Pham 347670


1: Lymara_37
2: KBurrousTX_37
3: RosiePosie_37 + 15
4: Colucci_37
5: DrYang_38
6: Amo99_73 + 8
7: Makar_73 + 1
8: Sting_71
9: Tiamoceli_80 + 7
10: Malisha_40
11: MicyPS_90 + 1
12: PSonyx_111
13: Gallop_26
14: Mufasa8_29
15: Sunshine23_31 + 1
16: Maruru_31
17: Scotia_30
18: JanetJ_27
19: NoSwimming_30
20: Bubbykins_37
21: Tonitrus_59
22: GMA4_36
23: Cantare_50
24: phiAsp2_39

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 347670 Report

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

Pham number 347670 has 57 members, 11 are drafts.

Phages represented in each track:
• Track 1 : Lymara_37
• Track 2 : KBurrousTX_37
• Track 3 : RosiePosie_37, EdgarPoe_37, Linus_37, Tophat_37, JayCookie_37, Mordred_37, HumptyDumpty_37, Chipper1996_370, Chocolat_37, MoyaNatalis_37, Conboy_37, Kabreeze_37, Scavito_37, PrincessTrina_37, JaNo_37, Chubster_37
• Track 4 : Colucci_37
• Track 5 : DrYang_38
• Track 6 : Amo99_73, Jollymon_72, Purplicious_71, Soos_68, Grumio_72, KingstonB_70, Stillion_71, ColdSoup_73, DonTron_72
• Track 7 : Makar_73, Clawz_72
• Track 8 : Sting_71
• Track 9 : Tiamoceli_80, Chickadee_87, Twonlo_84, EdmundFerry_85, GTE6_86, RoadKill_84, Kwekel_87, Dexdert_82
• Track 10 : Malisha_40
• Track 11 : MicyPS_90, Taotie_112
• Track 12 : PSonyx_111
• Track 13 : Gallop_26
• Track 14 : Mufasa8_29
• Track 15 : Sunshine23_31, Sonali_32
• Track 16 : Maruru_31
• Track 17 : Scotia_30
• Track 18 : JanetJ_27
• Track 19 : NoSwimming_30
• Track 20 : Bubbykins_37
• Track 21 : Tonitrus_59
• Track 22 : GMA4_36
• Track 23 : Cantare_50
• Track 24 : phiAsp2_39

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

The start number called the most often in the published annotations is 27, it was called in 19 of the 46 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Chipper1996_370, Chocolat_37, Chubster_37, Colucci_37, Conboy_37, DrYang_38, EdgarPoe_37, HumptyDumpty_37, JaNo_37, JayCookie_37, KBurrousTX_37, Kabreeze_37, Linus_37, Lymara_37, Mordred_37, MoyaNatalis_37, PrincessTrina_37, RosiePosie_37, Scavito_37, Tophat_37,

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

Genes that do not have the "Most Annotated" start:
• Amo99_73, Bubbykins_37, Cantare_50, Chickadee_87, Clawz_72, ColdSoup_73, Dexdert_82, DonTron_72, EdmundFerry_85, GMA4_36, GTE6_86, Gallop_26, Grumio_72, JanetJ_27, Jollymon_72, KingstonB_70, Kwekel_87, Makar_73, Malisha_40, Maruru_31, MicyPS_90, Mufasa8_29, NoSwimming_30, PSonyx_111, Purplicious_71, RoadKill_84, Scotia_30, Sonali_32, Soos_68, Stillion_71, Sting_71, Sunshine23_31, Taotie_112, Tiamoceli_80, Tonitrus_59, Twonlo_84, phiAsp2_39,

Summary by start number:

Start 16:
• Found in 2 of 57 (3.5%) of genes in pham
• Manual Annotations of this start: 1 of 46
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Cantare_50 (singleton),

Start 17:
• Found in 9 of 57 (15.8%) of genes in pham
• Manual Annotations of this start: 7 of 46
• Called 88.9% of time when present
• Phage (with cluster) where this start called: Chickadee_87 (DE3), Dexdert_82 (DE3), EdmundFerry_85 (DE3), GTE6_86 (DE3), Kwekel_87 (DE3), RoadKill_84 (DE3), Tiamoceli_80 (DE3), Twonlo_84 (DE3),

Start 18:
• Found in 1 of 57 (1.8%) of genes in pham
• Manual Annotations of this start: 1 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tonitrus_59 (singleton),

Start 19:
• Found in 1 of 57 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: phiAsp2_39 (singleton),

Start 21:
• Found in 1 of 57 (1.8%) of genes in pham
• Manual Annotations of this start: 1 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Malisha_40 (DN),

Start 22:
• Found in 4 of 57 (7.0%) of genes in pham

• Manual Annotations of this start: 2 of 46
• Called 75.0% of time when present
• Phage (with cluster) where this start called: MicyPS_90 (EQ), PSonyx_111 (EQ), Taotie_112 (EQ),

Start 25:
• Found in 20 of 57 (35.1%) of genes in pham
• Manual Annotations of this start: 7 of 46
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Amo99_73 (CP), Clawz_72 (CP), ColdSoup_73 (CP), DonTron_72 (CP), Grumio_72 (CP), Jollymon_72 (CP), KingstonB_70 (CP), Makar_73 (CP), Purplicious_71 (CP), Soos_68 (CP), Stillion_71 (CP), Sting_71 (CP),

Start 26:
• Found in 1 of 57 (1.8%) of genes in pham
• Manual Annotations of this start: 1 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bubbykins_37 (UNK),

Start 27:
• Found in 20 of 57 (35.1%) of genes in pham
• Manual Annotations of this start: 19 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chipper1996_370 (AR), Chocolat_37 (AR), Chubster_37 (AR), Colucci_37 (AR), Conboy_37 (AR), DrYang_38 (AR), EdgarPoe_37 (AR), HumptyDumpty_37 (AR), JaNo_37 (AR), JayCookie_37 (AR), KBurrousTX_37 (AR), Kabreeze_37 (AR), Linus_37 (AR), Lymara_37 (AR), Mordred_37 (AR), MoyaNatalis_37 (AR), PrincessTrina_37 (AR), RosiePosie_37 (AR), Scavito_37 (AR), Tophat_37 (AR),

Start 28:
• Found in 3 of 57 (5.3%) of genes in pham
• Manual Annotations of this start: 3 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JanetJ_27 (FO), NoSwimming_30 (FO), Scotia_30 (FO),

Start 29:
• Found in 4 of 57 (7.0%) of genes in pham
• Manual Annotations of this start: 4 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Maruru_31 (FG), Mufasa8_29 (FG), Sonali_32 (FG), Sunshine23_31 (FG),

Start 36:
• Found in 1 of 57 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GMA4_36 (singleton),

Start 48:
• Found in 1 of 57 (1.8%) of genes in pham

• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gallop_26 (ES),

Summary by clusters:

There are 10 clusters represented in this pham: DN, singleton, UNK, DE3, AR, FG, CP, EQ, ES, FO,

Info for manual annotations of cluster AR:
•Start number 27 was manually annotated 19 times for cluster AR.

Info for manual annotations of cluster CP:
•Start number 25 was manually annotated 7 times for cluster CP.

Info for manual annotations of cluster DE3:
•Start number 17 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DN:
•Start number 21 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster EQ:
•Start number 22 was manually annotated 2 times for cluster EQ.

Info for manual annotations of cluster FG:
•Start number 29 was manually annotated 4 times for cluster FG.

Info for manual annotations of cluster FO:
•Start number 28 was manually annotated 3 times for cluster FO.

Info for manual annotations of cluster UNK:
•Start number 26 was manually annotated 1 time for cluster UNK.

Gene Information:

Gene: Amo99_73 Start: 48277, Stop: 48501, Start Num: 25
Candidate Starts for Amo99_73:
(Start: 25 @48277 has 7 MA's), (40, 48349), (41, 48355), (49, 48391), (54, 48415), (55, 48424), (62, 48493),

Gene: Bubbykins_37 Start: 28274, Stop: 28059, Start Num: 26
Candidate Starts for Bubbykins_37:
(7, 28391), (8, 28385), (9, 28382), (10, 28376), (11, 28361), (13, 28346), (Start: 17 @28322 has 7 MA's), (Start: 26 @28274 has 1 MA's), (38, 28214), (44, 28184), (50, 28154), (51, 28151),

Gene: Cantare_50 Start: 45879, Stop: 46109, Start Num: 16
Candidate Starts for Cantare_50:
(Start: 16 @45879 has 1 MA's), (32, 45933), (33, 45936), (34, 45942),

Gene: Chickadee_87 Start: 56050, Stop: 56301, Start Num: 17

Candidate Starts for Chickadee_87:
(Start: 17 @56050 has 7 MA's), (Start: 25 @56089 has 7 MA's), (32, 56113), (42, 56173), (56, 56248),

Gene: Chipper1996_370 Start: 30385, Stop: 30167, Start Num: 27
Candidate Starts for Chipper1996_370:
(6, 30535), (8, 30490), (9, 30487), (14, 30448), (20, 30415), (Start: 27 @30385 has 19 MA's), (32, 30364), (38, 30328), (40, 30313), (44, 30298), (46, 30286),

Gene: Chocolat_37 Start: 30385, Stop: 30167, Start Num: 27
Candidate Starts for Chocolat_37:
(6, 30535), (8, 30490), (9, 30487), (14, 30448), (20, 30415), (Start: 27 @30385 has 19 MA's), (32, 30364), (38, 30328), (40, 30313), (44, 30298), (46, 30286),

Gene: Chubster_37 Start: 30157, Stop: 29939, Start Num: 27
Candidate Starts for Chubster_37:
(6, 30307), (8, 30262), (9, 30259), (14, 30220), (20, 30187), (Start: 27 @30157 has 19 MA's), (32, 30136), (38, 30100), (40, 30085), (44, 30070), (46, 30058),

Gene: Clawz_72 Start: 48155, Stop: 48379, Start Num: 25
Candidate Starts for Clawz_72:
(15, 48107), (Start: 25 @48155 has 7 MA's), (40, 48227), (41, 48233), (45, 48251), (46, 48254), (49, 48269), (54, 48293), (62, 48371),

Gene: ColdSoup_73 Start: 48358, Stop: 48582, Start Num: 25
Candidate Starts for ColdSoup_73:
(Start: 25 @48358 has 7 MA's), (40, 48430), (41, 48436), (49, 48472), (54, 48496), (55, 48505), (62, 48574),

Gene: Colucci_37 Start: 29963, Stop: 29742, Start Num: 27
Candidate Starts for Colucci_37:
(1, 30272), (2, 30215), (3, 30194), (14, 30026), (15, 30020), (Start: 22 @29981 has 2 MA's), (Start: 27 @29963 has 19 MA's), (40, 29891), (44, 29876), (46, 29864), (51, 29843),

Gene: Conboy_37 Start: 30384, Stop: 30166, Start Num: 27
Candidate Starts for Conboy_37:
(6, 30534), (8, 30489), (9, 30486), (14, 30447), (20, 30414), (Start: 27 @30384 has 19 MA's), (32, 30363), (38, 30327), (40, 30312), (44, 30297), (46, 30285),

Gene: Dexdert_82 Start: 54559, Stop: 54810, Start Num: 17
Candidate Starts for Dexdert_82:
(Start: 17 @54559 has 7 MA's), (Start: 25 @54598 has 7 MA's), (32, 54622), (42, 54682), (56, 54757),

Gene: DonTron_72 Start: 48395, Stop: 48619, Start Num: 25
Candidate Starts for DonTron_72:
(Start: 25 @48395 has 7 MA's), (40, 48467), (41, 48473), (49, 48509), (54, 48533), (55, 48542), (62, 48611),

Gene: DrYang_38 Start: 31723, Stop: 31505, Start Num: 27
Candidate Starts for DrYang_38:
(Start: 27 @31723 has 19 MA's), (37, 31675), (38, 31666), (40, 31651), (44, 31636), (46, 31624), (58, 31549),

Gene: EdgarPoe_37 Start: 30384, Stop: 30166, Start Num: 27

Candidate Starts for EdgarPoe_37:
(6, 30534), (8, 30489), (9, 30486), (14, 30447), (20, 30414), (Start: 27 @30384 has 19 MA's), (32, 30363), (38, 30327), (40, 30312), (44, 30297), (46, 30285),

Gene: EdmundFerry_85 Start: 55426, Stop: 55677, Start Num: 17
Candidate Starts for EdmundFerry_85:
(Start: 17 @55426 has 7 MA's), (Start: 25 @55465 has 7 MA's), (32, 55489), (42, 55549), (56, 55624),

Gene: GMA4_36 Start: 29103, Stop: 29303, Start Num: 36
Candidate Starts for GMA4_36:
(7, 28944), (36, 29103), (52, 29199),

Gene: GTE6_86 Start: 56599, Stop: 56850, Start Num: 17
Candidate Starts for GTE6_86:
(Start: 17 @56599 has 7 MA's), (Start: 25 @56638 has 7 MA's), (32, 56662), (42, 56722), (56, 56797),

Gene: Gallop_26 Start: 24284, Stop: 24048, Start Num: 48
Candidate Starts for Gallop_26:
(48, 24284), (53, 24257),

Gene: Grumio_72 Start: 47836, Stop: 48060, Start Num: 25
Candidate Starts for Grumio_72:
(Start: 25 @47836 has 7 MA's), (40, 47908), (41, 47914), (49, 47950), (54, 47974), (55, 47983), (62, 48052),

Gene: HumptyDumpty_37 Start: 30383, Stop: 30165, Start Num: 27
Candidate Starts for HumptyDumpty_37:
(6, 30533), (8, 30488), (9, 30485), (14, 30446), (20, 30413), (Start: 27 @30383 has 19 MA's), (32, 30362), (38, 30326), (40, 30311), (44, 30296), (46, 30284),

Gene: JaNo_37 Start: 30383, Stop: 30165, Start Num: 27
Candidate Starts for JaNo_37:
(6, 30533), (8, 30488), (9, 30485), (14, 30446), (20, 30413), (Start: 27 @30383 has 19 MA's), (32, 30362), (38, 30326), (40, 30311), (44, 30296), (46, 30284),

Gene: JanetJ_27 Start: 24007, Stop: 23804, Start Num: 28
Candidate Starts for JanetJ_27:
(Start: 28 @24007 has 3 MA's),

Gene: JayCookie_37 Start: 30387, Stop: 30169, Start Num: 27
Candidate Starts for JayCookie_37:
(6, 30537), (8, 30492), (9, 30489), (14, 30450), (20, 30417), (Start: 27 @30387 has 19 MA's), (32, 30366), (38, 30330), (40, 30315), (44, 30300), (46, 30288),

Gene: Jollymon_72 Start: 48358, Stop: 48582, Start Num: 25
Candidate Starts for Jollymon_72:
(Start: 25 @48358 has 7 MA's), (40, 48430), (41, 48436), (49, 48472), (54, 48496), (55, 48505), (62, 48574),

Gene: KBurrousTX_37 Start: 31486, Stop: 31268, Start Num: 27
Candidate Starts for KBurrousTX_37:
(20, 31513), (Start: 27 @31486 has 19 MA's), (33, 31462), (38, 31429), (40, 31414), (44, 31399), (46, 31387), (47, 31381),

Gene: Kabreeze_37 Start: 30383, Stop: 30165, Start Num: 27
Candidate Starts for Kabreeze_37:
(6, 30533), (8, 30488), (9, 30485), (14, 30446), (20, 30413), (Start: 27 @30383 has 19 MA's), (32, 30362), (38, 30326), (40, 30311), (44, 30296), (46, 30284),

Gene: KingstonB_70 Start: 47833, Stop: 48057, Start Num: 25
Candidate Starts for KingstonB_70:
(Start: 25 @47833 has 7 MA's), (40, 47905), (41, 47911), (49, 47947), (54, 47971), (55, 47980), (62, 48049),

Gene: Kwekel_87 Start: 55963, Stop: 56214, Start Num: 17
Candidate Starts for Kwekel_87:
(Start: 17 @55963 has 7 MA's), (Start: 25 @56002 has 7 MA's), (32, 56026), (42, 56086), (56, 56161),

Gene: Linus_37 Start: 30384, Stop: 30166, Start Num: 27
Candidate Starts for Linus_37:
(6, 30534), (8, 30489), (9, 30486), (14, 30447), (20, 30414), (Start: 27 @30384 has 19 MA's), (32, 30363), (38, 30327), (40, 30312), (44, 30297), (46, 30285),

Gene: Lymara_37 Start: 30202, Stop: 29981, Start Num: 27
Candidate Starts for Lymara_37:
(6, 30352), (8, 30307), (14, 30265), (20, 30232), (Start: 27 @30202 has 19 MA's), (37, 30154), (40, 30130), (44, 30115), (46, 30103),

Gene: Makar_73 Start: 48182, Stop: 48406, Start Num: 25
Candidate Starts for Makar_73:
(15, 48134), (Start: 25 @48182 has 7 MA's), (40, 48254), (41, 48260), (45, 48278), (46, 48281), (49, 48296), (54, 48320), (62, 48398),

Gene: Malisha_40 Start: 30125, Stop: 29862, Start Num: 21
Candidate Starts for Malisha_40:
(Start: 16 @30155 has 1 MA's), (Start: 21 @30125 has 1 MA's), (30, 30095), (31, 30092), (35, 30077), (60, 29903), (61, 29897),

Gene: Maruru_31 Start: 29698, Stop: 29486, Start Num: 29
Candidate Starts for Maruru_31:
(4, 29905), (23, 29716), (Start: 29 @29698 has 4 MA's),

Gene: MicyPS_90 Start: 54573, Stop: 54337, Start Num: 22
Candidate Starts for MicyPS_90:
(Start: 22 @54573 has 2 MA's), (59, 54363),

Gene: Mordred_37 Start: 30383, Stop: 30165, Start Num: 27
Candidate Starts for Mordred_37:
(6, 30533), (8, 30488), (9, 30485), (14, 30446), (20, 30413), (Start: 27 @30383 has 19 MA's), (32, 30362), (38, 30326), (40, 30311), (44, 30296), (46, 30284),

Gene: MoyaNatalis_37 Start: 30387, Stop: 30169, Start Num: 27
Candidate Starts for MoyaNatalis_37:
(6, 30537), (8, 30492), (9, 30489), (14, 30450), (20, 30417), (Start: 27 @30387 has 19 MA's), (32, 30366), (38, 30330), (40, 30315), (44, 30300), (46, 30288),

Gene: Mufasa8_29 Start: 27032, Stop: 26823, Start Num: 29
Candidate Starts for Mufasa8_29:
(Start: 29 @27032 has 4 MA's),

Gene: NoSwimming_30 Start: 25642, Stop: 25406, Start Num: 28
Candidate Starts for NoSwimming_30:
(Start: 28 @25642 has 3 MA's),

Gene: PSonyx_111 Start: 59498, Stop: 59262, Start Num: 22
Candidate Starts for PSonyx_111:
(Start: 22 @59498 has 2 MA's), (59, 59288),

Gene: PrincessTrina_37 Start: 30387, Stop: 30169, Start Num: 27
Candidate Starts for PrincessTrina_37:
(6, 30537), (8, 30492), (9, 30489), (14, 30450), (20, 30417), (Start: 27 @30387 has 19 MA's), (32, 30366), (38, 30330), (40, 30315), (44, 30300), (46, 30288),

Gene: Purplicious_71 Start: 47601, Stop: 47825, Start Num: 25
Candidate Starts for Purplicious_71:
(Start: 25 @47601 has 7 MA's), (40, 47673), (41, 47679), (49, 47715), (54, 47739), (55, 47748), (62, 47817),

Gene: RoadKill_84 Start: 55492, Stop: 55743, Start Num: 17
Candidate Starts for RoadKill_84:
(Start: 17 @55492 has 7 MA's), (Start: 25 @55531 has 7 MA's), (32, 55555), (42, 55615), (56, 55690),

Gene: RosiePosie_37 Start: 30386, Stop: 30168, Start Num: 27
Candidate Starts for RosiePosie_37:
(6, 30536), (8, 30491), (9, 30488), (14, 30449), (20, 30416), (Start: 27 @30386 has 19 MA's), (32, 30365), (38, 30329), (40, 30314), (44, 30299), (46, 30287),

Gene: Scavito_37 Start: 30384, Stop: 30166, Start Num: 27
Candidate Starts for Scavito_37:
(6, 30534), (8, 30489), (9, 30486), (14, 30447), (20, 30414), (Start: 27 @30384 has 19 MA's), (32, 30363), (38, 30327), (40, 30312), (44, 30297), (46, 30285),

Gene: Scotia_30 Start: 25627, Stop: 25391, Start Num: 28
Candidate Starts for Scotia_30:
(5, 25822), (Start: 28 @25627 has 3 MA's),

Gene: Sonali_32 Start: 30335, Stop: 30120, Start Num: 29
Candidate Starts for Sonali_32:
(Start: 29 @30335 has 4 MA's),

Gene: Soos_68 Start: 47562, Stop: 47786, Start Num: 25
Candidate Starts for Soos_68:
(Start: 25 @47562 has 7 MA's), (40, 47634), (41, 47640), (49, 47676), (54, 47700), (55, 47709), (62, 47778),

Gene: Stillion_71 Start: 48159, Stop: 48383, Start Num: 25
Candidate Starts for Stillion_71:
(Start: 25 @48159 has 7 MA's), (40, 48231), (41, 48237), (49, 48273), (54, 48297), (55, 48306), (62, 48375),

Gene: Sting_71 Start: 48001, Stop: 48225, Start Num: 25
Candidate Starts for Sting_71:
(Start: 25 @48001 has 7 MA's), (39, 48064), (40, 48073), (41, 48079), (49, 48115), (54, 48139), (55, 48148), (62, 48217),

Gene: Sunshine23_31 Start: 29942, Stop: 29730, Start Num: 29
Candidate Starts for Sunshine23_31:
(Start: 29 @29942 has 4 MA's),

Gene: Taotie_112 Start: 57499, Stop: 57263, Start Num: 22
Candidate Starts for Taotie_112:
(Start: 22 @57499 has 2 MA's), (59, 57289),

Gene: Tiamoceli_80 Start: 55382, Stop: 55633, Start Num: 17
Candidate Starts for Tiamoceli_80:
(Start: 17 @55382 has 7 MA's), (Start: 25 @55421 has 7 MA's), (32, 55445), (42, 55505), (56, 55580),

Gene: Tonitrus_59 Start: 44270, Stop: 44503, Start Num: 18
Candidate Starts for Tonitrus_59:
(Start: 18 @44270 has 1 MA's), (38, 44363), (39, 44369), (50, 44423), (57, 44465),

Gene: Tophat_37 Start: 30385, Stop: 30167, Start Num: 27
Candidate Starts for Tophat_37:
(6, 30535), (8, 30490), (9, 30487), (14, 30448), (20, 30415), (Start: 27 @30385 has 19 MA's), (32, 30364), (38, 30328), (40, 30313), (44, 30298), (46, 30286),

Gene: Twonlo_84 Start: 56083, Stop: 56334, Start Num: 17
Candidate Starts for Twonlo_84:
(Start: 17 @56083 has 7 MA's), (Start: 25 @56122 has 7 MA's), (32, 56146), (42, 56206), (56, 56281),

Gene: phiAsp2_39 Start: 33131, Stop: 33403, Start Num: 19
Candidate Starts for phiAsp2_39:
(12, 33095), (19, 33131), (24, 33155), (33, 33191), (43, 33251), (55, 33317), (63, 33392),