

Pham 161823



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 161823 Report

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

Pham number 161823 has 76 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Jumboset_55, Korra_55, Fluke_54, Scuttle_53, Dino_54, MrGloopy_54, Zorro_54
- Track 2 : PitaDog_52, Wayne_55, Lucy_51, DrRobert_50, Makoto_51
- Track 3 : Suppi_53, Canowicakte_53
- Track 4 : Wawa_54, TattModd_52, Rozby_53, Potatoes_53, Savage2526_54, Beethoven_53, BigMack_52, Cholula_53, Glenn_55, Vallejo_54, BrotherBLo_53, Kalizoi_54, Immaculata_53
- Track 5 : Lennox_52, AppleCider_53, ChewChew_52, CallieOMalley_53, Pterodactyl_52, PartyCup_58, CristinaYang_52, Lasagna_50, OurGirlNessie_50, Litotes_52, LilStuart_51, Bodacious_52, Nancia_52
- Track 6 : RcigaStruga_54, Albanese_54, Huntingdon_54, Misaeng_53
- Track 7 : EstebanJulior_52, MamaPearl_52
- Track 8 : Lakshmi_54, Oxyfnrius_54
- Track 9 : MeganNoll_54
- Track 10 : Urla_52
- Track 11 : Pumancara_51
- Track 12 : HeadNerd_51, Moki_51
- Track 13 : Bennie_52, Christian_52
- Track 14 : Carpal_53
- Track 15 : Joann_55, GreenHearts_55, Greenhouse_55, Nubia_54
- Track 16 : Preamble_53
- Track 17 : AustinPowers_53, Supakev_51
- Track 18 : Eunoia_51, Eunoia_53, Aledel_51, OMalley_51, Riovina_51
- Track 19 : WonderBoy_50
- Track 20 : Kittykat_55, DreamTeam_51, Gisselle_51
- Track 21 : RAP15_55
- Track 22 : Huckleberry_51
- Track 23 : PinkFriday_53
- Track 24 : Riverdale_54

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

The start number called the most often in the published annotations is 3, it was called in 53 of the 72 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Albanese_54, Aledel_51, AppleCider_53, AustinPowers_53, Beethoven_53, BigMack_52, Bodacious_52, BrotherBLo_53, CallieOMalley_53, Carpal_53, ChewChew_52, Cholula_53, CristinaYang_52, DreamTeam_51, EstebanJulior_52, Eunoia_51, Eunoia_53, Gisselle_51, Glenn_55, GreenHearts_55, Greenhouse_55, HeadNerd_51, Huckleberry_51, Huntingdon_54, Immaculata_53, Joann_55, Kalizoi_54, Kittykat_55, Lakshmi_54, Lasagna_50, Lennox_52, LilStuart_51, Litotes_52, MamaPearl_52, Misaeng_53, Moki_51, Nancia_52, Nubia_54, OMalley_51, OurGirlNessie_50, Oxynfrius_54, PartyCup_58, PinkFriday_53, Potatoes_53, Pterodactyl_52, RAP15_55, RcigaStruga_54, Riovina_51, Riverdale_54, Rozby_53, Savage2526_54, Supakev_51, TattModd_52, Urla_52, Vallejo_54, Wawa_54, WonderBoy_50,

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

- Bennie_52, Canowicakte_53, Christian_52, Dino_54, DrRobert_50, Fluke_54, Jumboset_55, Korra_55, Lucy_51, Makoto_51, MeganNoll_54, MrGloopy_54, PitaDog_52, Preamble_53, Pumancara_51, Scuttle_53, Suppi_53, Wayne_55, Zorro_54,

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

-

Summary by start number:

Start 1:

- Found in 25 of 76 (32.9%) of genes in pham
- Manual Annotations of this start: 8 of 72
- Called 32.0% of time when present
- Phage (with cluster) where this start called: Dino_54 (AK), Fluke_54 (AK), Jumboset_55 (AK), Korra_55 (AK), MeganNoll_54 (AK), MrGloopy_54 (AK), Scuttle_53 (AK), Zorro_54 (AK),

Start 2:

- Found in 37 of 76 (48.7%) of genes in pham
- Manual Annotations of this start: 11 of 72
- Called 29.7% of time when present
- Phage (with cluster) where this start called: Bennie_52 (AK), Canowicakte_53 (AK), Christian_52 (AK), DrRobert_50 (AK), Lucy_51 (AK), Makoto_51 (AK), PitaDog_52 (AK), Preamble_53 (AK), Pumancara_51 (AK), Suppi_53 (AK), Wayne_55 (AK),

Start 3:

- Found in 76 of 76 (100.0%) of genes in pham
- Manual Annotations of this start: 53 of 72
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Albanese_54 (AK), Aledel_51 (AK), AppleCider_53 (AK), AustinPowers_53 (AK), Beethoven_53 (AK), BigMack_52 (AK), Bodacious_52 (AK), BrotherBLo_53 (AK), CallieOMalley_53 (AK), Carpal_53 (AK), ChewChew_52 (AK), Cholula_53 (AK), CristinaYang_52 (AK), DreamTeam_51 (AK), EstebanJulior_52 (AK), Eunoia_51 (AK), Eunoia_53 (AK), Gisselle_51 (AK), Glenn_55 (AK), GreenHearts_55 (AK), Greenhouse_55 (AK), HeadNerd_51 (AK), Huckleberry_51 (AK), Huntingdon_54 (AK), Immaculata_53 (AK), Joann_55 (AK), Kalizoi_54 (AK), Kittykat_55 (AK), Lakshmi_54 (AK), Lasagna_50 (AK), Lennox_52

(AK), LilStuart_51 (AK), Litotes_52 (AK), MamaPearl_52 (AK), Misaeng_53 (AK), Moki_51 (AK), Nancia_52 (AK), Nubia_54 (AK), OMalley_51 (AK), OurGirlNessie_50 (AK), Oxynfrius_54 (AK), PartyCup_58 (AK), PinkFriday_53 (AK), Potatoes_53 (AK), Pterodactyl_52 (AK), RAP15_55 (AK), RcigaStruga_54 (AK), Riovina_51 (AK), Riverdale_54 (AK), Rozby_53 (AK), Savage2526_54 (AK), Supakev_51 (AK), TattModd_52 (AK), Urla_52 (AK), Vallejo_54 (AK), Wawa_54 (AK), WonderBoy_50 (AK),

Summary by clusters:

There is one cluster represented in this pham: AK

Info for manual annotations of cluster AK:

- Start number 1 was manually annotated 8 times for cluster AK.
- Start number 2 was manually annotated 11 times for cluster AK.
- Start number 3 was manually annotated 53 times for cluster AK.

Gene Information:

Gene: Albanese_54 Start: 40120, Stop: 39887, Start Num: 3

Candidate Starts for Albanese_54:

(Start: 3 @40120 has 53 MA's), (6, 40027), (7, 39994), (11, 39907),

Gene: Aledel_51 Start: 39496, Stop: 39263, Start Num: 3

Candidate Starts for Aledel_51:

(Start: 2 @39538 has 11 MA's), (Start: 3 @39496 has 53 MA's), (5, 39436), (6, 39403),

Gene: AppleCider_53 Start: 39534, Stop: 39301, Start Num: 3

Candidate Starts for AppleCider_53:

(Start: 2 @39576 has 11 MA's), (Start: 3 @39534 has 53 MA's), (6, 39441), (7, 39408),

Gene: AustinPowers_53 Start: 39519, Stop: 39286, Start Num: 3

Candidate Starts for AustinPowers_53:

(Start: 2 @39561 has 11 MA's), (Start: 3 @39519 has 53 MA's), (5, 39459), (6, 39426), (7, 39393),

Gene: Beethoven_53 Start: 39510, Stop: 39277, Start Num: 3

Candidate Starts for Beethoven_53:

(Start: 1 @39558 has 8 MA's), (Start: 3 @39510 has 53 MA's), (6, 39417), (7, 39384), (11, 39297), (12, 39288),

Gene: Bennie_52 Start: 38399, Stop: 38127, Start Num: 2

Candidate Starts for Bennie_52:

(Start: 2 @38399 has 11 MA's), (Start: 3 @38357 has 53 MA's), (6, 38267), (7, 38234),

Gene: BigMack_52 Start: 38846, Stop: 38613, Start Num: 3

Candidate Starts for BigMack_52:

(Start: 1 @38894 has 8 MA's), (Start: 3 @38846 has 53 MA's), (6, 38753), (7, 38720), (11, 38633), (12, 38624),

Gene: Bodacious_52 Start: 38847, Stop: 38617, Start Num: 3

Candidate Starts for Bodacious_52:

(Start: 2 @38889 has 11 MA's), (Start: 3 @38847 has 53 MA's), (6, 38757), (7, 38724),

Gene: BrotherBLo_53 Start: 39559, Stop: 39326, Start Num: 3

Candidate Starts for BrotherBLo_53:

(Start: 1 @39607 has 8 MA's), (Start: 3 @39559 has 53 MA's), (6, 39466), (7, 39433), (11, 39346), (12, 39337),

Gene: CallieOMalley_53 Start: 39511, Stop: 39278, Start Num: 3

Candidate Starts for CallieOMalley_53:

(Start: 2 @39553 has 11 MA's), (Start: 3 @39511 has 53 MA's), (6, 39418), (7, 39385),

Gene: Canowicakte_53 Start: 39608, Stop: 39333, Start Num: 2

Candidate Starts for Canowicakte_53:

(Start: 2 @39608 has 11 MA's), (Start: 3 @39566 has 53 MA's), (6, 39473), (7, 39440), (9, 39407),

Gene: Carpal_53 Start: 39535, Stop: 39302, Start Num: 3

Candidate Starts for Carpal_53:

(Start: 1 @39583 has 8 MA's), (Start: 3 @39535 has 53 MA's), (4, 39529), (6, 39442), (7, 39409), (11, 39322), (12, 39313),

Gene: ChewChew_52 Start: 38978, Stop: 38748, Start Num: 3

Candidate Starts for ChewChew_52:

(Start: 2 @39020 has 11 MA's), (Start: 3 @38978 has 53 MA's), (6, 38888), (7, 38855),

Gene: Cholula_53 Start: 39568, Stop: 39335, Start Num: 3

Candidate Starts for Cholula_53:

(Start: 1 @39616 has 8 MA's), (Start: 3 @39568 has 53 MA's), (6, 39475), (7, 39442), (11, 39355), (12, 39346),

Gene: Christian_52 Start: 38701, Stop: 38429, Start Num: 2

Candidate Starts for Christian_52:

(Start: 2 @38701 has 11 MA's), (Start: 3 @38659 has 53 MA's), (6, 38569), (7, 38536),

Gene: CristinaYang_52 Start: 38974, Stop: 38744, Start Num: 3

Candidate Starts for CristinaYang_52:

(Start: 2 @39016 has 11 MA's), (Start: 3 @38974 has 53 MA's), (6, 38884), (7, 38851),

Gene: Dino_54 Start: 39715, Stop: 39434, Start Num: 1

Candidate Starts for Dino_54:

(Start: 1 @39715 has 8 MA's), (Start: 3 @39667 has 53 MA's), (6, 39574), (7, 39541), (11, 39454), (12, 39445),

Gene: DrRobert_50 Start: 38252, Stop: 37980, Start Num: 2

Candidate Starts for DrRobert_50:

(Start: 2 @38252 has 11 MA's), (Start: 3 @38210 has 53 MA's), (6, 38120), (7, 38087),

Gene: DreamTeam_51 Start: 38546, Stop: 38313, Start Num: 3

Candidate Starts for DreamTeam_51:

(Start: 2 @38588 has 11 MA's), (Start: 3 @38546 has 53 MA's), (6, 38453), (7, 38420), (11, 38333),

Gene: EstebanJulior_52 Start: 39510, Stop: 39277, Start Num: 3

Candidate Starts for EstebanJulior_52:

(Start: 3 @39510 has 53 MA's), (6, 39417), (7, 39384), (11, 39297),

Gene: Eunoia_51 Start: 39496, Stop: 39263, Start Num: 3

Candidate Starts for Eunoia_51:

(Start: 2 @39538 has 11 MA's), (Start: 3 @39496 has 53 MA's), (5, 39436), (6, 39403),

Gene: Eunoia_53 Start: 40173, Stop: 39940, Start Num: 3

Candidate Starts for Eunoia_53:

(Start: 2 @40215 has 11 MA's), (Start: 3 @40173 has 53 MA's), (5, 40113), (6, 40080),

Gene: Fluke_54 Start: 39831, Stop: 39550, Start Num: 1

Candidate Starts for Fluke_54:

(Start: 1 @39831 has 8 MA's), (Start: 3 @39783 has 53 MA's), (6, 39690), (7, 39657), (11, 39570), (12, 39561),

Gene: Gisselle_51 Start: 38546, Stop: 38313, Start Num: 3

Candidate Starts for Gisselle_51:

(Start: 2 @38588 has 11 MA's), (Start: 3 @38546 has 53 MA's), (6, 38453), (7, 38420), (11, 38333),

Gene: Glenn_55 Start: 40244, Stop: 40011, Start Num: 3

Candidate Starts for Glenn_55:

(Start: 1 @40292 has 8 MA's), (Start: 3 @40244 has 53 MA's), (6, 40151), (7, 40118), (11, 40031), (12, 40022),

Gene: GreenHearts_55 Start: 40425, Stop: 40192, Start Num: 3

Candidate Starts for GreenHearts_55:

(Start: 3 @40425 has 53 MA's), (5, 40365), (6, 40332), (7, 40299), (11, 40212),

Gene: Greenhouse_55 Start: 40117, Stop: 39884, Start Num: 3

Candidate Starts for Greenhouse_55:

(Start: 3 @40117 has 53 MA's), (5, 40057), (6, 40024), (7, 39991), (11, 39904),

Gene: HeadNerd_51 Start: 38251, Stop: 38021, Start Num: 3

Candidate Starts for HeadNerd_51:

(Start: 2 @38293 has 11 MA's), (Start: 3 @38251 has 53 MA's), (6, 38161), (7, 38128),

Gene: Huckleberry_51 Start: 38254, Stop: 38024, Start Num: 3

Candidate Starts for Huckleberry_51:

(Start: 3 @38254 has 53 MA's), (6, 38164), (7, 38131),

Gene: Huntingdon_54 Start: 40150, Stop: 39917, Start Num: 3

Candidate Starts for Huntingdon_54:

(Start: 3 @40150 has 53 MA's), (6, 40057), (7, 40024), (11, 39937),

Gene: Immaculata_53 Start: 39568, Stop: 39335, Start Num: 3

Candidate Starts for Immaculata_53:

(Start: 1 @39616 has 8 MA's), (Start: 3 @39568 has 53 MA's), (6, 39475), (7, 39442), (11, 39355), (12, 39346),

Gene: Joann_55 Start: 40178, Stop: 39945, Start Num: 3

Candidate Starts for Joann_55:

(Start: 3 @40178 has 53 MA's), (5, 40118), (6, 40085), (7, 40052), (11, 39965),

Gene: Jumboset_55 Start: 40138, Stop: 39857, Start Num: 1

Candidate Starts for Jumboset_55:

(Start: 1 @40138 has 8 MA's), (Start: 3 @40090 has 53 MA's), (6, 39997), (7, 39964), (11, 39877), (12, 39868),

Gene: Kalizoi_54 Start: 39507, Stop: 39274, Start Num: 3

Candidate Starts for Kalizoi_54:

(Start: 1 @39555 has 8 MA's), (Start: 3 @39507 has 53 MA's), (6, 39414), (7, 39381), (11, 39294), (12, 39285),

Gene: Kittykat_55 Start: 39159, Stop: 38926, Start Num: 3

Candidate Starts for Kittykat_55:

(Start: 2 @39201 has 11 MA's), (Start: 3 @39159 has 53 MA's), (6, 39066), (7, 39033), (11, 38946),

Gene: Korra_55 Start: 39566, Stop: 39285, Start Num: 1

Candidate Starts for Korra_55:

(Start: 1 @39566 has 8 MA's), (Start: 3 @39518 has 53 MA's), (6, 39425), (7, 39392), (11, 39305), (12, 39296),

Gene: Lakshmi_54 Start: 40182, Stop: 39949, Start Num: 3

Candidate Starts for Lakshmi_54:

(Start: 3 @40182 has 53 MA's), (5, 40122), (6, 40089), (7, 40056), (10, 40011), (11, 39969),

Gene: Lasagna_50 Start: 38210, Stop: 37980, Start Num: 3

Candidate Starts for Lasagna_50:

(Start: 2 @38252 has 11 MA's), (Start: 3 @38210 has 53 MA's), (6, 38120), (7, 38087),

Gene: Lennox_52 Start: 38667, Stop: 38437, Start Num: 3

Candidate Starts for Lennox_52:

(Start: 2 @38709 has 11 MA's), (Start: 3 @38667 has 53 MA's), (6, 38577), (7, 38544),

Gene: LilStuart_51 Start: 38559, Stop: 38329, Start Num: 3

Candidate Starts for LilStuart_51:

(Start: 2 @38601 has 11 MA's), (Start: 3 @38559 has 53 MA's), (6, 38469), (7, 38436),

Gene: Litotes_52 Start: 39119, Stop: 38886, Start Num: 3

Candidate Starts for Litotes_52:

(Start: 2 @39161 has 11 MA's), (Start: 3 @39119 has 53 MA's), (6, 39026), (7, 38993),

Gene: Lucy_51 Start: 38593, Stop: 38321, Start Num: 2

Candidate Starts for Lucy_51:

(Start: 2 @38593 has 11 MA's), (Start: 3 @38551 has 53 MA's), (6, 38461), (7, 38428),

Gene: Makoto_51 Start: 38467, Stop: 38195, Start Num: 2

Candidate Starts for Makoto_51:

(Start: 2 @38467 has 11 MA's), (Start: 3 @38425 has 53 MA's), (6, 38335), (7, 38302),

Gene: MamaPearl_52 Start: 39510, Stop: 39277, Start Num: 3

Candidate Starts for MamaPearl_52:

(Start: 3 @39510 has 53 MA's), (6, 39417), (7, 39384), (11, 39297),

Gene: MeganNoll_54 Start: 40107, Stop: 39826, Start Num: 1

Candidate Starts for MeganNoll_54:

(Start: 1 @40107 has 8 MA's), (Start: 3 @40059 has 53 MA's), (5, 39999), (6, 39966), (7, 39933), (11, 39846), (12, 39837),

Gene: Misaeng_53 Start: 40076, Stop: 39843, Start Num: 3

Candidate Starts for Misaeng_53:

(Start: 3 @40076 has 53 MA's), (6, 39983), (7, 39950), (11, 39863),

Gene: Moki_51 Start: 38444, Stop: 38214, Start Num: 3

Candidate Starts for Moki_51:

(Start: 2 @38486 has 11 MA's), (Start: 3 @38444 has 53 MA's), (6, 38354), (7, 38321),

Gene: MrGloopy_54 Start: 39728, Stop: 39447, Start Num: 1

Candidate Starts for MrGloopy_54:

(Start: 1 @39728 has 8 MA's), (Start: 3 @39680 has 53 MA's), (6, 39587), (7, 39554), (11, 39467), (12, 39458),

Gene: Nancia_52 Start: 38847, Stop: 38617, Start Num: 3

Candidate Starts for Nancia_52:

(Start: 2 @38889 has 11 MA's), (Start: 3 @38847 has 53 MA's), (6, 38757), (7, 38724),

Gene: Nubia_54 Start: 40050, Stop: 39817, Start Num: 3

Candidate Starts for Nubia_54:

(Start: 3 @40050 has 53 MA's), (5, 39990), (6, 39957), (7, 39924), (11, 39837),

Gene: OMalley_51 Start: 39496, Stop: 39263, Start Num: 3

Candidate Starts for OMalley_51:

(Start: 2 @39538 has 11 MA's), (Start: 3 @39496 has 53 MA's), (5, 39436), (6, 39403),

Gene: OurGirlNessie_50 Start: 38173, Stop: 37943, Start Num: 3

Candidate Starts for OurGirlNessie_50:

(Start: 2 @38215 has 11 MA's), (Start: 3 @38173 has 53 MA's), (6, 38083), (7, 38050),

Gene: Oxynfrius_54 Start: 40059, Stop: 39826, Start Num: 3

Candidate Starts for Oxynfrius_54:

(Start: 3 @40059 has 53 MA's), (5, 39999), (6, 39966), (7, 39933), (10, 39888), (11, 39846),

Gene: PartyCup_58 Start: 39728, Stop: 39495, Start Num: 3

Candidate Starts for PartyCup_58:

(Start: 2 @39770 has 11 MA's), (Start: 3 @39728 has 53 MA's), (6, 39635), (7, 39602),

Gene: PinkFriday_53 Start: 39138, Stop: 38905, Start Num: 3

Candidate Starts for PinkFriday_53:

(Start: 2 @39180 has 11 MA's), (Start: 3 @39138 has 53 MA's), (5, 39078), (6, 39045), (11, 38925), (12, 38916),

Gene: PitaDog_52 Start: 38614, Stop: 38342, Start Num: 2

Candidate Starts for PitaDog_52:

(Start: 2 @38614 has 11 MA's), (Start: 3 @38572 has 53 MA's), (6, 38482), (7, 38449),

Gene: Potatoes_53 Start: 39568, Stop: 39335, Start Num: 3

Candidate Starts for Potatoes_53:

(Start: 1 @39616 has 8 MA's), (Start: 3 @39568 has 53 MA's), (6, 39475), (7, 39442), (11, 39355), (12, 39346),

Gene: Preamble_53 Start: 38781, Stop: 38506, Start Num: 2
Candidate Starts for Preamble_53:
(Start: 2 @38781 has 11 MA's), (Start: 3 @38739 has 53 MA's), (6, 38646), (7, 38613), (11, 38526),
(12, 38517),

Gene: Pterodactyl_52 Start: 38813, Stop: 38583, Start Num: 3
Candidate Starts for Pterodactyl_52:
(Start: 2 @38855 has 11 MA's), (Start: 3 @38813 has 53 MA's), (6, 38723), (7, 38690),

Gene: Pumancara_51 Start: 38637, Stop: 38365, Start Num: 2
Candidate Starts for Pumancara_51:
(Start: 2 @38637 has 11 MA's), (Start: 3 @38595 has 53 MA's), (5, 38538), (6, 38505), (7, 38472),
(11, 38385), (12, 38376),

Gene: RAP15_55 Start: 40060, Stop: 39827, Start Num: 3
Candidate Starts for RAP15_55:
(Start: 1 @40108 has 8 MA's), (Start: 3 @40060 has 53 MA's), (5, 40000), (6, 39967), (7, 39934), (11,
39847), (12, 39838),

Gene: RcigaStruga_54 Start: 40150, Stop: 39917, Start Num: 3
Candidate Starts for RcigaStruga_54:
(Start: 3 @40150 has 53 MA's), (6, 40057), (7, 40024), (11, 39937),

Gene: Riovina_51 Start: 39496, Stop: 39263, Start Num: 3
Candidate Starts for Riovina_51:
(Start: 2 @39538 has 11 MA's), (Start: 3 @39496 has 53 MA's), (5, 39436), (6, 39403),

Gene: Riverdale_54 Start: 39705, Stop: 39472, Start Num: 3
Candidate Starts for Riverdale_54:
(Start: 1 @39753 has 8 MA's), (Start: 3 @39705 has 53 MA's), (6, 39612), (7, 39579), (8, 39567), (11,
39492), (12, 39483),

Gene: Rozby_53 Start: 39509, Stop: 39276, Start Num: 3
Candidate Starts for Rozby_53:
(Start: 1 @39557 has 8 MA's), (Start: 3 @39509 has 53 MA's), (6, 39416), (7, 39383), (11, 39296),
(12, 39287),

Gene: Savage2526_54 Start: 39733, Stop: 39500, Start Num: 3
Candidate Starts for Savage2526_54:
(Start: 1 @39781 has 8 MA's), (Start: 3 @39733 has 53 MA's), (6, 39640), (7, 39607), (11, 39520),
(12, 39511),

Gene: Scuttle_53 Start: 39756, Stop: 39475, Start Num: 1
Candidate Starts for Scuttle_53:
(Start: 1 @39756 has 8 MA's), (Start: 3 @39708 has 53 MA's), (6, 39615), (7, 39582), (11, 39495),
(12, 39486),

Gene: Supakev_51 Start: 39523, Stop: 39290, Start Num: 3
Candidate Starts for Supakev_51:
(Start: 2 @39565 has 11 MA's), (Start: 3 @39523 has 53 MA's), (5, 39463), (6, 39430), (7, 39397),

Gene: Suppi_53 Start: 39608, Stop: 39333, Start Num: 2

Candidate Starts for Suppi_53:

(Start: 2 @39608 has 11 MA's), (Start: 3 @39566 has 53 MA's), (6, 39473), (7, 39440), (9, 39407),

Gene: TattModd_52 Start: 39454, Stop: 39221, Start Num: 3

Candidate Starts for TattModd_52:

(Start: 1 @39502 has 8 MA's), (Start: 3 @39454 has 53 MA's), (6, 39361), (7, 39328), (11, 39241), (12, 39232),

Gene: Urla_52 Start: 39484, Stop: 39251, Start Num: 3

Candidate Starts for Urla_52:

(Start: 1 @39532 has 8 MA's), (Start: 3 @39484 has 53 MA's), (6, 39391), (7, 39358),

Gene: Vallejo_54 Start: 39708, Stop: 39475, Start Num: 3

Candidate Starts for Vallejo_54:

(Start: 1 @39756 has 8 MA's), (Start: 3 @39708 has 53 MA's), (6, 39615), (7, 39582), (11, 39495), (12, 39486),

Gene: Wawa_54 Start: 39958, Stop: 39725, Start Num: 3

Candidate Starts for Wawa_54:

(Start: 1 @40006 has 8 MA's), (Start: 3 @39958 has 53 MA's), (6, 39865), (7, 39832), (11, 39745), (12, 39736),

Gene: Wayne_55 Start: 40062, Stop: 39787, Start Num: 2

Candidate Starts for Wayne_55:

(Start: 2 @40062 has 11 MA's), (Start: 3 @40020 has 53 MA's), (6, 39927), (7, 39894),

Gene: WonderBoy_50 Start: 38396, Stop: 38166, Start Num: 3

Candidate Starts for WonderBoy_50:

(Start: 3 @38396 has 53 MA's), (6, 38306), (7, 38273),

Gene: Zorro_54 Start: 39715, Stop: 39434, Start Num: 1

Candidate Starts for Zorro_54:

(Start: 1 @39715 has 8 MA's), (Start: 3 @39667 has 53 MA's), (6, 39574), (7, 39541), (11, 39454), (12, 39445),