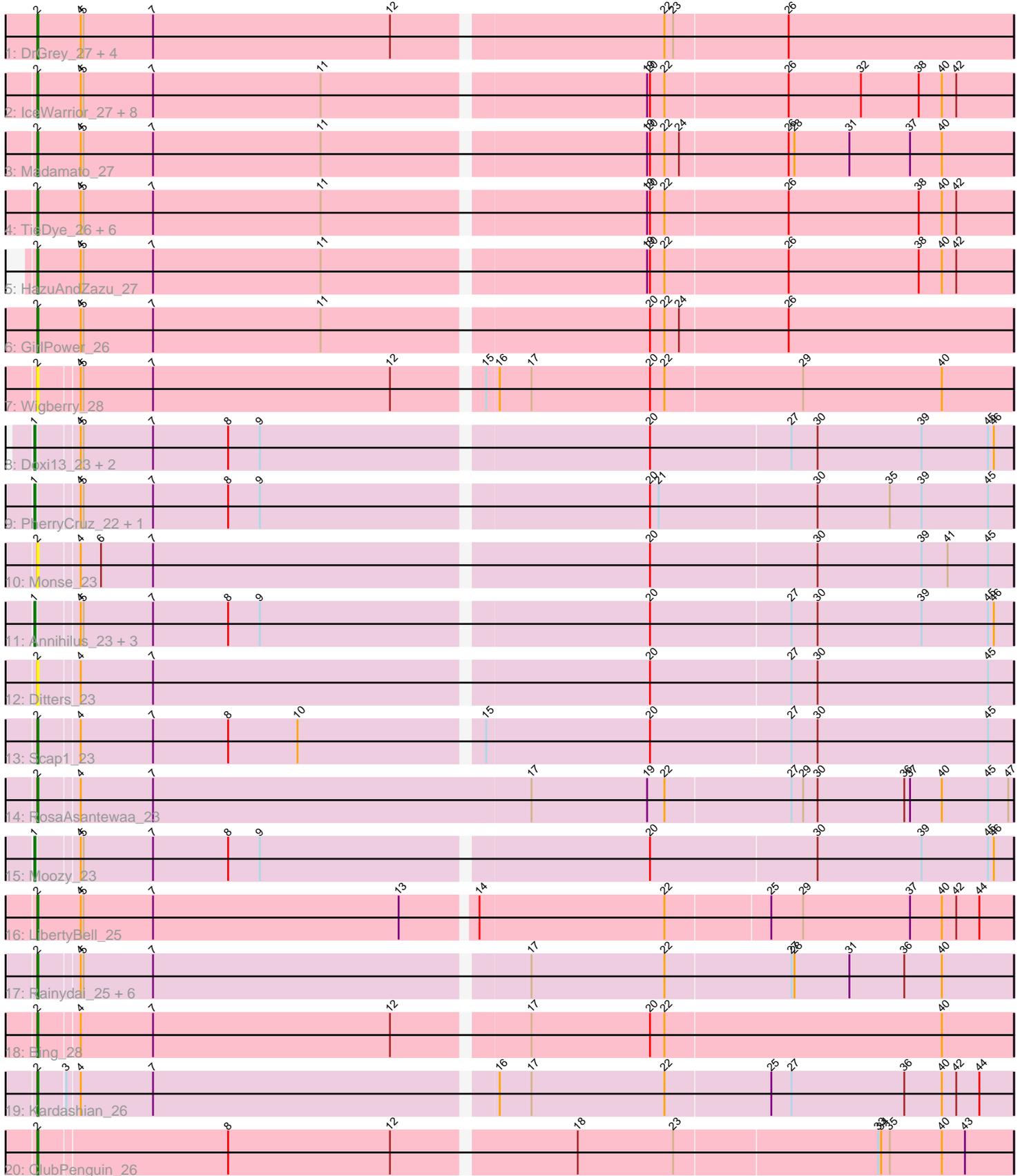# Pham 283898

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 283898 Report

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

Pham number 283898 has 50 members, 7 are drafts.

Phages represented in each track:
• Track 1 : DrGrey_27, FrodoSwaggins_27, Popy_27, Espio_28, Soshi_27
• Track 2 : IceWarrior_27, OlympicHelado_27, Hoshi_27, Esketit_27, Indigenous_27, Namo_27, Spectropatronm_27, TonyStarch_27, Rima_27
• Track 3 : Madamato_27
• Track 4 : TieDye_26, FidgetOrca_27, CherryBlossom_27, Maya_27, TaidaOne_27, Jaylociraptor_27, Meibysrarus_27
• Track 5 : HazuAndZazu_27
• Track 6 : GirlPower_26
• Track 7 : Wigberry_28
• Track 8 : Doxi13_23, GoblinVoyage_23, Sangak_23
• Track 9 : PherryCruz_22, RavenPuff_22
• Track 10 : Monse_23
• Track 11 : Annihilus_23, Bilo_23, HotFries_22, SheRa_23
• Track 12 : Ditters_23
• Track 13 : Scap1_23
• Track 14 : RosaAsantewaa_23
• Track 15 : Moozy_23
• Track 16 : LibertyBell_25
• Track 17 : Rainydai_25, Regigigas_26, Thiqqums_25, CricKo_25, Miek_25, FromIndy_26, SendItCS_24
• Track 18 : Bing_28
• Track 19 : Kardashian_26
• Track 20 : ClubPenguin_26

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

The start number called the most often in the published annotations is 2, it was called in 34 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Bing_28, CherryBlossom_27, ClubPenguin_26, CricKo_25, Ditters_23, DrGrey_27, Esketit_27, Espio_28, FidgetOrca_27, FrodoSwaggins_27, FromIndy_26, GirlPower_26, HazuAndZazu_27, Hoshi_27, IceWarrior_27, Indigenous_27, Jaylociraptor_27, Kardashian_26, LibertyBell_25, Madamato_27, Maya_27,

Meibysrarus_27, Miek_25, Monse_23, Namo_27, OlympicHelado_27, Popy_27, Rainydai_25, Regigigas_26, Rima_27, RosaAsantewaa_23, Scap1_23, SendItCS_24, Soshi_27, Spectropatronm_27, TaidaOne_27, Thiqqums_25, TieDye_26, TonyStarch_27, Wigberry_28,

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

Genes that do not have the "Most Annotated" start:
• Annihilus_23, Bilo_23, Doxi13_23, GoblinVoyage_23, HotFries_22, Moozy_23, PherryCruz_22, RavenPuff_22, Sangak_23, SheRa_23,

Summary by start number:

Start 1:
• Found in 10 of 50 (20.0%) of genes in pham
• Manual Annotations of this start: 9 of 43
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Annihilus_23 (BI2), Bilo_23 (BI2), Doxi13_23 (BI2), GoblinVoyage_23 (BI2), HotFries_22 (BI2), Moozy_23 (BI2), PherryCruz_22 (BI2), RavenPuff_22 (BI2), Sangak_23 (BI2), SheRa_23 (BI2),

Start 2:
• Found in 40 of 50 (80.0%) of genes in pham
• Manual Annotations of this start: 34 of 43
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bing_28 (BI5), CherryBlossom_27 (BI1), ClubPenguin_26 (BI7), CricKo_25 (BI4), Ditters_23 (BI2), DrGrey_27 (BI1), Esketit_27 (BI1), Espio_28 (BI1), FidgetOrca_27 (BI1), FrodoSwaggins_27 (BI1), FromIndy_26 (BI4), GirlPower_26 (BI1), HazuAndZazu_27 (BI1), Hoshi_27 (BI1), IceWarrior_27 (BI1), Indigenous_27 (BI1), Jaylociraptor_27 (BI1), Kardashian_26 (BI6), LibertyBell_25 (BI3), Madamato_27 (BI1), Maya_27 (BI1), Meibysrarus_27 (BI1), Miek_25 (BI4), Monse_23 (BI2), Namo_27 (BI1), OlympicHelado_27 (BI1), Popy_27 (BI1), Rainydai_25 (BI4), Regigigas_26 (BI4), Rima_27 (BI1), RosaAsantewaa_23 (BI2), Scap1_23 (BI2), SendItCS_24 (BI4), Soshi_27 (BI1), Spectropatronm_27 (BI1), TaidaOne_27 (BI1), Thiqqums_25 (BI4), TieDye_26 (BI1), TonyStarch_27 (BI1), Wigberry_28 (BI1),

Summary by clusters:

There are 7 clusters represented in this pham: BI6, BI7, BI4, BI5, BI2, BI3, BI1,

Info for manual annotations of cluster BI1:
•Start number 2 was manually annotated 23 times for cluster BI1.

Info for manual annotations of cluster BI2:
•Start number 1 was manually annotated 9 times for cluster BI2.
•Start number 2 was manually annotated 2 times for cluster BI2.

Info for manual annotations of cluster BI3:
•Start number 2 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:

•Start number 2 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:
•Start number 2 was manually annotated 1 time for cluster BI5.

Info for manual annotations of cluster BI6:
•Start number 2 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:
•Start number 2 was manually annotated 1 time for cluster BI7.

Gene Information:

Gene: Annihilus_23 Start: 20981, Stop: 21967, Start Num: 1
Candidate Starts for Annihilus_23:
(Start: 1 @20981 has 9 MA's), (4, 21020), (5, 21023), (7, 21095), (8, 21173), (9, 21206), (20, 21593), (27, 21737), (30, 21764), (39, 21872), (45, 21941), (46, 21947),

Gene: Bilo_23 Start: 21472, Stop: 22458, Start Num: 1
Candidate Starts for Bilo_23:
(Start: 1 @21472 has 9 MA's), (4, 21511), (5, 21514), (7, 21586), (8, 21664), (9, 21697), (20, 22084), (27, 22228), (30, 22255), (39, 22363), (45, 22432), (46, 22438),

Gene: Bing_28 Start: 23762, Stop: 24748, Start Num: 2
Candidate Starts for Bing_28:
(Start: 2 @23762 has 34 MA's), (4, 23801), (7, 23876), (12, 24122), (17, 24251), (20, 24374), (22, 24389), (40, 24674),

Gene: CherryBlossom_27 Start: 23904, Stop: 24896, Start Num: 2
Candidate Starts for CherryBlossom_27:
(Start: 2 @23904 has 34 MA's), (4, 23949), (5, 23952), (7, 24024), (11, 24198), (19, 24519), (20, 24522), (22, 24537), (26, 24663), (38, 24798), (40, 24822), (42, 24837),

Gene: ClubPenguin_26 Start: 23518, Stop: 24504, Start Num: 2
Candidate Starts for ClubPenguin_26:
(Start: 2 @23518 has 34 MA's), (8, 23710), (12, 23878), (18, 24058), (23, 24157), (33, 24364), (34, 24367), (35, 24376), (40, 24430), (43, 24454),

Gene: CricKo_25 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for CricKo_25:
(Start: 2 @22799 has 34 MA's), (4, 22838), (5, 22841), (7, 22913), (17, 23288), (22, 23426), (27, 23555), (28, 23558), (31, 23615), (36, 23672), (40, 23711),

Gene: Ditters_23 Start: 21438, Stop: 22424, Start Num: 2
Candidate Starts for Ditters_23:
(Start: 2 @21438 has 34 MA's), (4, 21477), (7, 21552), (20, 22050), (27, 22194), (30, 22221), (45, 22398),

Gene: Doxi13_23 Start: 20952, Stop: 21938, Start Num: 1
Candidate Starts for Doxi13_23:

(Start: 1 @20952 has 9 MA's), (4, 20991), (5, 20994), (7, 21066), (8, 21144), (9, 21177), (20, 21564), (27, 21708), (30, 21735), (39, 21843), (45, 21912), (46, 21918),

Gene: DrGrey_27 Start: 24403, Stop: 25395, Start Num: 2
Candidate Starts for DrGrey_27:
(Start: 2 @24403 has 34 MA's), (4, 24448), (5, 24451), (7, 24523), (12, 24769), (22, 25036), (23, 25045), (26, 25162),

Gene: Esketit_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Esketit_27:
(Start: 2 @23887 has 34 MA's), (4, 23932), (5, 23935), (7, 24007), (11, 24181), (19, 24502), (20, 24505), (22, 24520), (26, 24646), (32, 24721), (38, 24781), (40, 24805), (42, 24820),

Gene: Espio_28 Start: 24404, Stop: 25396, Start Num: 2
Candidate Starts for Espio_28:
(Start: 2 @24404 has 34 MA's), (4, 24449), (5, 24452), (7, 24524), (12, 24770), (22, 25037), (23, 25046), (26, 25163),

Gene: FidgetOrca_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for FidgetOrca_27:
(Start: 2 @23893 has 34 MA's), (4, 23938), (5, 23941), (7, 24013), (11, 24187), (19, 24508), (20, 24511), (22, 24526), (26, 24652), (38, 24787), (40, 24811), (42, 24826),

Gene: FrodoSwaggins_27 Start: 24403, Stop: 25395, Start Num: 2
Candidate Starts for FrodoSwaggins_27:
(Start: 2 @24403 has 34 MA's), (4, 24448), (5, 24451), (7, 24523), (12, 24769), (22, 25036), (23, 25045), (26, 25162),

Gene: FromIndy_26 Start: 22787, Stop: 23773, Start Num: 2
Candidate Starts for FromIndy_26:
(Start: 2 @22787 has 34 MA's), (4, 22826), (5, 22829), (7, 22901), (17, 23276), (22, 23414), (27, 23543), (28, 23546), (31, 23603), (36, 23660), (40, 23699),

Gene: GirlPower_26 Start: 25374, Stop: 26366, Start Num: 2
Candidate Starts for GirlPower_26:
(Start: 2 @25374 has 34 MA's), (4, 25419), (5, 25422), (7, 25494), (11, 25668), (20, 25992), (22, 26007), (24, 26022), (26, 26133),

Gene: GoblinVoyage_23 Start: 20952, Stop: 21938, Start Num: 1
Candidate Starts for GoblinVoyage_23:
(Start: 1 @20952 has 9 MA's), (4, 20991), (5, 20994), (7, 21066), (8, 21144), (9, 21177), (20, 21564), (27, 21708), (30, 21735), (39, 21843), (45, 21912), (46, 21918),

Gene: HazuAndZazu_27 Start: 24405, Stop: 25397, Start Num: 2
Candidate Starts for HazuAndZazu_27:
(Start: 2 @24405 has 34 MA's), (4, 24450), (5, 24453), (7, 24525), (11, 24699), (19, 25020), (20, 25023), (22, 25038), (26, 25164), (38, 25299), (40, 25323), (42, 25338),

Gene: Hoshi_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Hoshi_27:
(Start: 2 @23887 has 34 MA's), (4, 23932), (5, 23935), (7, 24007), (11, 24181), (19, 24502), (20, 24505), (22, 24520), (26, 24646), (32, 24721), (38, 24781), (40, 24805), (42, 24820),

Gene: HotFries_22 Start: 20951, Stop: 21937, Start Num: 1
Candidate Starts for HotFries_22:
(Start: 1 @20951 has 9 MA's), (4, 20990), (5, 20993), (7, 21065), (8, 21143), (9, 21176), (20, 21563), (27, 21707), (30, 21734), (39, 21842), (45, 21911), (46, 21917),

Gene: IceWarrior_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for IceWarrior_27:
(Start: 2 @23887 has 34 MA's), (4, 23932), (5, 23935), (7, 24007), (11, 24181), (19, 24502), (20, 24505), (22, 24520), (26, 24646), (32, 24721), (38, 24781), (40, 24805), (42, 24820),

Gene: Indigenous_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Indigenous_27:
(Start: 2 @23887 has 34 MA's), (4, 23932), (5, 23935), (7, 24007), (11, 24181), (19, 24502), (20, 24505), (22, 24520), (26, 24646), (32, 24721), (38, 24781), (40, 24805), (42, 24820),

Gene: Jaylociraptor_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Jaylociraptor_27:
(Start: 2 @23887 has 34 MA's), (4, 23932), (5, 23935), (7, 24007), (11, 24181), (19, 24502), (20, 24505), (22, 24520), (26, 24646), (38, 24781), (40, 24805), (42, 24820),

Gene: Kardashian_26 Start: 23844, Stop: 24830, Start Num: 2
Candidate Starts for Kardashian_26:
(Start: 2 @23844 has 34 MA's), (3, 23871), (4, 23883), (7, 23958), (16, 24300), (17, 24333), (22, 24471), (25, 24579), (27, 24600), (36, 24717), (40, 24756), (42, 24771), (44, 24795),

Gene: LibertyBell_25 Start: 22739, Stop: 23731, Start Num: 2
Candidate Starts for LibertyBell_25:
(Start: 2 @22739 has 34 MA's), (4, 22784), (5, 22787), (7, 22859), (13, 23114), (14, 23186), (22, 23375), (25, 23480), (29, 23513), (37, 23624), (40, 23657), (42, 23672), (44, 23696),

Gene: Madamato_27 Start: 23863, Stop: 24855, Start Num: 2
Candidate Starts for Madamato_27:
(Start: 2 @23863 has 34 MA's), (4, 23908), (5, 23911), (7, 23983), (11, 24157), (19, 24478), (20, 24481), (22, 24496), (24, 24511), (26, 24622), (28, 24628), (31, 24685), (37, 24748), (40, 24781),

Gene: Maya_27 Start: 23901, Stop: 24893, Start Num: 2
Candidate Starts for Maya_27:
(Start: 2 @23901 has 34 MA's), (4, 23946), (5, 23949), (7, 24021), (11, 24195), (19, 24516), (20, 24519), (22, 24534), (26, 24660), (38, 24795), (40, 24819), (42, 24834),

Gene: Meibysrarus_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Meibysrarus_27:
(Start: 2 @23887 has 34 MA's), (4, 23932), (5, 23935), (7, 24007), (11, 24181), (19, 24502), (20, 24505), (22, 24520), (26, 24646), (38, 24781), (40, 24805), (42, 24820),

Gene: Miek_25 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for Miek_25:
(Start: 2 @22799 has 34 MA's), (4, 22838), (5, 22841), (7, 22913), (17, 23288), (22, 23426), (27, 23555), (28, 23558), (31, 23615), (36, 23672), (40, 23711),

Gene: Monse_23 Start: 20980, Stop: 21969, Start Num: 2
Candidate Starts for Monse_23:

(Start: 2 @20980 has 34 MA's), (4, 21019), (6, 21040), (7, 21094), (20, 21595), (30, 21766), (39, 21874), (41, 21901), (45, 21943),

Gene: Moozy_23 Start: 20968, Stop: 21954, Start Num: 1
Candidate Starts for Moozy_23:
(Start: 1 @20968 has 9 MA's), (4, 21007), (5, 21010), (7, 21082), (8, 21160), (9, 21193), (20, 21580), (30, 21751), (39, 21859), (45, 21928), (46, 21934),

Gene: Namo_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for Namo_27:
(Start: 2 @23893 has 34 MA's), (4, 23938), (5, 23941), (7, 24013), (11, 24187), (19, 24508), (20, 24511), (22, 24526), (26, 24652), (32, 24727), (38, 24787), (40, 24811), (42, 24826),

Gene: OlympicHelado_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for OlympicHelado_27:
(Start: 2 @23893 has 34 MA's), (4, 23938), (5, 23941), (7, 24013), (11, 24187), (19, 24508), (20, 24511), (22, 24526), (26, 24652), (32, 24727), (38, 24787), (40, 24811), (42, 24826),

Gene: PherryCruz_22 Start: 20953, Stop: 21939, Start Num: 1
Candidate Starts for PherryCruz_22:
(Start: 1 @20953 has 9 MA's), (4, 20992), (5, 20995), (7, 21067), (8, 21145), (9, 21178), (20, 21565), (21, 21574), (30, 21736), (35, 21811), (39, 21844), (45, 21913),

Gene: Popy_27 Start: 24403, Stop: 25395, Start Num: 2
Candidate Starts for Popy_27:
(Start: 2 @24403 has 34 MA's), (4, 24448), (5, 24451), (7, 24523), (12, 24769), (22, 25036), (23, 25045), (26, 25162),

Gene: Rainydai_25 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for Rainydai_25:
(Start: 2 @22799 has 34 MA's), (4, 22838), (5, 22841), (7, 22913), (17, 23288), (22, 23426), (27, 23555), (28, 23558), (31, 23615), (36, 23672), (40, 23711),

Gene: RavenPuff_22 Start: 20953, Stop: 21939, Start Num: 1
Candidate Starts for RavenPuff_22:
(Start: 1 @20953 has 9 MA's), (4, 20992), (5, 20995), (7, 21067), (8, 21145), (9, 21178), (20, 21565), (21, 21574), (30, 21736), (35, 21811), (39, 21844), (45, 21913),

Gene: Regigigas_26 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for Regigigas_26:
(Start: 2 @22799 has 34 MA's), (4, 22838), (5, 22841), (7, 22913), (17, 23288), (22, 23426), (27, 23555), (28, 23558), (31, 23615), (36, 23672), (40, 23711),

Gene: Rima_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for Rima_27:
(Start: 2 @23893 has 34 MA's), (4, 23938), (5, 23941), (7, 24013), (11, 24187), (19, 24508), (20, 24511), (22, 24526), (26, 24652), (32, 24727), (38, 24787), (40, 24811), (42, 24826),

Gene: RosaAsantewaa_23 Start: 20777, Stop: 21778, Start Num: 2
Candidate Starts for RosaAsantewaa_23:
(Start: 2 @20777 has 34 MA's), (4, 20816), (7, 20891), (17, 21281), (19, 21401), (22, 21419), (27, 21548), (29, 21560), (30, 21575), (36, 21665), (37, 21671), (40, 21704), (45, 21752), (47, 21773),

Gene: Sangak_23 Start: 20953, Stop: 21939, Start Num: 1
Candidate Starts for Sangak_23:
(Start: 1 @20953 has 9 MA's), (4, 20992), (5, 20995), (7, 21067), (8, 21145), (9, 21178), (20, 21565), (27, 21709), (30, 21736), (39, 21844), (45, 21913), (46, 21919),

Gene: Scap1_23 Start: 20908, Stop: 21894, Start Num: 2
Candidate Starts for Scap1_23:
(Start: 2 @20908 has 34 MA's), (4, 20947), (7, 21022), (8, 21100), (10, 21172), (15, 21352), (20, 21520), (27, 21664), (30, 21691), (45, 21868),

Gene: SendItCS_24 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for SendItCS_24:
(Start: 2 @22799 has 34 MA's), (4, 22838), (5, 22841), (7, 22913), (17, 23288), (22, 23426), (27, 23555), (28, 23558), (31, 23615), (36, 23672), (40, 23711),

Gene: SheRa_23 Start: 20952, Stop: 21938, Start Num: 1
Candidate Starts for SheRa_23:
(Start: 1 @20952 has 9 MA's), (4, 20991), (5, 20994), (7, 21066), (8, 21144), (9, 21177), (20, 21564), (27, 21708), (30, 21735), (39, 21843), (45, 21912), (46, 21918),

Gene: Soshi_27 Start: 24409, Stop: 25401, Start Num: 2
Candidate Starts for Soshi_27:
(Start: 2 @24409 has 34 MA's), (4, 24454), (5, 24457), (7, 24529), (12, 24775), (22, 25042), (23, 25051), (26, 25168),

Gene: Spectropatronm_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Spectropatronm_27:
(Start: 2 @23887 has 34 MA's), (4, 23932), (5, 23935), (7, 24007), (11, 24181), (19, 24502), (20, 24505), (22, 24520), (26, 24646), (32, 24721), (38, 24781), (40, 24805), (42, 24820),

Gene: TaidaOne_27 Start: 24535, Stop: 25527, Start Num: 2
Candidate Starts for TaidaOne_27:
(Start: 2 @24535 has 34 MA's), (4, 24580), (5, 24583), (7, 24655), (11, 24829), (19, 25150), (20, 25153), (22, 25168), (26, 25294), (38, 25429), (40, 25453), (42, 25468),

Gene: Thiqqums_25 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for Thiqqums_25:
(Start: 2 @22799 has 34 MA's), (4, 22838), (5, 22841), (7, 22913), (17, 23288), (22, 23426), (27, 23555), (28, 23558), (31, 23615), (36, 23672), (40, 23711),

Gene: TieDye_26 Start: 23579, Stop: 24571, Start Num: 2
Candidate Starts for TieDye_26:
(Start: 2 @23579 has 34 MA's), (4, 23624), (5, 23627), (7, 23699), (11, 23873), (19, 24194), (20, 24197), (22, 24212), (26, 24338), (38, 24473), (40, 24497), (42, 24512),

Gene: TonyStarch_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for TonyStarch_27:
(Start: 2 @23893 has 34 MA's), (4, 23938), (5, 23941), (7, 24013), (11, 24187), (19, 24508), (20, 24511), (22, 24526), (26, 24652), (32, 24727), (38, 24787), (40, 24811), (42, 24826),

Gene: Wigberry_28 Start: 23314, Stop: 24300, Start Num: 2
Candidate Starts for Wigberry_28:

(Start: 2 @23314 has 34 MA's), (4, 23353), (5, 23356), (7, 23428), (12, 23674), (15, 23758), (16, 23770), (17, 23803), (20, 23926), (22, 23941), (29, 24082), (40, 24226),