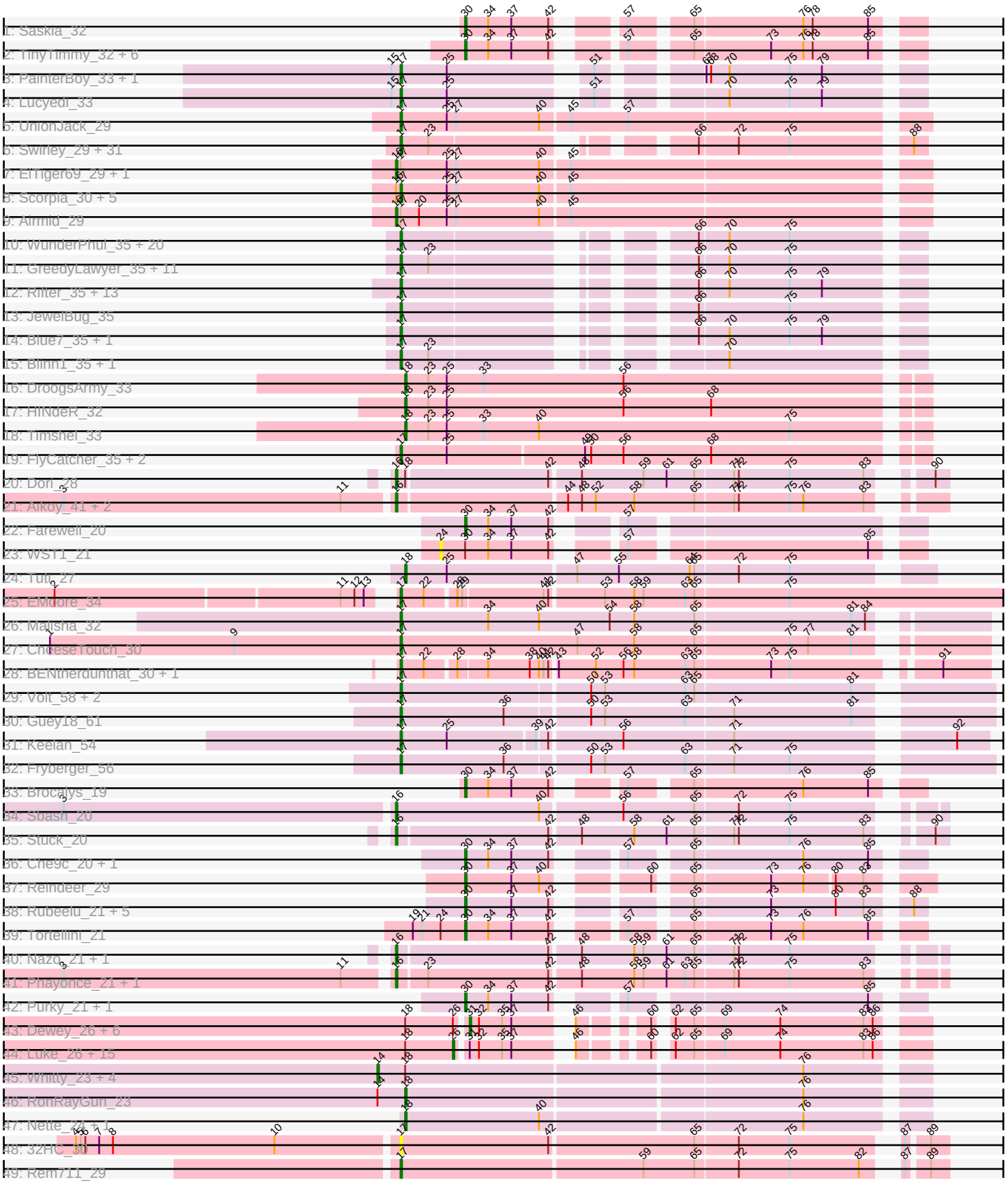
Pham 341815


1: Saskia_32
2: TinyTimmy_32 + 6
3: PainterBoy_33 + 1
4: Lucyedi_33
5: UnionJack_29
6: Swirley_29 + 31
7: ElTiger69_29 + 1
8: Scorpia_30 + 5
9: Airmid_29
10: WunderPhul_35 + 20
11: GreedyLawyer_35 + 11
12: Ritter_35 + 13
13: JewelBug_35
14: Blue7_35 + 1
15: Blinn1_35 + 1
16: DroogsArmy_33
17: HiNdeR_32
18: Timshel_33
19: FlyCatcher_35 + 2
20: Dori_28
21: Alkoy_41 + 2
22: Farewell_20
23: WST1_21
24: Tutt_27
25: EMdore_34
26: Malisha_32
27: CheeseTouch_30
28: BENtherdunthat_30 + 1
29: Volt_58 + 2
30: Guey18_61
31: Keelan_54
32: Fryberger_56
33: Brocalys_19
34: Sbash_20
35: Stuck_20
36: Che9c_20 + 1
37: Reindeer_29
38: Rubeelu_21 + 5
39: Tortellini_21
40: Nazo_21 + 1
41: Phayonce_21 + 1
42: Purky_21 + 1
43: Dewey_26 + 6
44: Luke_26 + 15
45: Whitty_23 + 4
46: RonRayGun_23
47: Nette_32 + 1
48: 32HC_30
49: Rem711_29

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 341815 Report

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

Pham number 341815 has 181 members, 9 are drafts.

Phages represented in each track:
• Track 1 : Saskia_32
• Track 2 : TinyTimmy_32, Salz_32, Kimba_32, Ebony_32, Mabel_32, Et2Brutus_31, Timothy_32
• Track 3 : PainterBoy_33, EagleEye_34
• Track 4 : Lucyedi_33
• Track 5 : UnionJack_29
• Track 6 : Swirley_29, Florence4_30, Micasa_29, PickleBack_29, Discoknowium_29, Conspiracy_29, Prinashe11_29, Bluefalcon_28, AgentM_29, MarysWell_28, Milcery_29, Coog_29, Theia_27, George_28, Ghoulboy_29, Twigg_29, Dublin_28, Lev2_29, LittleCherry_29, Florence1_29, Tarynearal_28, ForGetIt_29, Aragog_29, Phlorence_29, Zolita_28, Tiger_29, Midas2_29, Bonamassa_29, Jovo_29, Cuco_29, SydNat_29, HuhtaEnerson15_29
• Track 7 : ElTiger69_29, Jabiru_29
• Track 8 : Scorpia_30, PetterN_30, Chadwick_30, Benedict_29, Archetta_29, Naca_29
• Track 9 : Airmid_29
• Track 10 : WunderPhul_35, SuperCallie99_35, DelvinSonDorr_34, BABullseye_35, Helmet_35, Koko_35, Newrala_35, Dorothea_35, Cookiedough_35, Indra_35, Garak_36, Imbriano_35, Pmask_35, Temprado_35, BlessJoy_35, SuperAwesome_35, Neeharika16_35, Roksolana_35, Polyphemus_35, Jordennis_35, Isiphiwo_35
• Track 11 : GreedyLawyer_35, Hoot_35, EricB_35, Chartreuse_35, Kipper29_35, DaVinci_35, Kazan_35, McFly_35, BennyP_35, SmellyB_35, Candra_35, VohminGhazi_35
• Track 12 : Rifter_35, Yokurt_35, Lilbunny_35, Gruunaga_35, CloudWang3_35, Zulu_35, Tucker_35, Artemis2UCLA_35, Gladiator_35, Wiks_35, Zaka_35, Jeffabunny_35, Hexamo_35, ToneTone_33
• Track 13 : JewelBug_35
• Track 14 : Blue7_35, Hammer_35
• Track 15 : Blinn1_35, Priamo_35
• Track 16 : DroogsArmy_33
• Track 17 : HINdeR_32
• Track 18 : Timshel_33
• Track 19 : FlyCatcher_35, Toro_34, Sheen_33
• Track 20 : Dori_28
• Track 21 : Aikoy_41, Leopard_41, Onyinye_42
• Track 22 : Farewell_20

• Track 23 : WST1_21
• Track 24 : Tuti_27
• Track 25 : EMoore_34
• Track 26 : Malisha_32
• Track 27 : CheeseTouch_30
• Track 28 : BENtherdunthat_30, BotCity_30
• Track 29 : Volt_58, Ronaldo_59, Ziko_59
• Track 30 : Guey18_61
• Track 31 : Keelan_54
• Track 32 : Fryberger_56
• Track 33 : Brocalys_19
• Track 34 : Sbash_20
• Track 35 : Stuck_20
• Track 36 : Che9c_20, Sparky_20
• Track 37 : Reindeer_29
• Track 38 : Rubeelu_21, Juliette_29, Kevin1_21, MichelleMyBell_21, Butters_21, Ruthiejr_28
• Track 39 : Tortellini_21
• Track 40 : Nazo_21, BigNuz_21
• Track 41 : Phayonce_21, ThulaThula_21
• Track 42 : Purky_21, IdentityCrisis_20
• Track 43 : Dewey_26, Amochick_26, Gravaillia_26, Evanesce_26, Giles_26, OBUpride_26, Daegal_27
• Track 44 : Luke_26, LilHazelnut_26, Hail_26, Hadrien_26, Amymech_26, HH92_26, Wishmaker_26, Ubuntu_26, Kinbote_26, Gancho_25, DeepSoil15_26, Webster2_26, Forge_26, Ein37_26, Luna22_26, BloominB_26
• Track 45 : Whitty_23, ZenTime222_23, Nairb_23, Bernal13_23, Ibrahim_23
• Track 46 : RonRayGun_23
• Track 47 : Nette_24, Mendokysei_22
• Track 48 : 32HC_30
• Track 49 : Rem711_29

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

The start number called the most often in the published annotations is 17, it was called in 103 of the 172 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• 32HC_30, AgentM_29, Aragog_29, Archetta_29, Artemis2UCLA_35, BABullseye_35, BENtherdunthat_30, Benedict_29, BennyP_35, BlessJoy_35, Blinn1_35, Blue7_35, Bluefalcon_28, Bonamassa_29, BotCity_30, Candra_35, Chadwick_30, Chartreuse_35, CheeseTouch_30, CloudWang3_35, Conspiracy_29, Coog_29, Cookiedough_35, Cuco_29, DaVinci_35, DelvinSonDorr_34, Discoknowium_29, Dorothea_35, Dublin_28, EMoore_34, EagleEye_34, EricB_35, Florence1_29, Florence4_30, FlyCatcher_35, ForGetIt_29, Fryberger_56, Garak_36, George_28, Ghoulboy_29, Gladiator_35, GreedyLawyer_35, Gruunaga_35, Guey18_61, Hammer_35, Helmet_35, Hexamo_35, Hoot_35, HuhtaEnerson15_29, Imbriano_35, Indra_35, Isiphiwo_35, Jeffabunny_35, JewelBug_35, Jordennis_35, Jovo_29, Kazan_35, Keelan_54, Kipper29_35, Koko_35, Lev2_29, Lilbunny_35, LittleCherry_29, Lucyedi_33, Malisha_32, MarysWell_28, McFly_35, Micasa_29,

Midas2_29, Milcery_29, Naca_29, Neeharika16_35, Newrala_35, PainterBoy_33, PetterN_30, Phlorence_29, PickleBack_29, Pmask_35, Polyphemus_35, Priamo_35, Prinashe11_29, Rem711_29, Rifter_35, Roksolana_35, Ronaldo_59, Scorpia_30, Sheen_33, SmellyB_35, SuperAwesome_35, SuperCallie99_35, Swirley_29, SydNat_29, Tarynearal_28, Temprado_35, Theia_27, Tiger_29, ToneTone_33, Toro_34, Tucker_35, Twigg_29, UnionJack_29, VohminGhazi_35, Volt_58, Wiks_35, WunderPhul_35, Yokurt_35, Zaka_35, Ziko_59, Zolita_28, Zulu_35,

Genes that have the "Most Annotated" start but do not call it:
• Airmid_29, ElTiger69_29, Jabiru_29,

Genes that do not have the "Most Annotated" start:
• Aikoy_41, Amochick_26, Amymech_26, Bernal13_23, BigNuz_21, BloominB_26, Brocalys_19, Butters_21, Che9c_20, Daegal_27, DeepSoil15_26, Dewey_26, Dori_28, DroogsArmy_33, Ebony_32, Ein37_26, Et2Brutus_31, Evanesce_26, Farewell_20, Forge_26, Gancho_25, Giles_26, Gravaillia_26, HH92_26, HINdeR_32, Hadrien_26, Hail_26, Ibrahim_23, IdentityCrisis_20, Juliette_29, Kevin1_21, Kimba_32, Kinbote_26, Leopard_41, LilHazelnut_26, Luke_26, Luna22_26, Mabel_32, Mendokysei_22, MichelleMyBell_21, Nairb_23, Nazo_21, Nette_24, OBUpride_26, Onyinye_42, Phayonce_21, Purky_21, Reindeer_29, RonRayGun_23, Rubeelu_21, Ruthiejr_28, Salz_32, Saskia_32, Sbash_20, Sparky_20, Stuck_20, ThulaThula_21, Timothy_32, Timshel_33, TinyTimmy_32, Tortellini_21, Tuti_27, Ubuntu_26, WST1_21, Webster2_26, Whitty_23, Wishmaker_26, ZenTime222_23,

Summary by start number:

Start 14:
• Found in 6 of 181 (3.3%) of genes in pham
• Manual Annotations of this start: 5 of 172
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Bernal13_23 (T), Ibrahim_23 (T), Nairb_23 (T), Whitty_23 (T), ZenTime222_23 (T),

Start 16:
• Found in 19 of 181 (10.5%) of genes in pham
• Manual Annotations of this start: 13 of 172
• Called 68.4% of time when present
• Phage (with cluster) where this start called: Aikoy_41 (AE), Airmid_29 (A5), BigNuz_21 (P4), Dori_28 (AD), ElTiger69_29 (A5), Jabiru_29 (A5), Leopard_41 (AE), Nazo_21 (P4), Onyinye_42 (AE), Phayonce_21 (P5), Sbash_20 (I2), Stuck_20 (I2), ThulaThula_21 (P5),

Start 17:
• Found in 113 of 181 (62.4%) of genes in pham
• Manual Annotations of this start: 103 of 172
• Called 97.3% of time when present
• Phage (with cluster) where this start called: 32HC_30 (Z), AgentM_29 (A5), Aragog_29 (A5), Archetta_29 (A5), Artemis2UCLA_35 (A6), BABullseye_35 (A6), BENtherdunthat_30 (DN1), Benedict_29 (A5), BennyP_35 (A6), BlessJoy_35 (A6), Blinn1_35 (A6), Blue7_35 (A6), Bluefalcon_28 (A5), Bonamassa_29 (A5), BotCity_30 (DN), Candra_35 (A6), Chadwick_30 (A5), Chartreuse_35 (A6), CheeseTouch_30 (DN1), CloudWang3_35 (A6), Conspiracy_29 (A5), Coog_29 (A5), Cookiedough_35 (A6), Cuco_29 (A5), DaVinci_35 (A6), DelvinSonDorr_34 (A6), Discoknowium_29

(A5), Dorothea_35 (A6), Dublin_28 (A5), EMoore_34 (DE2), EagleEye_34 (A16), EricB_35 (A6), Florence1_29 (A5), Florence4_30 (A5), FlyCatcher_35 (A7), ForGetIt_29 (A5), Fryberger_56 (DP), Garak_36 (A6), George_28 (A5), Ghoulboy_29 (A5), Gladiator_35 (A6), GreedyLawyer_35 (A6), Gruunaga_35 (A6), Guey18_61 (DP), Hammer_35 (A6), Helmet_35 (A6), Hexamo_35 (A6), Hoot_35 (A6), HuhtaEnerson15_29 (A5), Imbriano_35 (A6), Indra_35 (A6), Isiphiwo_35 (A6), Jeffabunny_35 (A6), JewelBug_35 (A6), Jordennis_35 (A6), Jovo_29 (A5), Kazan_35 (A6), Keelan_54 (DP), Kipper29_35 (A6), Koko_35 (A6), Lev2_29 (A5), Lilbunny_35 (A6), LittleCherry_29 (A5), Lucyedi_33 (A16), Malisha_32 (DN), MarysWell_28 (A5), McFly_35 (A6), Micasa_29 (A5), Midas2_29 (A5), Milcery_29 (A5), Naca_29 (A5), Neeharika16_35 (A6), Newrala_35 (A6), PainterBoy_33 (A16), PetterN_30 (A5), Phlorence_29 (A5), PickleBack_29 (A5), Pmask_35 (A6), Polyphemus_35 (A6), Priamo_35 (A6), Prinashe11_29 (A5), Rem711_29 (Z), Rifter_35 (A6), Roksolana_35 (A6), Ronaldo_59 (DP), Scorpia_30 (A5), Sheen_33 (A7), SmellyB_35 (A6), SuperAwesome_35 (A6), SuperCallie99_35 (A6), Swirley_29 (A5), SydNat_29 (A5), Tarynearal_28 (A5), Temprado_35 (A6), Theia_27 (A5), Tiger_29 (A5), ToneTone_33 (A6), Toro_34 (A7), Tucker_35 (A6), Twigg_29 (A5), UnionJack_29 (A5), VohminGhazi_35 (A6), Volt_58 (DP), Wiks_35 (A6), WunderPhul_35 (A6), Yokurt_35 (A6), Zaka_35 (A6), Ziko_59 (DP), Zolita_28 (A5), Zulu_35 (A6),

Start 18:
• Found in 36 of 181 (19.9%) of genes in pham
• Manual Annotations of this start: 6 of 172
• Called 19.4% of time when present
• Phage (with cluster) where this start called: DroogsArmy_33 (A7), HINdeR_32 (A7), Mendokysei_22 (T), Nette_24 (T), RonRayGun_23 (T), Timshel_33 (A7), Tuti_27 (CZ4),

Start 24:
• Found in 2 of 181 (1.1%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: WST1_21 (AJ),

Start 26:
• Found in 23 of 181 (12.7%) of genes in pham
• Manual Annotations of this start: 16 of 172
• Called 69.6% of time when present
• Phage (with cluster) where this start called: Amymech_26 (Q), BloominB_26 (Q), DeepSoil15_26 (Q), Ein37_26 (Q), Forge_26 (Q), Gancho_25 (Q), HH92_26 (Q), Hadrien_26 (Q), Hail_26 (Q), Kinbote_26 (Q), LilHazelnut_26 (Q), Luke_26 (Q), Luna22_26 (Q), Ubuntu_26 (Q), Webster2_26 (Q), Wishmaker_26 (Q),

Start 30:
• Found in 23 of 181 (12.7%) of genes in pham
• Manual Annotations of this start: 22 of 172
• Called 95.7% of time when present
• Phage (with cluster) where this start called: Brocalys_19 (F1), Butters_21 (N), Che9c_20 (I2), Ebony_32 (A11), Et2Brutus_31 (A11), Farewell_20 (AF), IdentityCrisis_20 (AJ), Juliette_29 (K4), Kevin1_21 (N), Kimba_32 (A11), Mabel_32 (A11), MichelleMyBell_21 (N), Purky_21 (P6), Reindeer_29 (M1), Rubeelu_21 (N), Ruthiejr_28 (K4), Salz_32 (A11), Saskia_32 (A11), Sparky_20 (AF), Timothy_32 (A11), TinyTimmy_32 (A11), Tortellini_21 (P2),

Start 31:
• Found in 23 of 181 (12.7%) of genes in pham
• Manual Annotations of this start: 7 of 172
• Called 30.4% of time when present
• Phage (with cluster) where this start called: Amochick_26 (Q), Daegal_27 (Q), Dewey_26 (Q), Evanesce_26 (Q), Giles_26 (Q), Gravaillia_26 (Q), OBUpride_26 (Q),

Summary by clusters:

There are 26 clusters represented in this pham: DN, CZ4, M1, AF, K4, P6, DP, A16, A11, I2, A5, A7, A6, DN1, P2, AE, AD, P4, P5, AJ, N, Q, T, Z, F1, DE2,

Info for manual annotations of cluster A11:
•Start number 30 was manually annotated 8 times for cluster A11.

Info for manual annotations of cluster A16:
•Start number 17 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A5:
•Start number 16 was manually annotated 3 times for cluster A5.
•Start number 17 was manually annotated 37 times for cluster A5.

Info for manual annotations of cluster A6:
•Start number 17 was manually annotated 50 times for cluster A6.

Info for manual annotations of cluster A7:
•Start number 17 was manually annotated 1 time for cluster A7.
•Start number 18 was manually annotated 3 times for cluster A7.

Info for manual annotations of cluster AD:
•Start number 16 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster AE:
•Start number 16 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster AF:
•Start number 30 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AJ:
•Start number 30 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster CZ4:
•Start number 18 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster DE2:
•Start number 17 was manually annotated 1 time for cluster DE2.

Info for manual annotations of cluster DN:
•Start number 17 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 17 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DP:
•Start number 17 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster F1:
•Start number 30 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster I2:
•Start number 16 was manually annotated 2 times for cluster I2.
•Start number 30 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster K4:
•Start number 30 was manually annotated 2 times for cluster K4.

Info for manual annotations of cluster M1:
•Start number 30 was manually annotated 1 time for cluster M1.

Info for manual annotations of cluster N:
•Start number 30 was manually annotated 4 times for cluster N.

Info for manual annotations of cluster P2:
•Start number 30 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P4:
•Start number 16 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:
•Start number 16 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:
•Start number 30 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:
•Start number 26 was manually annotated 16 times for cluster Q.
•Start number 31 was manually annotated 7 times for cluster Q.

Info for manual annotations of cluster T:
•Start number 14 was manually annotated 5 times for cluster T.
•Start number 18 was manually annotated 2 times for cluster T.

Info for manual annotations of cluster Z:
•Start number 17 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_30 Start: 24811, Stop: 25137, Start Num: 17
Candidate Starts for 32HC_30:
(4, 24607), (5, 24610), (6, 24613), (7, 24622), (8, 24631), (10, 24736), (Start: 17 @24811 has 103 MA's), (42, 24907), (65, 24997), (72, 25024), (75, 25057), (87, 25114), (89, 25126),

Gene: AgentM_29 Start: 24027, Stop: 24311, Start Num: 17

Candidate Starts for AgentM_29:
(Start: 17 @24027 has 103 MA's), (23, 24045), (66, 24177), (72, 24201), (75, 24234), (88, 24303),

Gene: Aikoy_41 Start: 32549, Stop: 32875, Start Num: 16
Candidate Starts for Aikoy_41:
(3, 32339), (11, 32519), (Start: 16 @32549 has 13 MA's), (44, 32654), (48, 32663), (52, 32672), (58, 32696), (65, 32735), (71, 32759), (72, 32762), (75, 32795), (76, 32804), (83, 32843),

Gene: Airmid_29 Start: 23248, Stop: 23577, Start Num: 16
Candidate Starts for Airmid_29:
(Start: 16 @23248 has 13 MA's), (Start: 17 @23251 has 103 MA's), (20, 23263), (25, 23281), (27, 23287), (40, 23341), (45, 23359),

Gene: Amochick_26 Start: 23126, Stop: 23371, Start Num: 31
Candidate Starts for Amochick_26:
(Start: 18 @23090 has 6 MA's), (Start: 26 @23120 has 16 MA's), (Start: 31 @23126 has 7 MA's), (32, 23132), (35, 23147), (37, 23153), (46, 23180), (60, 23213), (62, 23219), (65, 23231), (69, 23249), (74, 23285), (83, 23339), (86, 23345),

Gene: Amymech_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Amymech_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Aragog_29 Start: 24057, Stop: 24341, Start Num: 17
Candidate Starts for Aragog_29:
(Start: 17 @24057 has 103 MA's), (23, 24075), (66, 24207), (72, 24231), (75, 24264), (88, 24333),

Gene: Archetta_29 Start: 23833, Stop: 24159, Start Num: 17
Candidate Starts for Archetta_29:
(Start: 16 @23830 has 13 MA's), (Start: 17 @23833 has 103 MA's), (25, 23863), (27, 23869), (40, 23923), (45, 23941),

Gene: Artemis2UCLA_35 Start: 23835, Stop: 24119, Start Num: 17
Candidate Starts for Artemis2UCLA_35:
(Start: 17 @23835 has 103 MA's), (66, 23985), (70, 24003), (75, 24042), (79, 24063),

Gene: BABullseye_35 Start: 24010, Stop: 24294, Start Num: 17
Candidate Starts for BABullseye_35:
(Start: 17 @24010 has 103 MA's), (66, 24160), (70, 24178), (75, 24217),

Gene: BENtherdunthat_30 Start: 23156, Stop: 23521, Start Num: 17
Candidate Starts for BENtherdunthat_30:
(Start: 17 @23156 has 103 MA's), (22, 23171), (28, 23189), (34, 23207), (38, 23234), (40, 23240), (41, 23243), (42, 23246), (43, 23249), (52, 23273), (56, 23291), (58, 23297), (63, 23330), (65, 23336), (73, 23384), (75, 23396), (91, 23477),

Gene: Benedict_29 Start: 23254, Stop: 23580, Start Num: 17
Candidate Starts for Benedict_29:
(Start: 16 @23251 has 13 MA's), (Start: 17 @23254 has 103 MA's), (25, 23284), (27, 23290), (40, 23344), (45, 23362),

Gene: BennyP_35 Start: 23937, Stop: 24221, Start Num: 17
Candidate Starts for BennyP_35:
(Start: 17 @23937 has 103 MA's), (23, 23955), (66, 24087), (70, 24105), (75, 24144),

Gene: Bernal13_23 Start: 21377, Stop: 21715, Start Num: 14
Candidate Starts for Bernal13_23:
(Start: 14 @21377 has 5 MA's), (Start: 18 @21395 has 6 MA's), (76, 21644),

Gene: BigNuz_21 Start: 21173, Stop: 21496, Start Num: 16
Candidate Starts for BigNuz_21:
(Start: 16 @21173 has 13 MA's), (42, 21269), (48, 21287), (58, 21320), (59, 21326), (61, 21341), (65, 21359), (71, 21383), (72, 21386), (75, 21419),

Gene: BlessJoy_35 Start: 23932, Stop: 24216, Start Num: 17
Candidate Starts for BlessJoy_35:
(Start: 17 @23932 has 103 MA's), (66, 24082), (70, 24100), (75, 24139),

Gene: Blinn1_35 Start: 24003, Stop: 24287, Start Num: 17
Candidate Starts for Blinn1_35:
(Start: 17 @24003 has 103 MA's), (23, 24021), (70, 24171),

Gene: BloominB_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for BloominB_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Blue7_35 Start: 23921, Stop: 24205, Start Num: 17
Candidate Starts for Blue7_35:
(Start: 17 @23921 has 103 MA's), (66, 24071), (70, 24089), (75, 24128), (79, 24149),

Gene: Bluefalcon_28 Start: 24107, Stop: 24391, Start Num: 17
Candidate Starts for Bluefalcon_28:
(Start: 17 @24107 has 103 MA's), (23, 24125), (66, 24257), (72, 24281), (75, 24314), (88, 24383),

Gene: Bonamassa_29 Start: 23948, Stop: 24232, Start Num: 17
Candidate Starts for Bonamassa_29:
(Start: 17 @23948 has 103 MA's), (23, 23966), (66, 24098), (72, 24122), (75, 24155), (88, 24224),

Gene: BotCity_30 Start: 23157, Stop: 23522, Start Num: 17
Candidate Starts for BotCity_30:
(Start: 17 @23157 has 103 MA's), (22, 23172), (28, 23190), (34, 23208), (38, 23235), (40, 23241), (41, 23244), (42, 23247), (43, 23250), (52, 23274), (56, 23292), (58, 23298), (63, 23331), (65, 23337), (73, 23385), (75, 23397), (91, 23478),

Gene: Brocalys_19 Start: 19647, Stop: 19901, Start Num: 30
Candidate Starts for Brocalys_19:
(Start: 30 @19647 has 22 MA's), (34, 19662), (37, 19677), (42, 19701), (57, 19731), (65, 19764), (76, 19833), (85, 19875),

Gene: Butters_21 Start: 19744, Stop: 19998, Start Num: 30
Candidate Starts for Butters_21:

(Start: 30 @19744 has 22 MA's), (37, 19774), (42, 19798), (65, 19861), (73, 19909), (80, 19951), (83, 19969), (88, 19990),

Gene: Candra_35 Start: 23973, Stop: 24257, Start Num: 17
Candidate Starts for Candra_35:
(Start: 17 @23973 has 103 MA's), (23, 23991), (66, 24123), (70, 24141), (75, 24180),

Gene: Chadwick_30 Start: 23222, Stop: 23548, Start Num: 17
Candidate Starts for Chadwick_30:
(Start: 16 @23219 has 13 MA's), (Start: 17 @23222 has 103 MA's), (25, 23252), (27, 23258), (40, 23312), (45, 23330),

Gene: Chartreuse_35 Start: 23884, Stop: 24168, Start Num: 17
Candidate Starts for Chartreuse_35:
(Start: 17 @23884 has 103 MA's), (23, 23902), (66, 24034), (70, 24052), (75, 24091),

Gene: Che9c_20 Start: 20753, Stop: 21007, Start Num: 30
Candidate Starts for Che9c_20:
(Start: 30 @20753 has 22 MA's), (34, 20768), (37, 20783), (42, 20807), (57, 20837), (65, 20870), (76, 20939), (85, 20981),

Gene: CheeseTouch_30 Start: 23185, Stop: 23553, Start Num: 17
Candidate Starts for CheeseTouch_30:
(1, 22957), (9, 23077), (Start: 17 @23185 has 103 MA's), (47, 23299), (58, 23335), (65, 23374), (75, 23434), (77, 23446), (81, 23473),

Gene: CloudWang3_35 Start: 23935, Stop: 24219, Start Num: 17
Candidate Starts for CloudWang3_35:
(Start: 17 @23935 has 103 MA's), (66, 24085), (70, 24103), (75, 24142), (79, 24163),

Gene: Conspiracy_29 Start: 23857, Stop: 24141, Start Num: 17
Candidate Starts for Conspiracy_29:
(Start: 17 @23857 has 103 MA's), (23, 23875), (66, 24007), (72, 24031), (75, 24064), (88, 24133),

Gene: Coog_29 Start: 23997, Stop: 24281, Start Num: 17
Candidate Starts for Coog_29:
(Start: 17 @23997 has 103 MA's), (23, 24015), (66, 24147), (72, 24171), (75, 24204), (88, 24273),

Gene: Cookiedough_35 Start: 23930, Stop: 24214, Start Num: 17
Candidate Starts for Cookiedough_35:
(Start: 17 @23930 has 103 MA's), (66, 24080), (70, 24098), (75, 24137),

Gene: Cuco_29 Start: 23947, Stop: 24231, Start Num: 17
Candidate Starts for Cuco_29:
(Start: 17 @23947 has 103 MA's), (23, 23965), (66, 24097), (72, 24121), (75, 24154), (88, 24223),

Gene: DaVinci_35 Start: 23938, Stop: 24222, Start Num: 17
Candidate Starts for DaVinci_35:
(Start: 17 @23938 has 103 MA's), (23, 23956), (66, 24088), (70, 24106), (75, 24145),

Gene: Daegal_27 Start: 23414, Stop: 23659, Start Num: 31
Candidate Starts for Daegal_27:

(Start: 18 @23378 has 6 MA's), (Start: 26 @23408 has 16 MA's), (Start: 31 @23414 has 7 MA's), (32, 23420), (35, 23435), (37, 23441), (46, 23468), (60, 23501), (62, 23507), (65, 23519), (69, 23537), (74, 23573), (83, 23627), (86, 23633),

Gene: DeepSoil15_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for DeepSoil15_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: DelvinSonDorr_34 Start: 23930, Stop: 24214, Start Num: 17
Candidate Starts for DelvinSonDorr_34:
(Start: 17 @23930 has 103 MA's), (66, 24080), (70, 24098), (75, 24137),

Gene: Dewey_26 Start: 23120, Stop: 23365, Start Num: 31
Candidate Starts for Dewey_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Discoknowium_29 Start: 24066, Stop: 24350, Start Num: 17
Candidate Starts for Discoknowium_29:
(Start: 17 @24066 has 103 MA's), (23, 24084), (66, 24216), (72, 24240), (75, 24273), (88, 24342),

Gene: Dori_28 Start: 28425, Stop: 28751, Start Num: 16
Candidate Starts for Dori_28:
(Start: 16 @28425 has 13 MA's), (Start: 18 @28431 has 6 MA's), (42, 28521), (48, 28539), (59, 28578), (61, 28593), (65, 28611), (71, 28635), (72, 28638), (75, 28671), (83, 28719), (90, 28743),

Gene: Dorothea_35 Start: 23938, Stop: 24222, Start Num: 17
Candidate Starts for Dorothea_35:
(Start: 17 @23938 has 103 MA's), (66, 24088), (70, 24106), (75, 24145),

Gene: DroogsArmy_33 Start: 27229, Stop: 27555, Start Num: 18
Candidate Starts for DroogsArmy_33:
(Start: 18 @27229 has 6 MA's), (23, 27244), (25, 27256), (33, 27280), (56, 27370),

Gene: Dublin_28 Start: 23916, Stop: 24200, Start Num: 17
Candidate Starts for Dublin_28:
(Start: 17 @23916 has 103 MA's), (23, 23934), (66, 24066), (72, 24090), (75, 24123), (88, 24192),

Gene: EMoore_34 Start: 32939, Stop: 33334, Start Num: 17
Candidate Starts for EMoore_34:
(2, 32735), (11, 32915), (12, 32924), (13, 32930), (Start: 17 @32939 has 103 MA's), (22, 32954), (28, 32972), (29, 32975), (41, 33026), (42, 33029), (53, 33062), (58, 33080), (59, 33086), (63, 33113), (65, 33119), (75, 33179),

Gene: EagleEye_34 Start: 24891, Stop: 25181, Start Num: 17
Candidate Starts for EagleEye_34:
(15, 24885), (Start: 17 @24891 has 103 MA's), (25, 24921), (51, 24999), (67, 25050), (68, 25053), (70, 25065), (75, 25104), (79, 25125),

Gene: Ebony_32 Start: 25166, Stop: 25420, Start Num: 30

Candidate Starts for Ebony_32:
(Start: 30 @25166 has 22 MA's), (34, 25181), (37, 25196), (42, 25220), (57, 25250), (65, 25283), (73, 25331), (76, 25352), (78, 25358), (85, 25394),

Gene: Ein37_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Ein37_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: ElTiger69_29 Start: 23249, Stop: 23578, Start Num: 16
Candidate Starts for ElTiger69_29:
(Start: 16 @23249 has 13 MA's), (Start: 17 @23252 has 103 MA's), (25, 23282), (27, 23288), (40, 23342), (45, 23360),

Gene: EricB_35 Start: 23930, Stop: 24214, Start Num: 17
Candidate Starts for EricB_35:
(Start: 17 @23930 has 103 MA's), (23, 23948), (66, 24080), (70, 24098), (75, 24137),

Gene: Et2Brutus_31 Start: 25126, Stop: 25380, Start Num: 30
Candidate Starts for Et2Brutus_31:
(Start: 30 @25126 has 22 MA's), (34, 25141), (37, 25156), (42, 25180), (57, 25210), (65, 25243), (73, 25291), (76, 25312), (78, 25318), (85, 25354),

Gene: Evanesce_26 Start: 23120, Stop: 23365, Start Num: 31
Candidate Starts for Evanesce_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Farewell_20 Start: 21630, Stop: 21884, Start Num: 30
Candidate Starts for Farewell_20:
(Start: 30 @21630 has 22 MA's), (34, 21645), (37, 21660), (42, 21684), (57, 21714),

Gene: Florence1_29 Start: 23739, Stop: 24023, Start Num: 17
Candidate Starts for Florence1_29:
(Start: 17 @23739 has 103 MA's), (23, 23757), (66, 23889), (72, 23913), (75, 23946), (88, 24015),

Gene: Florence4_30 Start: 23739, Stop: 24023, Start Num: 17
Candidate Starts for Florence4_30:
(Start: 17 @23739 has 103 MA's), (23, 23757), (66, 23889), (72, 23913), (75, 23946), (88, 24015),

Gene: FlyCatcher_35 Start: 26996, Stop: 27322, Start Num: 17
Candidate Starts for FlyCatcher_35:
(Start: 17 @26996 has 103 MA's), (25, 27026), (49, 27113), (50, 27116), (56, 27137), (68, 27194),

Gene: ForGetIt_29 Start: 23882, Stop: 24166, Start Num: 17
Candidate Starts for ForGetIt_29:
(Start: 17 @23882 has 103 MA's), (23, 23900), (66, 24032), (72, 24056), (75, 24089), (88, 24158),

Gene: Forge_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Forge_26:

(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Fryberger_56 Start: 31110, Stop: 31466, Start Num: 17
Candidate Starts for Fryberger_56:
(Start: 17 @31110 has 103 MA's), (36, 31176), (50, 31227), (53, 31236), (63, 31287), (71, 31317), (75, 31353),

Gene: Gancho_25 Start: 22838, Stop: 23089, Start Num: 26
Candidate Starts for Gancho_25:
(Start: 18 @22808 has 6 MA's), (Start: 26 @22838 has 16 MA's), (Start: 31 @22844 has 7 MA's), (32, 22850), (35, 22865), (37, 22871), (46, 22898), (60, 22931), (62, 22937), (65, 22949), (69, 22967), (74, 23003), (83, 23057), (86, 23063),

Gene: Garak_36 Start: 23938, Stop: 24222, Start Num: 17
Candidate Starts for Garak_36:
(Start: 17 @23938 has 103 MA's), (66, 24088), (70, 24106), (75, 24145),

Gene: George_28 Start: 23948, Stop: 24232, Start Num: 17
Candidate Starts for George_28:
(Start: 17 @23948 has 103 MA's), (23, 23966), (66, 24098), (72, 24122), (75, 24155), (88, 24224),

Gene: Ghoulboy_29 Start: 24197, Stop: 24481, Start Num: 17
Candidate Starts for Ghoulboy_29:
(Start: 17 @24197 has 103 MA's), (23, 24215), (66, 24347), (72, 24371), (75, 24404), (88, 24473),

Gene: Giles_26 Start: 23120, Stop: 23365, Start Num: 31
Candidate Starts for Giles_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Gladiator_35 Start: 23925, Stop: 24209, Start Num: 17
Candidate Starts for Gladiator_35:
(Start: 17 @23925 has 103 MA's), (66, 24075), (70, 24093), (75, 24132), (79, 24153),

Gene: Gravaillia_26 Start: 22850, Stop: 23095, Start Num: 31
Candidate Starts for Gravaillia_26:
(Start: 18 @22814 has 6 MA's), (Start: 26 @22844 has 16 MA's), (Start: 31 @22850 has 7 MA's), (32, 22856), (35, 22871), (37, 22877), (46, 22904), (60, 22937), (62, 22943), (65, 22955), (69, 22973), (74, 23009), (83, 23063), (86, 23069),

Gene: GreedyLawyer_35 Start: 23937, Stop: 24221, Start Num: 17
Candidate Starts for GreedyLawyer_35:
(Start: 17 @23937 has 103 MA's), (23, 23955), (66, 24087), (70, 24105), (75, 24144),

Gene: Gruunaga_35 Start: 23925, Stop: 24209, Start Num: 17
Candidate Starts for Gruunaga_35:
(Start: 17 @23925 has 103 MA's), (66, 24075), (70, 24093), (75, 24132), (79, 24153),

Gene: Guey18_61 Start: 32302, Stop: 32658, Start Num: 17
Candidate Starts for Guey18_61:

(Start: 17 @32302 has 103 MA's), (36, 32368), (50, 32419), (53, 32428), (63, 32479), (71, 32509), (81, 32584),

Gene: HH92_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for HH92_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: HINdeR_32 Start: 27335, Stop: 27661, Start Num: 18
Candidate Starts for HINdeR_32:
(Start: 18 @27335 has 6 MA's), (23, 27350), (25, 27362), (56, 27476), (68, 27533),

Gene: Hadrien_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Hadrien_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Hail_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Hail_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Hammer_35 Start: 23936, Stop: 24220, Start Num: 17
Candidate Starts for Hammer_35:
(Start: 17 @23936 has 103 MA's), (66, 24086), (70, 24104), (75, 24143), (79, 24164),

Gene: Helmet_35 Start: 23938, Stop: 24222, Start Num: 17
Candidate Starts for Helmet_35:
(Start: 17 @23938 has 103 MA's), (66, 24088), (70, 24106), (75, 24145),

Gene: Hexamo_35 Start: 23907, Stop: 24191, Start Num: 17
Candidate Starts for Hexamo_35:
(Start: 17 @23907 has 103 MA's), (66, 24057), (70, 24075), (75, 24114), (79, 24135),

Gene: Hoot_35 Start: 23916, Stop: 24200, Start Num: 17
Candidate Starts for Hoot_35:
(Start: 17 @23916 has 103 MA's), (23, 23934), (66, 24066), (70, 24084), (75, 24123),

Gene: HuhtaEnerson15_29 Start: 23948, Stop: 24232, Start Num: 17
Candidate Starts for HuhtaEnerson15_29:
(Start: 17 @23948 has 103 MA's), (23, 23966), (66, 24098), (72, 24122), (75, 24155), (88, 24224),

Gene: Ibrahim_23 Start: 21377, Stop: 21715, Start Num: 14
Candidate Starts for Ibrahim_23:
(Start: 14 @21377 has 5 MA's), (Start: 18 @21395 has 6 MA's), (76, 21644),

Gene: IdentityCrisis_20 Start: 18777, Stop: 19031, Start Num: 30
Candidate Starts for IdentityCrisis_20:
(Start: 30 @18777 has 22 MA's), (34, 18792), (37, 18807), (42, 18831), (57, 18861), (85, 19005),

Gene: Imbriano_35 Start: 23937, Stop: 24221, Start Num: 17
Candidate Starts for Imbriano_35:
(Start: 17 @23937 has 103 MA's), (66, 24087), (70, 24105), (75, 24144),

Gene: Indra_35 Start: 23939, Stop: 24223, Start Num: 17
Candidate Starts for Indra_35:
(Start: 17 @23939 has 103 MA's), (66, 24089), (70, 24107), (75, 24146),

Gene: Isiphiwo_35 Start: 24008, Stop: 24292, Start Num: 17
Candidate Starts for Isiphiwo_35:
(Start: 17 @24008 has 103 MA's), (66, 24158), (70, 24176), (75, 24215),

Gene: Jabiru_29 Start: 23299, Stop: 23628, Start Num: 16
Candidate Starts for Jabiru_29:
(Start: 16 @23299 has 13 MA's), (Start: 17 @23302 has 103 MA's), (25, 23332), (27, 23338), (40, 23392), (45, 23410),

Gene: Jeffabunny_35 Start: 23959, Stop: 24243, Start Num: 17
Candidate Starts for Jeffabunny_35:
(Start: 17 @23959 has 103 MA's), (66, 24109), (70, 24127), (75, 24166), (79, 24187),

Gene: JewelBug_35 Start: 23942, Stop: 24226, Start Num: 17
Candidate Starts for JewelBug_35:
(Start: 17 @23942 has 103 MA's), (66, 24092), (75, 24149),

Gene: Jordennis_35 Start: 23927, Stop: 24211, Start Num: 17
Candidate Starts for Jordennis_35:
(Start: 17 @23927 has 103 MA's), (66, 24077), (70, 24095), (75, 24134),

Gene: Jovo_29 Start: 24138, Stop: 24422, Start Num: 17
Candidate Starts for Jovo_29:
(Start: 17 @24138 has 103 MA's), (23, 24156), (66, 24288), (72, 24312), (75, 24345), (88, 24414),

Gene: Juliette_29 Start: 24277, Stop: 24531, Start Num: 30
Candidate Starts for Juliette_29:
(Start: 30 @24277 has 22 MA's), (37, 24307), (42, 24331), (65, 24394), (73, 24442), (80, 24484), (83, 24502), (88, 24523),

Gene: Kazan_35 Start: 23943, Stop: 24227, Start Num: 17
Candidate Starts for Kazan_35:
(Start: 17 @23943 has 103 MA's), (23, 23961), (66, 24093), (70, 24111), (75, 24150),

Gene: Keelan_54 Start: 31093, Stop: 31443, Start Num: 17
Candidate Starts for Keelan_54:
(Start: 17 @31093 has 103 MA's), (25, 31123), (39, 31177), (42, 31183), (56, 31228), (71, 31297), (92, 31423),

Gene: Kevin1_21 Start: 19745, Stop: 19999, Start Num: 30
Candidate Starts for Kevin1_21:
(Start: 30 @19745 has 22 MA's), (37, 19775), (42, 19799), (65, 19862), (73, 19910), (80, 19952), (83, 19970), (88, 19991),

Gene: Kimba_32 Start: 25175, Stop: 25429, Start Num: 30

Candidate Starts for Kimba_32:
(Start: 30 @25175 has 22 MA's), (34, 25190), (37, 25205), (42, 25229), (57, 25259), (65, 25292), (73, 25340), (76, 25361), (78, 25367), (85, 25403),

Gene: Kinbote_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Kinbote_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Kipper29_35 Start: 23937, Stop: 24221, Start Num: 17
Candidate Starts for Kipper29_35:
(Start: 17 @23937 has 103 MA's), (23, 23955), (66, 24087), (70, 24105), (75, 24144),

Gene: Koko_35 Start: 24275, Stop: 24559, Start Num: 17
Candidate Starts for Koko_35:
(Start: 17 @24275 has 103 MA's), (66, 24425), (70, 24443), (75, 24482),

Gene: Leopard_41 Start: 32837, Stop: 33163, Start Num: 16
Candidate Starts for Leopard_41:
(3, 32627), (11, 32807), (Start: 16 @32837 has 13 MA's), (44, 32942), (48, 32951), (52, 32960), (58, 32984), (65, 33023), (71, 33047), (72, 33050), (75, 33083), (76, 33092), (83, 33131),

Gene: Lev2_29 Start: 23770, Stop: 24054, Start Num: 17
Candidate Starts for Lev2_29:
(Start: 17 @23770 has 103 MA's), (23, 23788), (66, 23920), (72, 23944), (75, 23977), (88, 24046),

Gene: LilHazelnut_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for LilHazelnut_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Lilbunny_35 Start: 23933, Stop: 24217, Start Num: 17
Candidate Starts for Lilbunny_35:
(Start: 17 @23933 has 103 MA's), (66, 24083), (70, 24101), (75, 24140), (79, 24161),

Gene: LittleCherry_29 Start: 23949, Stop: 24233, Start Num: 17
Candidate Starts for LittleCherry_29:
(Start: 17 @23949 has 103 MA's), (23, 23967), (66, 24099), (72, 24123), (75, 24156), (88, 24225),

Gene: Lucyedi_33 Start: 24891, Stop: 25181, Start Num: 17
Candidate Starts for Lucyedi_33:
(15, 24885), (Start: 17 @24891 has 103 MA's), (25, 24921), (51, 24999), (70, 25065), (75, 25104), (79, 25125),

Gene: Luke_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Luke_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Luna22_26 Start: 23114, Stop: 23365, Start Num: 26

Candidate Starts for Luna22_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Mabel_32 Start: 25175, Stop: 25429, Start Num: 30
Candidate Starts for Mabel_32:
(Start: 30 @25175 has 22 MA's), (34, 25190), (37, 25205), (42, 25229), (57, 25259), (65, 25292), (73, 25340), (76, 25361), (78, 25367), (85, 25403),

Gene: Malisha_32 Start: 25733, Stop: 26101, Start Num: 17
Candidate Starts for Malisha_32:
(Start: 17 @25733 has 103 MA's), (34, 25790), (40, 25823), (54, 25868), (58, 25883), (65, 25922), (81, 26021), (84, 26030),

Gene: MarysWell_28 Start: 23997, Stop: 24281, Start Num: 17
Candidate Starts for MarysWell_28:
(Start: 17 @23997 has 103 MA's), (23, 24015), (66, 24147), (72, 24171), (75, 24204), (88, 24273),

Gene: McFly_35 Start: 23937, Stop: 24221, Start Num: 17
Candidate Starts for McFly_35:
(Start: 17 @23937 has 103 MA's), (23, 23955), (66, 24087), (70, 24105), (75, 24144),

Gene: Mendokysei_22 Start: 21205, Stop: 21525, Start Num: 18
Candidate Starts for Mendokysei_22:
(Start: 18 @21205 has 6 MA's), (40, 21292), (76, 21454),

Gene: Micasa_29 Start: 23923, Stop: 24207, Start Num: 17
Candidate Starts for Micasa_29:
(Start: 17 @23923 has 103 MA's), (23, 23941), (66, 24073), (72, 24097), (75, 24130), (88, 24199),

Gene: MichelleMyBell_21 Start: 19775, Stop: 20029, Start Num: 30
Candidate Starts for MichelleMyBell_21:
(Start: 30 @19775 has 22 MA's), (37, 19805), (42, 19829), (65, 19892), (73, 19940), (80, 19982), (83, 20000), (88, 20021),

Gene: Midas2_29 Start: 23997, Stop: 24281, Start Num: 17
Candidate Starts for Midas2_29:
(Start: 17 @23997 has 103 MA's), (23, 24015), (66, 24147), (72, 24171), (75, 24204), (88, 24273),

Gene: Milcery_29 Start: 23953, Stop: 24237, Start Num: 17
Candidate Starts for Milcery_29:
(Start: 17 @23953 has 103 MA's), (23, 23971), (66, 24103), (72, 24127), (75, 24160), (88, 24229),

Gene: Naca_29 Start: 23788, Stop: 24114, Start Num: 17
Candidate Starts for Naca_29:
(Start: 16 @23785 has 13 MA's), (Start: 17 @23788 has 103 MA's), (25, 23818), (27, 23824), (40, 23878), (45, 23896),

Gene: Nairb_23 Start: 21377, Stop: 21715, Start Num: 14
Candidate Starts for Nairb_23:
(Start: 14 @21377 has 5 MA's), (Start: 18 @21395 has 6 MA's), (76, 21644),

Gene: Nazo_21 Start: 21173, Stop: 21496, Start Num: 16
Candidate Starts for Nazo_21:
(Start: 16 @21173 has 13 MA's), (42, 21269), (48, 21287), (58, 21320), (59, 21326), (61, 21341), (65, 21359), (71, 21383), (72, 21386), (75, 21419),

Gene: Neeharika16_35 Start: 23930, Stop: 24214, Start Num: 17
Candidate Starts for Neeharika16_35:
(Start: 17 @23930 has 103 MA's), (66, 24080), (70, 24098), (75, 24137),

Gene: Nette_24 Start: 21214, Stop: 21534, Start Num: 18
Candidate Starts for Nette_24:
(Start: 18 @21214 has 6 MA's), (40, 21301), (76, 21463),

Gene: Newrala_35 Start: 23930, Stop: 24214, Start Num: 17
Candidate Starts for Newrala_35:
(Start: 17 @23930 has 103 MA's), (66, 24080), (70, 24098), (75, 24137),

Gene: OBUpride_26 Start: 23114, Stop: 23359, Start Num: 31
Candidate Starts for OBUpride_26:
(Start: 18 @23078 has 6 MA's), (Start: 26 @23108 has 16 MA's), (Start: 31 @23114 has 7 MA's), (32, 23120), (35, 23135), (37, 23141), (46, 23168), (60, 23201), (62, 23207), (65, 23219), (69, 23237), (74, 23273), (83, 23327), (86, 23333),

Gene: Onyinye_42 Start: 32716, Stop: 33042, Start Num: 16
Candidate Starts for Onyinye_42:
(3, 32506), (11, 32686), (Start: 16 @32716 has 13 MA's), (44, 32821), (48, 32830), (52, 32839), (58, 32863), (65, 32902), (71, 32926), (72, 32929), (75, 32962), (76, 32971), (83, 33010),

Gene: PainterBoy_33 Start: 24828, Stop: 25118, Start Num: 17
Candidate Starts for PainterBoy_33:
(15, 24822), (Start: 17 @24828 has 103 MA's), (25, 24858), (51, 24936), (67, 24987), (68, 24990), (70, 25002), (75, 25041), (79, 25062),

Gene: PetterN_30 Start: 23222, Stop: 23548, Start Num: 17
Candidate Starts for PetterN_30:
(Start: 16 @23219 has 13 MA's), (Start: 17 @23222 has 103 MA's), (25, 23252), (27, 23258), (40, 23312), (45, 23330),

Gene: Phayonce_21 Start: 21124, Stop: 21447, Start Num: 16
Candidate Starts for Phayonce_21:
(3, 20917), (11, 21097), (Start: 16 @21124 has 13 MA's), (23, 21142), (42, 21220), (48, 21238), (58, 21271), (59, 21277), (61, 21292), (63, 21304), (65, 21310), (71, 21334), (72, 21337), (75, 21370), (83, 21418),

Gene: Phlorence_29 Start: 24057, Stop: 24341, Start Num: 17
Candidate Starts for Phlorence_29:
(Start: 17 @24057 has 103 MA's), (23, 24075), (66, 24207), (72, 24231), (75, 24264), (88, 24333),

Gene: PickleBack_29 Start: 23771, Stop: 24055, Start Num: 17
Candidate Starts for PickleBack_29:
(Start: 17 @23771 has 103 MA's), (23, 23789), (66, 23921), (72, 23945), (75, 23978), (88, 24047),

Gene: Pmask_35 Start: 23931, Stop: 24215, Start Num: 17

Candidate Starts for Pmask_35:
(Start: 17 @23931 has 103 MA's), (66, 24081), (70, 24099), (75, 24138),

Gene: Polyphemus_35 Start: 23929, Stop: 24213, Start Num: 17
Candidate Starts for Polyphemus_35:
(Start: 17 @23929 has 103 MA's), (66, 24079), (70, 24097), (75, 24136),

Gene: Priamo_35 Start: 23980, Stop: 24264, Start Num: 17
Candidate Starts for Priamo_35:
(Start: 17 @23980 has 103 MA's), (23, 23998), (70, 24148),

Gene: Prinashe11_29 Start: 23916, Stop: 24200, Start Num: 17
Candidate Starts for Prinashe11_29:
(Start: 17 @23916 has 103 MA's), (23, 23934), (66, 24066), (72, 24090), (75, 24123), (88, 24192),

Gene: Purky_21 Start: 20870, Stop: 21124, Start Num: 30
Candidate Starts for Purky_21:
(Start: 30 @20870 has 22 MA's), (34, 20885), (37, 20900), (42, 20924), (57, 20954), (85, 21098),

Gene: Reindeer_29 Start: 26688, Stop: 26945, Start Num: 30
Candidate Starts for Reindeer_29:
(Start: 30 @26688 has 22 MA's), (37, 26718), (40, 26736), (60, 26787), (65, 26805), (73, 26853), (76, 26874), (80, 26892), (83, 26910),

Gene: Rem711_29 Start: 24862, Stop: 25188, Start Num: 17
Candidate Starts for Rem711_29:
(Start: 17 @24862 has 103 MA's), (59, 25015), (65, 25048), (72, 25075), (75, 25108), (82, 25153), (87, 25165), (89, 25177),

Gene: Rifter_35 Start: 23924, Stop: 24208, Start Num: 17
Candidate Starts for Rifter_35:
(Start: 17 @23924 has 103 MA's), (66, 24074), (70, 24092), (75, 24131), (79, 24152),

Gene: Roksolana_35 Start: 23951, Stop: 24235, Start Num: 17
Candidate Starts for Roksolana_35:
(Start: 17 @23951 has 103 MA's), (66, 24101), (70, 24119), (75, 24158),

Gene: RonRayGun_23 Start: 21395, Stop: 21715, Start Num: 18
Candidate Starts for RonRayGun_23:
(Start: 14 @21377 has 5 MA's), (Start: 18 @21395 has 6 MA's), (76, 21644),

Gene: Ronaldo_59 Start: 32055, Stop: 32411, Start Num: 17
Candidate Starts for Ronaldo_59:
(Start: 17 @32055 has 103 MA's), (50, 32172), (53, 32181), (63, 32232), (65, 32238), (81, 32337),

Gene: Rubeelu_21 Start: 19744, Stop: 19998, Start Num: 30
Candidate Starts for Rubeelu_21:
(Start: 30 @19744 has 22 MA's), (37, 19774), (42, 19798), (65, 19861), (73, 19909), (80, 19951), (83, 19969), (88, 19990),

Gene: Ruthiejr_28 Start: 24008, Stop: 24262, Start Num: 30
Candidate Starts for Ruthiejr_28:

(Start: 30 @24008 has 22 MA's), (37, 24038), (42, 24062), (65, 24125), (73, 24173), (80, 24215), (83, 24233), (88, 24254),

Gene: Salz_32 Start: 25114, Stop: 25368, Start Num: 30
Candidate Starts for Salz_32:
(Start: 30 @25114 has 22 MA's), (34, 25129), (37, 25144), (42, 25168), (57, 25198), (65, 25231), (73, 25279), (76, 25300), (78, 25306), (85, 25342),

Gene: Saskia_32 Start: 24983, Stop: 25237, Start Num: 30
Candidate Starts for Saskia_32:
(Start: 30 @24983 has 22 MA's), (34, 24998), (37, 25013), (42, 25037), (57, 25067), (65, 25100), (76, 25169), (78, 25175), (85, 25211),

Gene: Sbash_20 Start: 20703, Stop: 21029, Start Num: 16
Candidate Starts for Sbash_20:
(3, 20493), (Start: 16 @20703 has 13 MA's), (40, 20796), (56, 20847), (65, 20892), (72, 20919), (75, 20952),

Gene: Scorpia_30 Start: 23225, Stop: 23551, Start Num: 17
Candidate Starts for Scorpia_30:
(Start: 16 @23222 has 13 MA's), (Start: 17 @23225 has 103 MA's), (25, 23255), (27, 23261), (40, 23315), (45, 23333),

Gene: Sheen_33 Start: 27051, Stop: 27377, Start Num: 17
Candidate Starts for Sheen_33:
(Start: 17 @27051 has 103 MA's), (25, 27081), (49, 27168), (50, 27171), (56, 27192), (68, 27249),

Gene: SmellyB_35 Start: 23937, Stop: 24221, Start Num: 17
Candidate Starts for SmellyB_35:
(Start: 17 @23937 has 103 MA's), (23, 23955), (66, 24087), (70, 24105), (75, 24144),

Gene: Sparky_20 Start: 21631, Stop: 21885, Start Num: 30
Candidate Starts for Sparky_20:
(Start: 30 @21631 has 22 MA's), (34, 21646), (37, 21661), (42, 21685), (57, 21715), (65, 21748), (76, 21817), (85, 21859),

Gene: Stuck_20 Start: 20898, Stop: 21224, Start Num: 16
Candidate Starts for Stuck_20:
(Start: 16 @20898 has 13 MA's), (42, 20994), (48, 21012), (58, 21045), (61, 21066), (65, 21084), (71, 21108), (72, 21111), (75, 21144), (83, 21192), (90, 21216),

Gene: SuperAwesome_35 Start: 23930, Stop: 24214, Start Num: 17
Candidate Starts for SuperAwesome_35:
(Start: 17 @23930 has 103 MA's), (66, 24080), (70, 24098), (75, 24137),

Gene: SuperCallie99_35 Start: 23929, Stop: 24213, Start Num: 17
Candidate Starts for SuperCallie99_35:
(Start: 17 @23929 has 103 MA's), (66, 24079), (70, 24097), (75, 24136),

Gene: Swirley_29 Start: 23924, Stop: 24208, Start Num: 17
Candidate Starts for Swirley_29:
(Start: 17 @23924 has 103 MA's), (23, 23942), (66, 24074), (72, 24098), (75, 24131), (88, 24200),

Gene: SydNat_29 Start: 24209, Stop: 24493, Start Num: 17
Candidate Starts for SydNat_29:
(Start: 17 @24209 has 103 MA's), (23, 24227), (66, 24359), (72, 24383), (75, 24416), (88, 24485),

Gene: Tarynearal_28 Start: 23946, Stop: 24230, Start Num: 17
Candidate Starts for Tarynearal_28:
(Start: 17 @23946 has 103 MA's), (23, 23964), (66, 24096), (72, 24120), (75, 24153), (88, 24222),

Gene: Temprado_35 Start: 23938, Stop: 24222, Start Num: 17
Candidate Starts for Temprado_35:
(Start: 17 @23938 has 103 MA's), (66, 24088), (70, 24106), (75, 24145),

Gene: Theia_27 Start: 23970, Stop: 24254, Start Num: 17
Candidate Starts for Theia_27:
(Start: 17 @23970 has 103 MA's), (23, 23988), (66, 24120), (72, 24144), (75, 24177), (88, 24246),

Gene: ThulaThula_21 Start: 21130, Stop: 21453, Start Num: 16
Candidate Starts for ThulaThula_21:
(3, 20923), (11, 21103), (Start: 16 @21130 has 13 MA's), (23, 21148), (42, 21226), (48, 21244), (58, 21277), (59, 21283), (61, 21298), (63, 21310), (65, 21316), (71, 21340), (72, 21343), (75, 21376), (83, 21424),

Gene: Tiger_29 Start: 23848, Stop: 24132, Start Num: 17
Candidate Starts for Tiger_29:
(Start: 17 @23848 has 103 MA's), (23, 23866), (66, 23998), (72, 24022), (75, 24055), (88, 24124),

Gene: Timothy_32 Start: 25117, Stop: 25371, Start Num: 30
Candidate Starts for Timothy_32:
(Start: 30 @25117 has 22 MA's), (34, 25132), (37, 25147), (42, 25171), (57, 25201), (65, 25234), (73, 25282), (76, 25303), (78, 25309), (85, 25345),

Gene: Timshel_33 Start: 27459, Stop: 27785, Start Num: 18
Candidate Starts for Timshel_33:
(Start: 18 @27459 has 6 MA's), (23, 27474), (25, 27486), (33, 27510), (40, 27546), (75, 27708),

Gene: TinyTimmy_32 Start: 25160, Stop: 25414, Start Num: 30
Candidate Starts for TinyTimmy_32:
(Start: 30 @25160 has 22 MA's), (34, 25175), (37, 25190), (42, 25214), (57, 25244), (65, 25277), (73, 25325), (76, 25346), (78, 25352), (85, 25388),

Gene: ToneTone_33 Start: 23865, Stop: 24149, Start Num: 17
Candidate Starts for ToneTone_33:
(Start: 17 @23865 has 103 MA's), (66, 24015), (70, 24033), (75, 24072), (79, 24093),

Gene: Toro_34 Start: 26996, Stop: 27322, Start Num: 17
Candidate Starts for Toro_34:
(Start: 17 @26996 has 103 MA's), (25, 27026), (49, 27113), (50, 27116), (56, 27137), (68, 27194),

Gene: Tortellini_21 Start: 21612, Stop: 21866, Start Num: 30
Candidate Starts for Tortellini_21:
(19, 21579), (21, 21585), (24, 21597), (Start: 30 @21612 has 22 MA's), (34, 21627), (37, 21642), (42, 21666), (57, 21696), (65, 21729), (73, 21777), (76, 21798), (85, 21840),

Gene: Tucker_35 Start: 23951, Stop: 24235, Start Num: 17
Candidate Starts for Tucker_35:
(Start: 17 @23951 has 103 MA's), (66, 24101), (70, 24119), (75, 24158), (79, 24179),

Gene: Tuti_27 Start: 23509, Stop: 23829, Start Num: 18
Candidate Starts for Tuti_27:
(Start: 18 @23509 has 6 MA's), (25, 23536), (47, 23617), (55, 23644), (64, 23689), (65, 23692), (72, 23719), (75, 23752),

Gene: Twigg_29 Start: 23919, Stop: 24203, Start Num: 17
Candidate Starts for Twigg_29:
(Start: 17 @23919 has 103 MA's), (23, 23937), (66, 24069), (72, 24093), (75, 24126), (88, 24195),

Gene: Ubuntu_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Ubuntu_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: UnionJack_29 Start: 22960, Stop: 23286, Start Num: 17
Candidate Starts for UnionJack_29:
(Start: 17 @22960 has 103 MA's), (25, 22990), (27, 22996), (40, 23050), (45, 23068), (57, 23104),

Gene: VohminGhazi_35 Start: 23937, Stop: 24221, Start Num: 17
Candidate Starts for VohminGhazi_35:
(Start: 17 @23937 has 103 MA's), (23, 23955), (66, 24087), (70, 24105), (75, 24144),

Gene: Volt_58 Start: 32055, Stop: 32411, Start Num: 17
Candidate Starts for Volt_58:
(Start: 17 @32055 has 103 MA's), (50, 32172), (53, 32181), (63, 32232), (65, 32238), (81, 32337),

Gene: WST1_21 Start: 18774, Stop: 19043, Start Num: 24
Candidate Starts for WST1_21:
(24, 18774), (Start: 30 @18789 has 22 MA's), (34, 18804), (37, 18819), (42, 18843), (57, 18873), (85, 19017),

Gene: Webster2_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Webster2_26:
(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: Whitty_23 Start: 21377, Stop: 21715, Start Num: 14
Candidate Starts for Whitty_23:
(Start: 14 @21377 has 5 MA's), (Start: 18 @21395 has 6 MA's), (76, 21644),

Gene: Wiks_35 Start: 23933, Stop: 24217, Start Num: 17
Candidate Starts for Wiks_35:
(Start: 17 @23933 has 103 MA's), (66, 24083), (70, 24101), (75, 24140), (79, 24161),

Gene: Wishmaker_26 Start: 23114, Stop: 23365, Start Num: 26
Candidate Starts for Wishmaker_26:

(Start: 18 @23084 has 6 MA's), (Start: 26 @23114 has 16 MA's), (Start: 31 @23120 has 7 MA's), (32, 23126), (35, 23141), (37, 23147), (46, 23174), (60, 23207), (62, 23213), (65, 23225), (69, 23243), (74, 23279), (83, 23333), (86, 23339),

Gene: WunderPhul_35 Start: 23932, Stop: 24216, Start Num: 17
Candidate Starts for WunderPhul_35:
(Start: 17 @23932 has 103 MA's), (66, 24082), (70, 24100), (75, 24139),

Gene: Yokurt_35 Start: 23933, Stop: 24217, Start Num: 17
Candidate Starts for Yokurt_35:
(Start: 17 @23933 has 103 MA's), (66, 24083), (70, 24101), (75, 24140), (79, 24161),

Gene: Zaka_35 Start: 23933, Stop: 24217, Start Num: 17
Candidate Starts for Zaka_35:
(Start: 17 @23933 has 103 MA's), (66, 24083), (70, 24101), (75, 24140), (79, 24161),

Gene: ZenTime222_23 Start: 21377, Stop: 21715, Start Num: 14
Candidate Starts for ZenTime222_23:
(Start: 14 @21377 has 5 MA's), (Start: 18 @21395 has 6 MA's), (76, 21644),

Gene: Ziko_59 Start: 31995, Stop: 32351, Start Num: 17
Candidate Starts for Ziko_59:
(Start: 17 @31995 has 103 MA's), (50, 32112), (53, 32121), (63, 32172), (65, 32178), (81, 32277),

Gene: Zolita_28 Start: 24210, Stop: 24494, Start Num: 17
Candidate Starts for Zolita_28:
(Start: 17 @24210 has 103 MA's), (23, 24228), (66, 24360), (72, 24384), (75, 24417), (88, 24486),

Gene: Zulu_35 Start: 23932, Stop: 24216, Start Num: 17
Candidate Starts for Zulu_35:
(Start: 17 @23932 has 103 MA's), (66, 24082), (70, 24100), (75, 24139), (79, 24160),