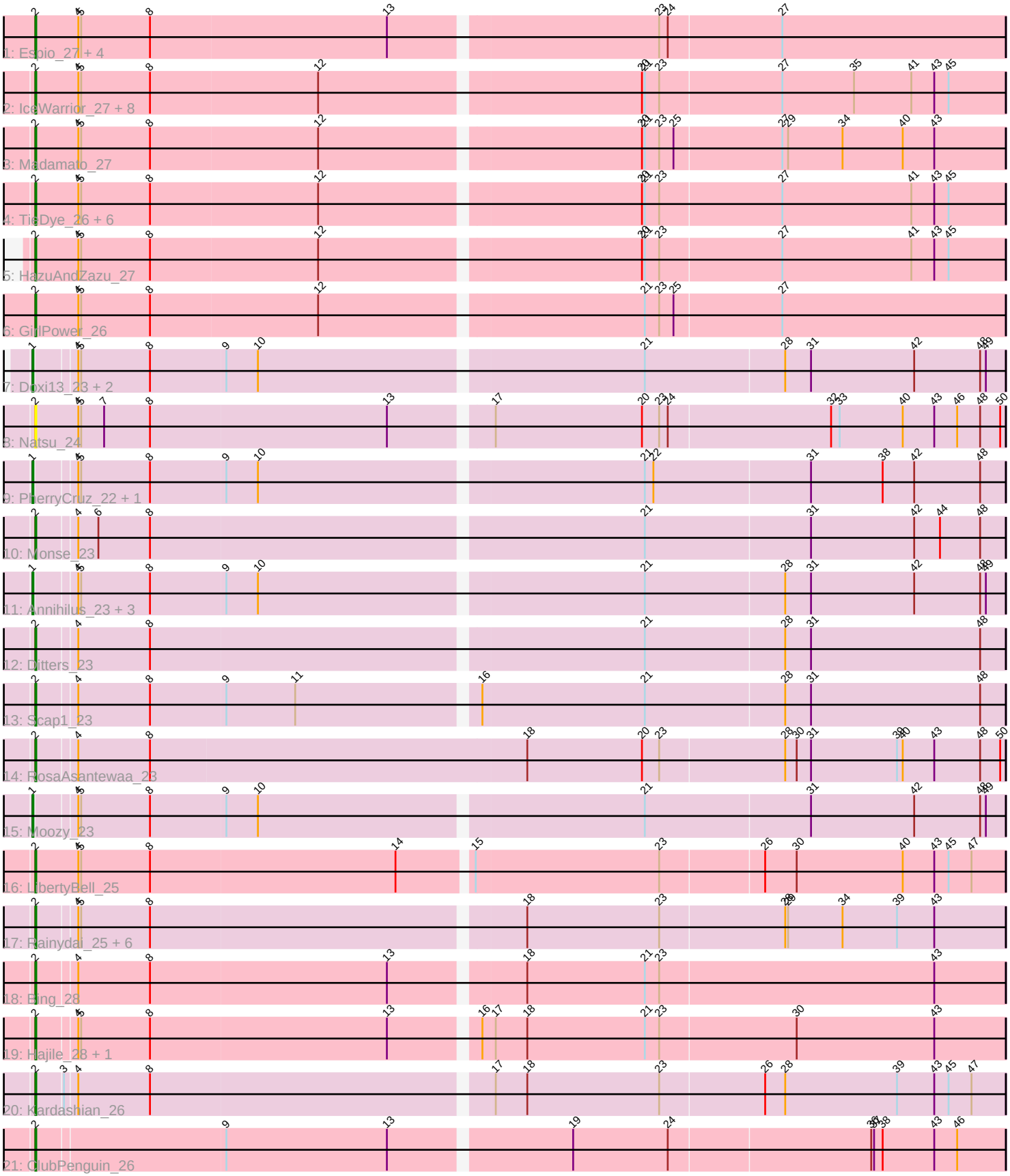
Pham 338325


1: Espio_27 + 4
2: IceWarrior_27 + 8
3: Madamato_27
4: TieDye_26 + 6
5: HazuAndZazu_27
6: GirlPower_26
7: Doxi13_23 + 2
8: Natsu_24
9: PhierryCruz_22 + 1
10: Monse_23
11: Annihilus_23 + 3
12: Ditters_23
13: Scap1_23
14: RosaAsantewaa_23
15: Moozy_23
16: LibertyBell_25
17: Rainydai_25 + 6
18: Bing_28
19: Hajile_28 + 1
20: Kardashian_26
21: ClubPenguin_26

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 338325 Report

This analysis was run 11/14/26 on database version 672.

Pham number 338325 has 52 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Espio_27, DrGrey_27, FrodoSwaggins_27, Popy_27, 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 : Doxi13_23, GoblinVoyage_23, Sangak_23
• Track 8 : Natsu_24
• 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 : Hajile_28, Wigberry_27
• Track 20 : Kardashian_26
• Track 21 : 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 38 of the 47 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_27, FidgetOrca_27, FrodoSwaggins_27, FromIndy_26, GirlPower_26, Hajile_28, 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, Natsu_24, 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_27,

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 52 (19.2%) of genes in pham
• Manual Annotations of this start: 9 of 47
• 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 42 of 52 (80.8%) of genes in pham
• Manual Annotations of this start: 38 of 47
• 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_27 (BI1), FidgetOrca_27 (BI1), FrodoSwaggins_27 (BI1), FromIndy_26 (BI4), GirlPower_26 (BI1), Hajile_28 (BI5), 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), Natsu_24 (BI2), 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_27 (BI5),

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 24 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 4 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 2 times 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), (8, 21095), (9, 21173), (10, 21206), (21, 21593), (28, 21737), (31, 21764), (42, 21872), (48, 21941), (49, 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), (8, 21586), (9, 21664), (10, 21697), (21, 22084), (28, 22228), (31, 22255), (42, 22363), (48, 22432), (49, 22438),

Gene: Bing_28 Start: 23762, Stop: 24748, Start Num: 2
Candidate Starts for Bing_28:
(Start: 2 @23762 has 38 MA's), (4, 23801), (8, 23876), (13, 24122), (18, 24251), (21, 24374), (23, 24389), (43, 24674),

Gene: CherryBlossom_27 Start: 23904, Stop: 24896, Start Num: 2
Candidate Starts for CherryBlossom_27:
(Start: 2 @23904 has 38 MA's), (4, 23949), (5, 23952), (8, 24024), (12, 24198), (20, 24519), (21, 24522), (23, 24537), (27, 24663), (41, 24798), (43, 24822), (45, 24837),

Gene: ClubPenguin_26 Start: 23518, Stop: 24504, Start Num: 2
Candidate Starts for ClubPenguin_26:
(Start: 2 @23518 has 38 MA's), (9, 23710), (13, 23878), (19, 24058), (24, 24157), (36, 24364), (37, 24367), (38, 24376), (43, 24430), (46, 24454),

Gene: CricKo_25 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for CricKo_25:
(Start: 2 @22799 has 38 MA's), (4, 22838), (5, 22841), (8, 22913), (18, 23288), (23, 23426), (28, 23555), (29, 23558), (34, 23615), (39, 23672), (43, 23711),

Gene: Ditters_23 Start: 21438, Stop: 22424, Start Num: 2
Candidate Starts for Ditters_23:
(Start: 2 @21438 has 38 MA's), (4, 21477), (8, 21552), (21, 22050), (28, 22194), (31, 22221), (48, 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), (8, 21066), (9, 21144), (10, 21177), (21, 21564), (28, 21708), (31, 21735), (42, 21843), (48, 21912), (49, 21918),

Gene: DrGrey_27 Start: 24403, Stop: 25395, Start Num: 2
Candidate Starts for DrGrey_27:
(Start: 2 @24403 has 38 MA's), (4, 24448), (5, 24451), (8, 24523), (13, 24769), (23, 25036), (24, 25045), (27, 25162),

Gene: Esketit_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Esketit_27:
(Start: 2 @23887 has 38 MA's), (4, 23932), (5, 23935), (8, 24007), (12, 24181), (20, 24502), (21, 24505), (23, 24520), (27, 24646), (35, 24721), (41, 24781), (43, 24805), (45, 24820),

Gene: Espio_27 Start: 24404, Stop: 25396, Start Num: 2
Candidate Starts for Espio_27:
(Start: 2 @24404 has 38 MA's), (4, 24449), (5, 24452), (8, 24524), (13, 24770), (23, 25037), (24, 25046), (27, 25163),

Gene: FidgetOrca_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for FidgetOrca_27:
(Start: 2 @23893 has 38 MA's), (4, 23938), (5, 23941), (8, 24013), (12, 24187), (20, 24508), (21, 24511), (23, 24526), (27, 24652), (41, 24787), (43, 24811), (45, 24826),

Gene: FrodoSwaggins_27 Start: 24403, Stop: 25395, Start Num: 2
Candidate Starts for FrodoSwaggins_27:
(Start: 2 @24403 has 38 MA's), (4, 24448), (5, 24451), (8, 24523), (13, 24769), (23, 25036), (24, 25045), (27, 25162),

Gene: FromIndy_26 Start: 22787, Stop: 23773, Start Num: 2
Candidate Starts for FromIndy_26:
(Start: 2 @22787 has 38 MA's), (4, 22826), (5, 22829), (8, 22901), (18, 23276), (23, 23414), (28, 23543), (29, 23546), (34, 23603), (39, 23660), (43, 23699),

Gene: GirlPower_26 Start: 25374, Stop: 26366, Start Num: 2
Candidate Starts for GirlPower_26:
(Start: 2 @25374 has 38 MA's), (4, 25419), (5, 25422), (8, 25494), (12, 25668), (21, 25992), (23, 26007), (25, 26022), (27, 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), (8, 21066), (9, 21144), (10, 21177), (21, 21564), (28, 21708), (31, 21735), (42, 21843), (48, 21912), (49, 21918),

Gene: Hajile_28 Start: 23311, Stop: 24297, Start Num: 2
Candidate Starts for Hajile_28:
(Start: 2 @23311 has 38 MA's), (4, 23350), (5, 23353), (8, 23425), (13, 23671), (16, 23755), (17, 23767), (18, 23800), (21, 23923), (23, 23938), (30, 24079), (43, 24223),

Gene: HazuAndZazu_27 Start: 24405, Stop: 25397, Start Num: 2
Candidate Starts for HazuAndZazu_27:
(Start: 2 @24405 has 38 MA's), (4, 24450), (5, 24453), (8, 24525), (12, 24699), (20, 25020), (21, 25023), (23, 25038), (27, 25164), (41, 25299), (43, 25323), (45, 25338),

Gene: Hoshi_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Hoshi_27:
(Start: 2 @23887 has 38 MA's), (4, 23932), (5, 23935), (8, 24007), (12, 24181), (20, 24502), (21, 24505), (23, 24520), (27, 24646), (35, 24721), (41, 24781), (43, 24805), (45, 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), (8, 21065), (9, 21143), (10, 21176), (21, 21563), (28, 21707), (31, 21734), (42, 21842), (48, 21911), (49, 21917),

Gene: IceWarrior_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for IceWarrior_27:
(Start: 2 @23887 has 38 MA's), (4, 23932), (5, 23935), (8, 24007), (12, 24181), (20, 24502), (21, 24505), (23, 24520), (27, 24646), (35, 24721), (41, 24781), (43, 24805), (45, 24820),

Gene: Indigenous_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Indigenous_27:
(Start: 2 @23887 has 38 MA's), (4, 23932), (5, 23935), (8, 24007), (12, 24181), (20, 24502), (21, 24505), (23, 24520), (27, 24646), (35, 24721), (41, 24781), (43, 24805), (45, 24820),

Gene: Jaylociraptor_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Jaylociraptor_27:
(Start: 2 @23887 has 38 MA's), (4, 23932), (5, 23935), (8, 24007), (12, 24181), (20, 24502), (21, 24505), (23, 24520), (27, 24646), (41, 24781), (43, 24805), (45, 24820),

Gene: Kardashian_26 Start: 23844, Stop: 24830, Start Num: 2
Candidate Starts for Kardashian_26:
(Start: 2 @23844 has 38 MA's), (3, 23871), (4, 23883), (8, 23958), (17, 24300), (18, 24333), (23, 24471), (26, 24579), (28, 24600), (39, 24717), (43, 24756), (45, 24771), (47, 24795),

Gene: LibertyBell_25 Start: 22739, Stop: 23731, Start Num: 2
Candidate Starts for LibertyBell_25:
(Start: 2 @22739 has 38 MA's), (4, 22784), (5, 22787), (8, 22859), (14, 23114), (15, 23186), (23, 23375), (26, 23480), (30, 23513), (40, 23624), (43, 23657), (45, 23672), (47, 23696),

Gene: Madamato_27 Start: 23863, Stop: 24855, Start Num: 2
Candidate Starts for Madamato_27:
(Start: 2 @23863 has 38 MA's), (4, 23908), (5, 23911), (8, 23983), (12, 24157), (20, 24478), (21, 24481), (23, 24496), (25, 24511), (27, 24622), (29, 24628), (34, 24685), (40, 24748), (43, 24781),

Gene: Maya_27 Start: 23901, Stop: 24893, Start Num: 2
Candidate Starts for Maya_27:
(Start: 2 @23901 has 38 MA's), (4, 23946), (5, 23949), (8, 24021), (12, 24195), (20, 24516), (21, 24519), (23, 24534), (27, 24660), (41, 24795), (43, 24819), (45, 24834),

Gene: Meibysrarus_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Meibysrarus_27:
(Start: 2 @23887 has 38 MA's), (4, 23932), (5, 23935), (8, 24007), (12, 24181), (20, 24502), (21, 24505), (23, 24520), (27, 24646), (41, 24781), (43, 24805), (45, 24820),

Gene: Miek_25 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for Miek_25:

(Start: 2 @22799 has 38 MA's), (4, 22838), (5, 22841), (8, 22913), (18, 23288), (23, 23426), (28, 23555), (29, 23558), (34, 23615), (39, 23672), (43, 23711),

Gene: Monse_23 Start: 20980, Stop: 21969, Start Num: 2
Candidate Starts for Monse_23:
(Start: 2 @20980 has 38 MA's), (4, 21019), (6, 21040), (8, 21094), (21, 21595), (31, 21766), (42, 21874), (44, 21901), (48, 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), (8, 21082), (9, 21160), (10, 21193), (21, 21580), (31, 21751), (42, 21859), (48, 21928), (49, 21934),

Gene: Namo_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for Namo_27:
(Start: 2 @23893 has 38 MA's), (4, 23938), (5, 23941), (8, 24013), (12, 24187), (20, 24508), (21, 24511), (23, 24526), (27, 24652), (35, 24727), (41, 24787), (43, 24811), (45, 24826),

Gene: Natsu_24 Start: 20962, Stop: 21954, Start Num: 2
Candidate Starts for Natsu_24:
(Start: 2 @20962 has 38 MA's), (4, 21007), (5, 21010), (7, 21034), (8, 21082), (13, 21328), (17, 21424), (20, 21577), (23, 21595), (24, 21604), (32, 21772), (33, 21781), (40, 21847), (43, 21880), (46, 21904), (48, 21928), (50, 21949),

Gene: OlympicHelado_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for OlympicHelado_27:
(Start: 2 @23893 has 38 MA's), (4, 23938), (5, 23941), (8, 24013), (12, 24187), (20, 24508), (21, 24511), (23, 24526), (27, 24652), (35, 24727), (41, 24787), (43, 24811), (45, 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), (8, 21067), (9, 21145), (10, 21178), (21, 21565), (22, 21574), (31, 21736), (38, 21811), (42, 21844), (48, 21913),

Gene: Popy_27 Start: 24403, Stop: 25395, Start Num: 2
Candidate Starts for Popy_27:
(Start: 2 @24403 has 38 MA's), (4, 24448), (5, 24451), (8, 24523), (13, 24769), (23, 25036), (24, 25045), (27, 25162),

Gene: Rainydai_25 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for Rainydai_25:
(Start: 2 @22799 has 38 MA's), (4, 22838), (5, 22841), (8, 22913), (18, 23288), (23, 23426), (28, 23555), (29, 23558), (34, 23615), (39, 23672), (43, 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), (8, 21067), (9, 21145), (10, 21178), (21, 21565), (22, 21574), (31, 21736), (38, 21811), (42, 21844), (48, 21913),

Gene: Regigigas_26 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for Regigigas_26:
(Start: 2 @22799 has 38 MA's), (4, 22838), (5, 22841), (8, 22913), (18, 23288), (23, 23426), (28, 23555), (29, 23558), (34, 23615), (39, 23672), (43, 23711),

Gene: Rima_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for Rima_27:
(Start: 2 @23893 has 38 MA's), (4, 23938), (5, 23941), (8, 24013), (12, 24187), (20, 24508), (21, 24511), (23, 24526), (27, 24652), (35, 24727), (41, 24787), (43, 24811), (45, 24826),

Gene: RosaAsantewaa_23 Start: 20777, Stop: 21778, Start Num: 2
Candidate Starts for RosaAsantewaa_23:
(Start: 2 @20777 has 38 MA's), (4, 20816), (8, 20891), (18, 21281), (20, 21401), (23, 21419), (28, 21548), (30, 21560), (31, 21575), (39, 21665), (40, 21671), (43, 21704), (48, 21752), (50, 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), (8, 21067), (9, 21145), (10, 21178), (21, 21565), (28, 21709), (31, 21736), (42, 21844), (48, 21913), (49, 21919),

Gene: Scap1_23 Start: 20908, Stop: 21894, Start Num: 2
Candidate Starts for Scap1_23:
(Start: 2 @20908 has 38 MA's), (4, 20947), (8, 21022), (9, 21100), (11, 21172), (16, 21352), (21, 21520), (28, 21664), (31, 21691), (48, 21868),

Gene: SendItCS_24 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for SendItCS_24:
(Start: 2 @22799 has 38 MA's), (4, 22838), (5, 22841), (8, 22913), (18, 23288), (23, 23426), (28, 23555), (29, 23558), (34, 23615), (39, 23672), (43, 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), (8, 21066), (9, 21144), (10, 21177), (21, 21564), (28, 21708), (31, 21735), (42, 21843), (48, 21912), (49, 21918),

Gene: Soshi_27 Start: 24409, Stop: 25401, Start Num: 2
Candidate Starts for Soshi_27:
(Start: 2 @24409 has 38 MA's), (4, 24454), (5, 24457), (8, 24529), (13, 24775), (23, 25042), (24, 25051), (27, 25168),

Gene: Spectropatronm_27 Start: 23887, Stop: 24879, Start Num: 2
Candidate Starts for Spectropatronm_27:
(Start: 2 @23887 has 38 MA's), (4, 23932), (5, 23935), (8, 24007), (12, 24181), (20, 24502), (21, 24505), (23, 24520), (27, 24646), (35, 24721), (41, 24781), (43, 24805), (45, 24820),

Gene: TaidaOne_27 Start: 24535, Stop: 25527, Start Num: 2
Candidate Starts for TaidaOne_27:
(Start: 2 @24535 has 38 MA's), (4, 24580), (5, 24583), (8, 24655), (12, 24829), (20, 25150), (21, 25153), (23, 25168), (27, 25294), (41, 25429), (43, 25453), (45, 25468),

Gene: Thiqqums_25 Start: 22799, Stop: 23785, Start Num: 2
Candidate Starts for Thiqqums_25:
(Start: 2 @22799 has 38 MA's), (4, 22838), (5, 22841), (8, 22913), (18, 23288), (23, 23426), (28, 23555), (29, 23558), (34, 23615), (39, 23672), (43, 23711),

Gene: TieDye_26 Start: 23579, Stop: 24571, Start Num: 2
Candidate Starts for TieDye_26:

(Start: 2 @23579 has 38 MA's), (4, 23624), (5, 23627), (8, 23699), (12, 23873), (20, 24194), (21, 24197), (23, 24212), (27, 24338), (41, 24473), (43, 24497), (45, 24512),

Gene: TonyStarch_27 Start: 23893, Stop: 24885, Start Num: 2
Candidate Starts for TonyStarch_27:
(Start: 2 @23893 has 38 MA's), (4, 23938), (5, 23941), (8, 24013), (12, 24187), (20, 24508), (21, 24511), (23, 24526), (27, 24652), (35, 24727), (41, 24787), (43, 24811), (45, 24826),

Gene: Wigberry_27 Start: 23314, Stop: 24300, Start Num: 2
Candidate Starts for Wigberry_27:
(Start: 2 @23314 has 38 MA's), (4, 23353), (5, 23356), (8, 23428), (13, 23674), (16, 23758), (17, 23770), (18, 23803), (21, 23926), (23, 23941), (30, 24082), (43, 24226),