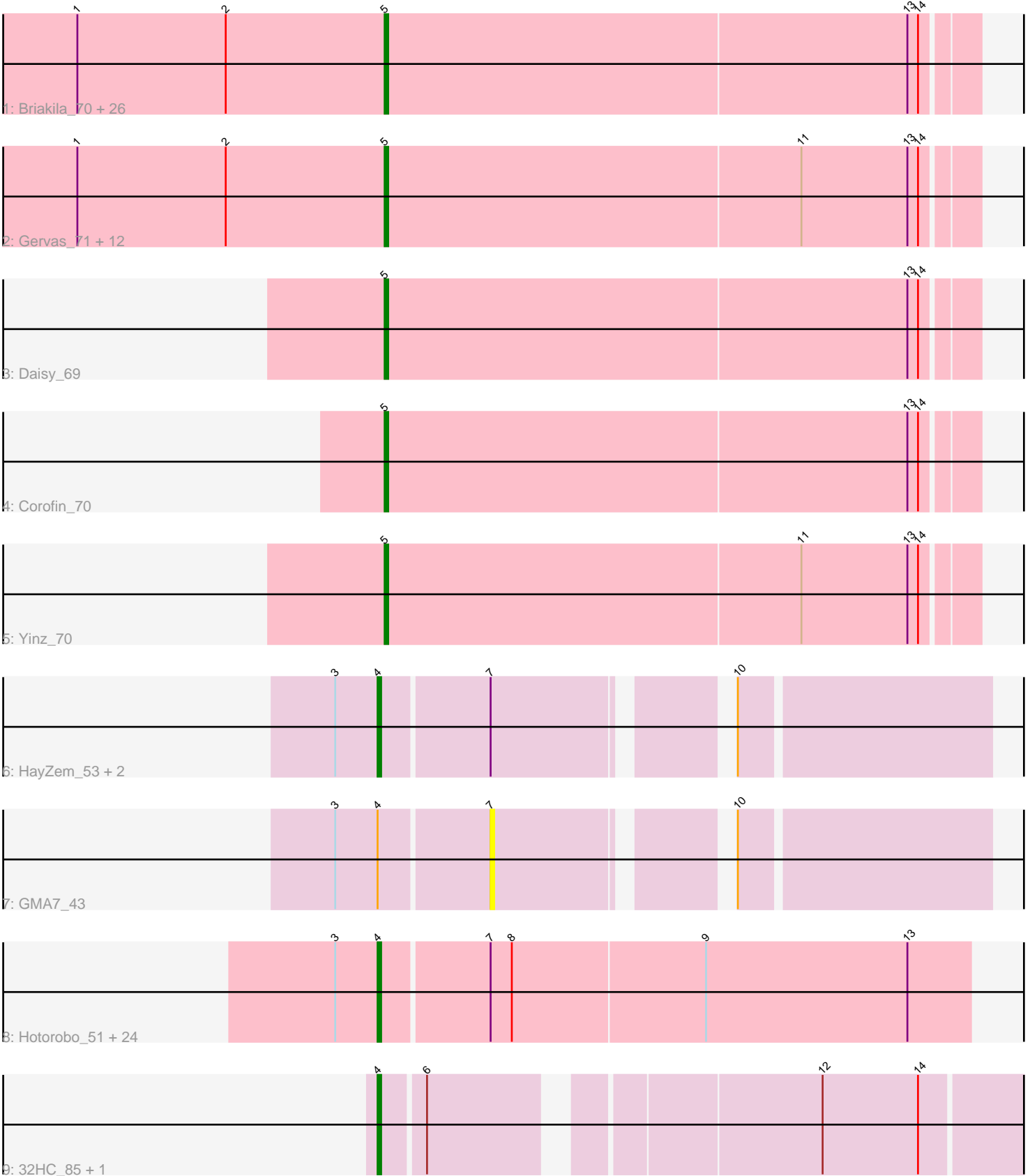


Pham 85485



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 85485 Report

This analysis was run 04/28/24 on database version 559.

Pham number 85485 has 74 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Briakila\_70, Compostia\_69, Akoma\_70, Athena\_72, Halfpint\_70, Abinghost\_70, Deenasa\_70, RomaT\_70, Morty007\_69, Kamiyu\_70, Phaedruss\_65, Nozo\_70, OrangeOswald\_70, LestyG\_68, GlenHope\_71, Jackstina\_66, Neos5\_70, Philly\_69, RagingRooster\_69, Bernardo\_71, Rita1961\_71, Pipefish\_73, Chandler\_70, SynergyX\_70, Devonte\_69, Gadget\_71, ChaChing\_70
- Track 2 : Gervas\_71, SlippinJimmy\_73, Casbah\_70, Audrey\_70, Kronus\_70, Baloo\_69, Obutu\_72, Phlyer\_70, MmasiCarm\_71, Yahalom\_68, Ben11\_70, Phayeta\_73, Mortcellus\_70
- Track 3 : Daisy\_69
- Track 4 : Corofin\_70
- Track 5 : Yinz\_70
- Track 6 : HayZem\_53, Amore2\_54, GTE7\_42
- Track 7 : GMA7\_43
- Track 8 : Hotorobo\_51, CathyBurgh\_51, Adgers\_53, Barbochs\_52, Boneham\_55, Squibbles\_51, BirksAndSocks\_56, Flakey\_51, Jellybones\_54, John316\_55, Monty\_50, Sam12\_51, GourdThymes\_51, FelixAlejandro\_56, RemRem\_52, Gorko\_51, Exiguo\_51, Poland\_58, Sombrero\_52, Msay19\_56, Ekhein\_52, Breezic\_51, Beaver\_55, Butterball\_55, Lizzo\_51
- Track 9 : 32HC\_85, Rem711\_84

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

The start number called the most often in the published annotations is 5, it was called in 40 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost\_70, Akoma\_70, Athena\_72, Audrey\_70, Baloo\_69, Ben11\_70, Bernardo\_71, Briakila\_70, Casbah\_70, ChaChing\_70, Chandler\_70, Compostia\_69, Corofin\_70, Daisy\_69, Deenasa\_70, Devonte\_69, Gadget\_71, Gervas\_71, GlenHope\_71, Halfpint\_70, Jackstina\_66, Kamiyu\_70, Kronus\_70, LestyG\_68, MmasiCarm\_71, Mortcellus\_70, Morty007\_69, Neos5\_70, Nozo\_70, Obutu\_72, OrangeOswald\_70, Phaedruss\_65, Phayeta\_73, Philly\_69, Phlyer\_70, Pipefish\_73, RagingRooster\_69, Rita1961\_71, RomaT\_70, SlippinJimmy\_73, SynergyX\_70, Yahalom\_68, Yinz\_70,

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

- 

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

- 32HC\_85, Adgers\_53, Amore2\_54, Barbochs\_52, Beaver\_55, BirksAndSocks\_56, Boneham\_55, Breezic\_51, Butterball\_55, CathyBurgh\_51, Ekhein\_52, Exiguo\_51, FelixAlejandro\_56, Flakey\_51, GMA7\_43, GTE7\_42, Gorko\_51, GourdThymes\_51, HayZem\_53, Hotorobo\_51, Jellybones\_54, John316\_55, Lizzo\_51, Monty\_50, Msay19\_56, Poland\_58, Rem711\_84, RemRem\_52, Sam12\_51, Sombrero\_52, Squibbles\_51,

### Summary by start number:

Start 4:

- Found in 31 of 74 ( 41.9% ) of genes in pham
- Manual Annotations of this start: 23 of 63
- Called 96.8% of time when present
- Phage (with cluster) where this start called: 32HC\_85 (Z), Adgers\_53 (CS2), Amore2\_54 (CS1), Barbochs\_52 (CS2), Beaver\_55 (CS2), BirksAndSocks\_56 (CS2), Boneham\_55 (CS2), Breezic\_51 (CS2), Butterball\_55 (CS2), CathyBurgh\_51 (CS2), Ekhein\_52 (CS2), Exiguo\_51 (CS2), FelixAlejandro\_56 (CS2), Flakey\_51 (CS2), GTE7\_42 (CS1), Gorko\_51 (CS2), GourdThymes\_51 (CS2), HayZem\_53 (CS1), Hotorobo\_51 (CS2), Jellybones\_54 (CS2), John316\_55 (CS2), Lizzo\_51 (CS2), Monty\_50 (CS2), Msay19\_56 (CS2), Poland\_58 (CS2), Rem711\_84 (Z), RemRem\_52 (CS2), Sam12\_51 (CS2), Sombrero\_52 (CS2), Squibbles\_51 (CS2),

Start 5:

- Found in 43 of 74 ( 58.1% ) of genes in pham
- Manual Annotations of this start: 40 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost\_70 (B3), Akoma\_70 (B3), Athena\_72 (B3), Audrey\_70 (B3), Baloo\_69 (B3), Ben11\_70 (B3), Bernardo\_71 (B3), Briakila\_70 (B3), Casbah\_70 (B3), ChaChing\_70 (B3), Chandler\_70 (B3), Compostia\_69 (B3), Corofin\_70 (B3), Daisy\_69 (B3), Deenasa\_70 (B3), Devonte\_69 (B3), Gadget\_71 (B3), Gervas\_71 (B3), GlenHope\_71 (B3), Halfpint\_70 (B3), Jackstina\_66 (B3), Kamiyu\_70 (B3), Kronus\_70 (B3), LestyG\_68 (B3), MmasiCarm\_71 (B3), Mortcellus\_70 (B3), Morty007\_69 (B3), Neos5\_70 (B3), Nozo\_70 (B3), Obutu\_72 (B3), OrangeOswald\_70 (B3), Phaedrus\_65 (B3), Phayeta\_73 (B3), Philly\_69 (B3), Phlyer\_70 (B3), Pipefish\_73 (B3), RagingRooster\_69 (B3), Rita1961\_71 (B3), RomaT\_70 (B3), SlippinJimmy\_73 (B3), SynergyX\_70 (B3), Yahalom\_68 (B3), Yinz\_70 (B3),

Start 7:

- Found in 29 of 74 ( 39.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 3.4% of time when present
- Phage (with cluster) where this start called: GMA7\_43 (CS1),

### Summary by clusters:

There are 4 clusters represented in this pham: Z, CS2, CS1, B3,

Info for manual annotations of cluster B3:

- Start number 5 was manually annotated 40 times for cluster B3.

Info for manual annotations of cluster CS1:

- Start number 4 was manually annotated 1 time for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 4 was manually annotated 21 times for cluster CS2.

Info for manual annotations of cluster Z:

- Start number 4 was manually annotated 1 time for cluster Z.

### ***Gene Information:***

Gene: 32HC\_85 Start: 50086, Stop: 50292, Start Num: 4

Candidate Starts for 32HC\_85:

(Start: 4 @50086 has 23 MA's), (6, 50098), (12, 50197), (14, 50224),

Gene: Abinghost\_70 Start: 57718, Stop: 57882, Start Num: 5

Candidate Starts for Abinghost\_70:

(1, 57631), (2, 57673), (Start: 5 @57718 has 40 MA's), (13, 57865), (14, 57868),

Gene: Adgers\_53 Start: 46936, Stop: 46772, Start Num: 4

Candidate Starts for Adgers\_53:

(3, 46948), (Start: 4 @46936 has 23 MA's), (7, 46906), (8, 46900), (9, 46846), (13, 46789),

Gene: Akoma\_70 Start: 57758, Stop: 57922, Start Num: 5

Candidate Starts for Akoma\_70:

(1, 57671), (2, 57713), (Start: 5 @57758 has 40 MA's), (13, 57905), (14, 57908),

Gene: Amore2\_54 Start: 47321, Stop: 47166, Start Num: 4

Candidate Starts for Amore2\_54:

(3, 47333), (Start: 4 @47321 has 23 MA's), (7, 47291), (10, 47234),

Gene: Athena\_72 Start: 58493, Stop: 58657, Start Num: 5

Candidate Starts for Athena\_72:

(1, 58406), (2, 58448), (Start: 5 @58493 has 40 MA's), (13, 58640), (14, 58643),

Gene: Audrey\_70 Start: 57757, Stop: 57921, Start Num: 5

Candidate Starts for Audrey\_70:

(1, 57670), (2, 57712), (Start: 5 @57757 has 40 MA's), (11, 57874), (13, 57904), (14, 57907),

Gene: Baloo\_69 Start: 57590, Stop: 57754, Start Num: 5

Candidate Starts for Baloo\_69:

(1, 57503), (2, 57545), (Start: 5 @57590 has 40 MA's), (11, 57707), (13, 57737), (14, 57740),

Gene: Barbochs\_52 Start: 46680, Stop: 46516, Start Num: 4

Candidate Starts for Barbochs\_52:

(3, 46692), (Start: 4 @46680 has 23 MA's), (7, 46650), (8, 46644), (9, 46590), (13, 46533),

Gene: Beaver\_55 Start: 48450, Stop: 48286, Start Num: 4

Candidate Starts for Beaver\_55:

(3, 48462), (Start: 4 @48450 has 23 MA's), (7, 48420), (8, 48414), (9, 48360), (13, 48303),

Gene: Ben11\_70 Start: 57975, Stop: 58139, Start Num: 5

Candidate Starts for Ben11\_70:

(1, 57888), (2, 57930), (Start: 5 @57975 has 40 MA's), (11, 58092), (13, 58122), (14, 58125),

Gene: Bernardo\_71 Start: 57956, Stop: 58120, Start Num: 5

Candidate Starts for Bernardo\_71:

(1, 57869), (2, 57911), (Start: 5 @57956 has 40 MA's), (13, 58103), (14, 58106),

Gene: BirksAndSocks\_56 Start: 48800, Stop: 48636, Start Num: 4

Candidate Starts for BirksAndSocks\_56:

(3, 48812), (Start: 4 @48800 has 23 MA's), (7, 48770), (8, 48764), (9, 48710), (13, 48653),

Gene: Boneham\_55 Start: 48701, Stop: 48537, Start Num: 4

Candidate Starts for Boneham\_55:

(3, 48713), (Start: 4 @48701 has 23 MA's), (7, 48671), (8, 48665), (9, 48611), (13, 48554),

Gene: Breezic\_51 Start: 46693, Stop: 46529, Start Num: 4

Candidate Starts for Breezic\_51:

(3, 46705), (Start: 4 @46693 has 23 MA's), (7, 46663), (8, 46657), (9, 46603), (13, 46546),

Gene: Briakila\_70 Start: 57956, Stop: 58120, Start Num: 5

Candidate Starts for Briakila\_70:

(1, 57869), (2, 57911), (Start: 5 @57956 has 40 MA's), (13, 58103), (14, 58106),

Gene: Butterball\_55 Start: 48706, Stop: 48542, Start Num: 4

Candidate Starts for Butterball\_55:

(3, 48718), (Start: 4 @48706 has 23 MA's), (7, 48676), (8, 48670), (9, 48616), (13, 48559),

Gene: Casbah\_70 Start: 58077, Stop: 58241, Start Num: 5

Candidate Starts for Casbah\_70:

(1, 57990), (2, 58032), (Start: 5 @58077 has 40 MA's), (11, 58194), (13, 58224), (14, 58227),

Gene: CathyBurgh\_51 Start: 47270, Stop: 47106, Start Num: 4

Candidate Starts for CathyBurgh\_51:

(3, 47282), (Start: 4 @47270 has 23 MA's), (7, 47240), (8, 47234), (9, 47180), (13, 47123),

Gene: ChaChing\_70 Start: 57775, Stop: 57939, Start Num: 5

Candidate Starts for ChaChing\_70:

(1, 57688), (2, 57730), (Start: 5 @57775 has 40 MA's), (13, 57922), (14, 57925),

Gene: Chandler\_70 Start: 58537, Stop: 58701, Start Num: 5

Candidate Starts for Chandler\_70:

(1, 58450), (2, 58492), (Start: 5 @58537 has 40 MA's), (13, 58684), (14, 58687),

Gene: Compostia\_69 Start: 58158, Stop: 58322, Start Num: 5

Candidate Starts for Compostia\_69:

(1, 58071), (2, 58113), (Start: 5 @58158 has 40 MA's), (13, 58305), (14, 58308),

Gene: Corofin\_70 Start: 57788, Stop: 57952, Start Num: 5

Candidate Starts for Corofin\_70:

(Start: 5 @57788 has 40 MA's), (13, 57935), (14, 57938),

Gene: Daisy\_69 Start: 57321, Stop: 57485, Start Num: 5

Candidate Starts for Daisy\_69:

(Start: 5 @57321 has 40 MA's), (13, 57468), (14, 57471),

Gene: Deenasa\_70 Start: 58624, Stop: 58788, Start Num: 5

Candidate Starts for Deenasa\_70:

(1, 58537), (2, 58579), (Start: 5 @58624 has 40 MA's), (13, 58771), (14, 58774),

Gene: Devonte\_69 Start: 57400, Stop: 57564, Start Num: 5

Candidate Starts for Devonte\_69:

(1, 57313), (2, 57355), (Start: 5 @57400 has 40 MA's), (13, 57547), (14, 57550),

Gene: Ekhein\_52 Start: 46398, Stop: 46234, Start Num: 4

Candidate Starts for Ekhein\_52:

(3, 46410), (Start: 4 @46398 has 23 MA's), (7, 46368), (8, 46362), (9, 46308), (13, 46251),

Gene: Exiguo\_51 Start: 46410, Stop: 46246, Start Num: 4

Candidate Starts for Exiguo\_51:

(3, 46422), (Start: 4 @46410 has 23 MA's), (7, 46380), (8, 46374), (9, 46320), (13, 46263),

Gene: FelixAlejandro\_56 Start: 48904, Stop: 48740, Start Num: 4

Candidate Starts for FelixAlejandro\_56:

(3, 48916), (Start: 4 @48904 has 23 MA's), (7, 48874), (8, 48868), (9, 48814), (13, 48757),

Gene: Flakey\_51 Start: 47274, Stop: 47110, Start Num: 4

Candidate Starts for Flakey\_51:

(3, 47286), (Start: 4 @47274 has 23 MA's), (7, 47244), (8, 47238), (9, 47184), (13, 47127),

Gene: GMA7\_43 Start: 41505, Stop: 41380, Start Num: 7

Candidate Starts for GMA7\_43:

(3, 41547), (Start: 4 @41535 has 23 MA's), (7, 41505), (10, 41448),

Gene: GTE7\_42 Start: 41566, Stop: 41411, Start Num: 4

Candidate Starts for GTE7\_42:

(3, 41578), (Start: 4 @41566 has 23 MA's), (7, 41536), (10, 41479),

Gene: Gadget\_71 Start: 58088, Stop: 58252, Start Num: 5

Candidate Starts for Gadget\_71:

(1, 58001), (2, 58043), (Start: 5 @58088 has 40 MA's), (13, 58235), (14, 58238),

Gene: Gervas\_71 Start: 58182, Stop: 58346, Start Num: 5

Candidate Starts for Gervas\_71:

(1, 58095), (2, 58137), (Start: 5 @58182 has 40 MA's), (11, 58299), (13, 58329), (14, 58332),

Gene: GlenHope\_71 Start: 57748, Stop: 57912, Start Num: 5

Candidate Starts for GlenHope\_71:

(1, 57661), (2, 57703), (Start: 5 @57748 has 40 MA's), (13, 57895), (14, 57898),

Gene: Gorko\_51 Start: 46402, Stop: 46238, Start Num: 4

Candidate Starts for Gorko\_51:

(3, 46414), (Start: 4 @46402 has 23 MA's), (7, 46372), (8, 46366), (9, 46312), (13, 46255),

Gene: GourdThymes\_51 Start: 47276, Stop: 47112, Start Num: 4  
Candidate Starts for GourdThymes\_51:  
(3, 47288), (Start: 4 @47276 has 23 MA's), (7, 47246), (8, 47240), (9, 47186), (13, 47129),

Gene: Halfpint\_70 Start: 57499, Stop: 57663, Start Num: 5  
Candidate Starts for Halfpint\_70:  
(1, 57412), (2, 57454), (Start: 5 @57499 has 40 MA's), (13, 57646), (14, 57649),

Gene: HayZem\_53 Start: 47318, Stop: 47163, Start Num: 4  
Candidate Starts for HayZem\_53:  
(3, 47330), (Start: 4 @47318 has 23 MA's), (7, 47288), (10, 47231),

Gene: Hotorobo\_51 Start: 47281, Stop: 47117, Start Num: 4  
Candidate Starts for Hotorobo\_51:  
(3, 47293), (Start: 4 @47281 has 23 MA's), (7, 47251), (8, 47245), (9, 47191), (13, 47134),

Gene: Jackstina\_66 Start: 57640, Stop: 57804, Start Num: 5  
Candidate Starts for Jackstina\_66:  
(1, 57553), (2, 57595), (Start: 5 @57640 has 40 MA's), (13, 57787), (14, 57790),

Gene: Jellybones\_54 Start: 48382, Stop: 48218, Start Num: 4  
Candidate Starts for Jellybones\_54:  
(3, 48394), (Start: 4 @48382 has 23 MA's), (7, 48352), (8, 48346), (9, 48292), (13, 48235),

Gene: John316\_55 Start: 48439, Stop: 48275, Start Num: 4  
Candidate Starts for John316\_55:  
(3, 48451), (Start: 4 @48439 has 23 MA's), (7, 48409), (8, 48403), (9, 48349), (13, 48292),

Gene: Kamiyu\_70 Start: 57717, Stop: 57881, Start Num: 5  
Candidate Starts for Kamiyu\_70:  
(1, 57630), (2, 57672), (Start: 5 @57717 has 40 MA's), (13, 57864), (14, 57867),

Gene: Kronus\_70 Start: 58813, Stop: 58977, Start Num: 5  
Candidate Starts for Kronus\_70:  
(1, 58726), (2, 58768), (Start: 5 @58813 has 40 MA's), (11, 58930), (13, 58960), (14, 58963),

Gene: LestyG\_68 Start: 57243, Stop: 57407, Start Num: 5  
Candidate Starts for LestyG\_68:  
(1, 57156), (2, 57198), (Start: 5 @57243 has 40 MA's), (13, 57390), (14, 57393),

Gene: Lizzo\_51 Start: 47270, Stop: 47106, Start Num: 4  
Candidate Starts for Lizzo\_51:  
(3, 47282), (Start: 4 @47270 has 23 MA's), (7, 47240), (8, 47234), (9, 47180), (13, 47123),

Gene: MmasiCarm\_71 Start: 58168, Stop: 58332, Start Num: 5  
Candidate Starts for MmasiCarm\_71:  
(1, 58081), (2, 58123), (Start: 5 @58168 has 40 MA's), (11, 58285), (13, 58315), (14, 58318),

Gene: Monty\_50 Start: 46420, Stop: 46256, Start Num: 4  
Candidate Starts for Monty\_50:  
(3, 46432), (Start: 4 @46420 has 23 MA's), (7, 46390), (8, 46384), (9, 46330), (13, 46273),

Gene: Mortcellus\_70 Start: 58830, Stop: 58994, Start Num: 5

Candidate Starts for Mortcellus\_70:

(1, 58743), (2, 58785), (Start: 5 @58830 has 40 MA's), (11, 58947), (13, 58977), (14, 58980),

Gene: Morty007\_69 Start: 58665, Stop: 58829, Start Num: 5

Candidate Starts for Morty007\_69:

(1, 58578), (2, 58620), (Start: 5 @58665 has 40 MA's), (13, 58812), (14, 58815),

Gene: Msay19\_56 Start: 48893, Stop: 48729, Start Num: 4

Candidate Starts for Msay19\_56:

(3, 48905), (Start: 4 @48893 has 23 MA's), (7, 48863), (8, 48857), (9, 48803), (13, 48746),

Gene: Neos5\_70 Start: 58127, Stop: 58291, Start Num: 5

Candidate Starts for Neos5\_70:

(1, 58040), (2, 58082), (Start: 5 @58127 has 40 MA's), (13, 58274), (14, 58277),

Gene: Nozo\_70 Start: 58524, Stop: 58688, Start Num: 5

Candidate Starts for Nozo\_70:

(1, 58437), (2, 58479), (Start: 5 @58524 has 40 MA's), (13, 58671), (14, 58674),

Gene: Obutu\_72 Start: 58347, Stop: 58511, Start Num: 5

Candidate Starts for Obutu\_72:

(1, 58260), (2, 58302), (Start: 5 @58347 has 40 MA's), (11, 58464), (13, 58494), (14, 58497),

Gene: OrangeOswald\_70 Start: 57765, Stop: 57929, Start Num: 5

Candidate Starts for OrangeOswald\_70:

(1, 57678), (2, 57720), (Start: 5 @57765 has 40 MA's), (13, 57912), (14, 57915),

Gene: Phaedrus\_65 Start: 57190, Stop: 57354, Start Num: 5

Candidate Starts for Phaedrus\_65:

(1, 57103), (2, 57145), (Start: 5 @57190 has 40 MA's), (13, 57337), (14, 57340),

Gene: Phayeta\_73 Start: 58251, Stop: 58415, Start Num: 5

Candidate Starts for Phayeta\_73:

(1, 58164), (2, 58206), (Start: 5 @58251 has 40 MA's), (11, 58368), (13, 58398), (14, 58401),

Gene: Philly\_69 Start: 57577, Stop: 57741, Start Num: 5

Candidate Starts for Philly\_69:

(1, 57490), (2, 57532), (Start: 5 @57577 has 40 MA's), (13, 57724), (14, 57727),

Gene: Phlyer\_70 Start: 58473, Stop: 58637, Start Num: 5

Candidate Starts for Phlyer\_70:

(1, 58386), (2, 58428), (Start: 5 @58473 has 40 MA's), (11, 58590), (13, 58620), (14, 58623),

Gene: Pipefish\_73 Start: 58884, Stop: 59048, Start Num: 5

Candidate Starts for Pipefish\_73:

(1, 58797), (2, 58839), (Start: 5 @58884 has 40 MA's), (13, 59031), (14, 59034),

Gene: Poland\_58 Start: 48872, Stop: 48708, Start Num: 4

Candidate Starts for Poland\_58:

(3, 48884), (Start: 4 @48872 has 23 MA's), (7, 48842), (8, 48836), (9, 48782), (13, 48725),

Gene: RagingRooster\_69 Start: 57405, Stop: 57569, Start Num: 5



Candidate Starts for RagingRooster\_69:

(1, 57318), (2, 57360), (Start: 5 @57405 has 40 MA's), (13, 57552), (14, 57555),

Gene: Rem711\_84 Start: 49959, Stop: 50114, Start Num: 4

Candidate Starts for Rem711\_84:

(Start: 4 @49959 has 23 MA's), (6, 49971), (12, 50070), (14, 50097),

Gene: RemRem\_52 Start: 46410, Stop: 46246, Start Num: 4

Candidate Starts for RemRem\_52:

(3, 46422), (Start: 4 @46410 has 23 MA's), (7, 46380), (8, 46374), (9, 46320), (13, 46263),

Gene: Rita1961\_71 Start: 58123, Stop: 58287, Start Num: 5

Candidate Starts for Rita1961\_71:

(1, 58036), (2, 58078), (Start: 5 @58123 has 40 MA's), (13, 58270), (14, 58273),

Gene: RomaT\_70 Start: 58324, Stop: 58488, Start Num: 5

Candidate Starts for RomaT\_70:

(1, 58237), (2, 58279), (Start: 5 @58324 has 40 MA's), (13, 58471), (14, 58474),

Gene: Sam12\_51 Start: 46410, Stop: 46246, Start Num: 4

Candidate Starts for Sam12\_51:

(3, 46422), (Start: 4 @46410 has 23 MA's), (7, 46380), (8, 46374), (9, 46320), (13, 46263),

Gene: SlippinJimmy\_73 Start: 59148, Stop: 59312, Start Num: 5

Candidate Starts for SlippinJimmy\_73:

(1, 59061), (2, 59103), (Start: 5 @59148 has 40 MA's), (11, 59265), (13, 59295), (14, 59298),

Gene: Sombrero\_52 Start: 46783, Stop: 46619, Start Num: 4

Candidate Starts for Sombrero\_52:

(3, 46795), (Start: 4 @46783 has 23 MA's), (7, 46753), (8, 46747), (9, 46693), (13, 46636),

Gene: Squibbles\_51 Start: 47273, Stop: 47109, Start Num: 4

Candidate Starts for Squibbles\_51:

(3, 47285), (Start: 4 @47273 has 23 MA's), (7, 47243), (8, 47237), (9, 47183), (13, 47126),

Gene: SynergyX\_70 Start: 57762, Stop: 57926, Start Num: 5

Candidate Starts for SynergyX\_70:

(1, 57675), (2, 57717), (Start: 5 @57762 has 40 MA's), (13, 57909), (14, 57912),

Gene: Yahalom\_68 Start: 57567, Stop: 57731, Start Num: 5

Candidate Starts for Yahalom\_68:

(1, 57480), (2, 57522), (Start: 5 @57567 has 40 MA's), (11, 57684), (13, 57714), (14, 57717),

Gene: Yinz\_70 Start: 57632, Stop: 57796, Start Num: 5

Candidate Starts for Yinz\_70:

(Start: 5 @57632 has 40 MA's), (11, 57749), (13, 57779), (14, 57782),