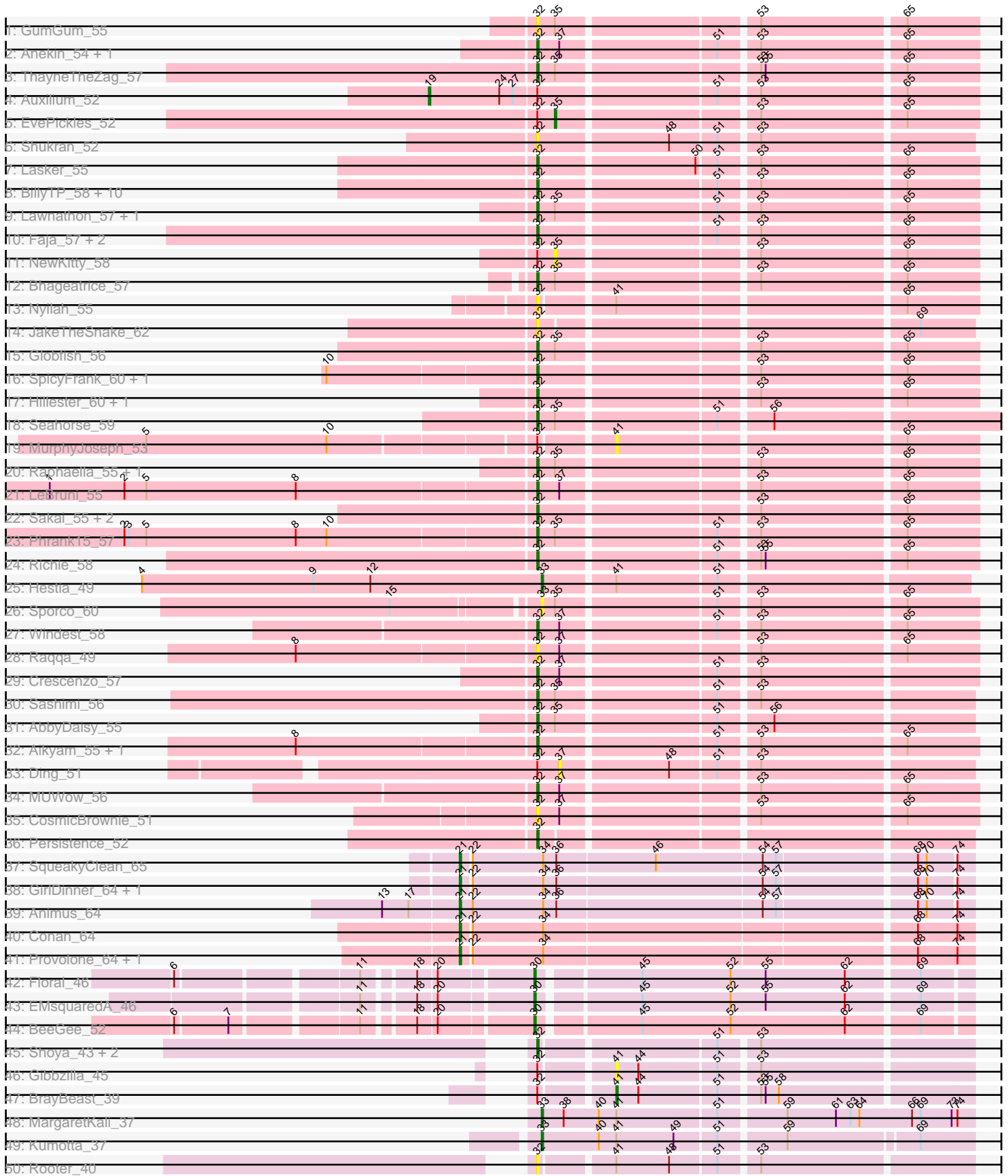
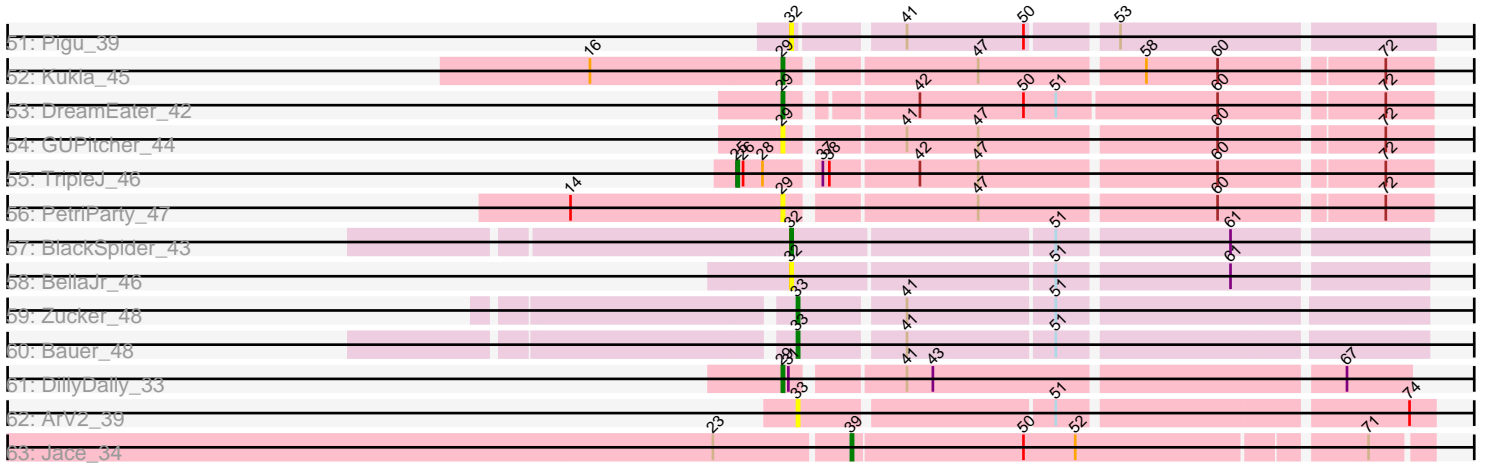


Pham 308441



Pham 308441



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 308441 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308441 has 87 members, 25 are drafts.

Phages represented in each track:

- Track 1 : GumGum_55
- Track 2 : Anekin_54, DarwinJr_59
- Track 3 : ThayneTheZag_57
- Track 4 : Auxilium_52
- Track 5 : EvePickles_52
- Track 6 : Shukran_52
- Track 7 : Lasker_55
- Track 8 : BillyTP_58, Isolde_55, BenchScraper_55, CookieBear_56, BasketStar_58, AdaS_52, MidnightRain_60, Vopal_59, YoungHarleezy_56, Mapleville_52, JellyBread_53
- Track 9 : Lawnathon_57, SonDevVon_60
- Track 10 : Faja_57, Tiff81_52, Satrap_57
- Track 11 : NewKitty_58
- Track 12 : Bhageatrice_57
- Track 13 : Nyilah_55
- Track 14 : JakeTheSnake_62
- Track 15 : Globfish_56
- Track 16 : SpicyFrank_60, Cassini_51
- Track 17 : Hillester_60, RadFad_60
- Track 18 : Seahorse_59
- Track 19 : MurphyJoseph_53
- Track 20 : Raphaella_55, Kabloowy_56
- Track 21 : LeBruni_55
- Track 22 : Sakai_55, BlueShadow_56, Gorpy_56
- Track 23 : Phrank15_57
- Track 24 : Richie_58
- Track 25 : Hestia_49
- Track 26 : Sporco_60
- Track 27 : Windest_58
- Track 28 : Raqqa_49
- Track 29 : Crescenzo_57
- Track 30 : Sashimi_56
- Track 31 : AbbyDaisy_55
- Track 32 : Aikyam_55, MaterMagnus_57
- Track 33 : Ding_51
- Track 34 : MUWow_56
- Track 35 : CosmicBrownie_51

- Track 36 : Persistence_52
- Track 37 : SqueakyClean_65
- Track 38 : GirlDinner_64, Janus_65
- Track 39 : Animus_64
- Track 40 : Conan_64
- Track 41 : Provolone_64, ElGato_64
- Track 42 : Floral_46
- Track 43 : EMSquaredA_46
- Track 44 : BeeGee_52
- Track 45 : Shoya_43, JeanClaude_41, Sarge_37
- Track 46 : Gibbzilla_45
- Track 47 : BrayBeast_39
- Track 48 : MargaretKali_37
- Track 49 : Kumotta_37
- Track 50 : Rooter_40
- Track 51 : Pigu_39
- Track 52 : Kukla_45
- Track 53 : DreamEater_42
- Track 54 : GUPitcher_44
- Track 55 : TripleJ_46
- Track 56 : PetriParty_47
- Track 57 : BlackSpider_43
- Track 58 : BellaJr_46
- Track 59 : Zucker_48
- Track 60 : Bauer_48
- Track 61 : DillyDally_33
- Track 62 : ArV2_39
- Track 63 : Jace_34

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

The start number called the most often in the published annotations is 32, it was called in 39 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbyDaisy_55, AdaS_52, Aikyam_55, Anekin_54, BasketStar_58, BellaJr_46, BenchScraper_55, Bhageatrice_57, BillyTP_58, BlackSpider_43, BlueShadow_56, Cassini_51, CookieBear_56, CosmicBrownie_51, Crescenzo_57, DarwinJr_59, Faja_57, Globfish_56, Gorpy_56, GumGum_55, Hillester_60, Isolde_55, JakeTheSnake_62, JeanClaude_41, JellyBread_53, Kabloowy_56, Lasker_55, Lawnathon_57, LeBruni_55, MUWow_56, Mapleville_52, MaterMagnus_57, MidnightRain_60, Nyilah_55, Persistence_52, Phrank15_57, Pigu_39, RadFad_60, Raphaella_55, Raqqa_49, Richie_58, Rooter_40, Sakai_55, Sarge_37, Sashimi_56, Satrap_57, Seahorse_59, Shoya_43, Shukran_52, SonDevVon_60, SpicyFrank_60, ThayneTheZag_57, Tiff81_52, Vopal_59, Windest_58, YoungHarleezy_56,

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

- Auxilium_52, BrayBeast_39, Ding_51, EvePickles_52, Gibbzilla_45, MurphyJoseph_53, NewKitty_58,

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

- Animus_64, ArV2_39, Bauer_48, BeeGee_52, Conan_64, DillyDally_33, DreamEater_42, EMsquaredA_46, ElGato_64, Floral_46, GUPitcher_44, GirlDinner_64, Hestia_49, Jace_34, Janus_65, Kukla_45, Kumotta_37, MargaretKali_37, PetriParty_47, Provolone_64, Sporco_60, SqueakyClean_65, TripleJ_46, Zucker_48,

Summary by start number:

Start 19:

- Found in 1 of 87 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Auxilium_52 (AY),

Start 21:

- Found in 7 of 87 (8.0%) of genes in pham
- Manual Annotations of this start: 7 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Animus_64 (BD2), Conan_64 (BD3), ElGato_64 (BD3), GirlDinner_64 (BD2), Janus_65 (BD2), Provolone_64 (BD3), SqueakyClean_65 (BD2),

Start 25:

- Found in 1 of 87 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TripleJ_46 (FJ),

Start 29:

- Found in 5 of 87 (5.7%) of genes in pham
- Manual Annotations of this start: 3 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DillyDally_33 (singleton), DreamEater_42 (FJ), GUPitcher_44 (FJ), Kukla_45 (FJ), PetriParty_47 (FJ),

Start 30:

- Found in 3 of 87 (3.4%) of genes in pham
- Manual Annotations of this start: 3 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BeeGee_52 (CY5), EMsquaredA_46 (CY1), Floral_46 (CY1),

Start 32:

- Found in 63 of 87 (72.4%) of genes in pham
- Manual Annotations of this start: 39 of 62
- Called 88.9% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_55 (AY), AdaS_52 (AY), Aikyam_55 (AY), Anekin_54 (AY), BasketStar_58 (AY), BellaJr_46 (FN), BenchScraper_55 (AY), Bhageatrice_57 (AY), BillyTP_58 (AY), BlackSpider_43 (FN), BlueShadow_56 (AY), Cassini_51 (FN), CookieBear_56 (AY), CosmicBrownie_51 (AY), Crescenzo_57 (AY), DarwinJr_59 (AY), Faja_57 (AY), Globfish_56 (AY), Gorpy_56 (AY), GumGum_55 (AY), Hillester_60 (AY), Isolde_55 (AY),

JakeTheSnake_62 (AY), JeanClaude_41 (FB), JellyBread_53 (AY), Kabloowy_56 (AY), Lasker_55 (AY), Lawnathon_57 (AY), LeBruni_55 (AY), MUWow_56 (AY), Mapleville_52 (AY), MaterMagnus_57 (AY), MidnightRain_60 (AY), Nyilah_55 (AY), Persistence_52 (AY), Phrank15_57 (AY), Pigu_39 (FB), RadFad_60 (AY), Raphaella_55 (AY), Raqqa_49 (AY), Richie_58 (AY), Rooter_40 (FB), Sakai_55 (AY), Sarge_37 (FB), Sashimi_56 (AY), Satrap_57 (AY), Seahorse_59 (AY), Shoya_43 (FB), Shukran_52 (AY), SonDevVon_60 (AY), SpicyFrank_60 (AY), ThayneTheZag_57 (AY), Tiff81_52 (AY), Vopal_59 (AY), Windest_58 (AY), YoungHarleezy_56 (AY),

Start 33:

- Found in 7 of 87 (8.0%) of genes in pham
- Manual Annotations of this start: 5 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArV2_39 (singleton), Bauer_48 (FN), Hestia_49 (AY), Kumotta_37 (FB), MargaretKali_37 (FB), Sporco_60 (AY), Zucker_48 (FN),

Start 35:

- Found in 15 of 87 (17.2%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 13.3% of time when present
- Phage (with cluster) where this start called: EvePickles_52 (AY), NewKitty_58 (AY),

Start 37:

- Found in 10 of 87 (11.5%) of genes in pham
- No Manual Annotations of this start.
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Ding_51 (AY),

Start 39:

- Found in 1 of 87 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace_34 (singleton),

Start 41:

- Found in 13 of 87 (14.9%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 23.1% of time when present
- Phage (with cluster) where this start called: BrayBeast_39 (FB), Gibbzilla_45 (FB), MurphyJoseph_53 (AY),

Summary by clusters:

There are 9 clusters represented in this pham: singleton, CY5, CY1, FB, BD3, BD2, AY, FJ, FN,

Info for manual annotations of cluster AY:

- Start number 19 was manually annotated 1 time for cluster AY.
- Start number 32 was manually annotated 36 times for cluster AY.
- Start number 33 was manually annotated 1 time for cluster AY.
- Start number 35 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BD2:

- Start number 21 was manually annotated 4 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 21 was manually annotated 3 times for cluster BD3.

Info for manual annotations of cluster CY1:

- Start number 30 was manually annotated 2 times for cluster CY1.

Info for manual annotations of cluster CY5:

- Start number 30 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster FB:

- Start number 32 was manually annotated 2 times for cluster FB.
- Start number 33 was manually annotated 2 times for cluster FB.
- Start number 41 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FJ:

- Start number 25 was manually annotated 1 time for cluster FJ.
- Start number 29 was manually annotated 2 times for cluster FJ.

Info for manual annotations of cluster FN:

- Start number 32 was manually annotated 1 time for cluster FN.
- Start number 33 was manually annotated 2 times for cluster FN.

Gene Information:

Gene: AbbyDaisy_55 Start: 33488, Stop: 33763, Start Num: 32

Candidate Starts for AbbyDaisy_55:

(Start: 32 @33488 has 39 MA's), (Start: 35 @33500 has 1 MA's), (51, 33602), (56, 33635),

Gene: AdaS_52 Start: 31425, Stop: 31703, Start Num: 32

Candidate Starts for AdaS_52:

(Start: 32 @31425 has 39 MA's), (51, 31539), (53, 31563), (65, 31656),

Gene: Aikyam_55 Start: 31597, Stop: 31875, Start Num: 32

Candidate Starts for Aikyam_55:

(8, 31441), (Start: 32 @31597 has 39 MA's), (51, 31711), (53, 31735), (65, 31828),

Gene: Anekin_54 Start: 33269, Stop: 33547, Start Num: 32

Candidate Starts for Anekin_54:

(Start: 32 @33269 has 39 MA's), (37, 33284), (51, 33383), (53, 33407), (65, 33500),

Gene: Animus_64 Start: 43827, Stop: 43495, Start Num: 21

Candidate Starts for Animus_64:

(13, 43878), (17, 43860), (Start: 21 @43827 has 7 MA's), (22, 43818), (34, 43770), (36, 43761), (54, 43626), (57, 43617), (68, 43530), (70, 43524), (74, 43506),

Gene: ArV2_39 Start: 25620, Stop: 25892, Start Num: 33

Candidate Starts for ArV2_39:

(Start: 33 @25620 has 5 MA's), (51, 25731), (74, 25881),

Gene: Auxilium_52 Start: 30682, Stop: 31032, Start Num: 19

Candidate Starts for Auxilium_52:

(Start: 19 @30682 has 1 MA's), (24, 30730), (27, 30739), (Start: 32 @30754 has 39 MA's), (51, 30868), (53, 30892), (65, 30985),

Gene: BasketStar_58 Start: 34095, Stop: 34373, Start Num: 32

Candidate Starts for BasketStar_58:

(Start: 32 @34095 has 39 MA's), (51, 34209), (53, 34233), (65, 34326),

Gene: Bauer_48 Start: 30759, Stop: 31028, Start Num: 33

Candidate Starts for Bauer_48:

(Start: 33 @30759 has 5 MA's), (Start: 41 @30804 has 1 MA's), (51, 30870),

Gene: BeeGee_52 Start: 36970, Stop: 37248, Start Num: 30

Candidate Starts for BeeGee_52:

(6, 36766), (7, 36799), (11, 36874), (18, 36904), (20, 36916), (Start: 30 @36970 has 3 MA's), (45, 37033), (52, 37093), (62, 37171), (69, 37216),

Gene: BellaJr_46 Start: 31330, Stop: 31605, Start Num: 32

Candidate Starts for BellaJr_46:

(Start: 32 @31330 has 39 MA's), (51, 31447), (61, 31522),

Gene: BenchScraper_55 Start: 32919, Stop: 33197, Start Num: 32

Candidate Starts for BenchScraper_55:

(Start: 32 @32919 has 39 MA's), (51, 33033), (53, 33057), (65, 33150),

Gene: Bhageatrice_57 Start: 35193, Stop: 35471, Start Num: 32

Candidate Starts for Bhageatrice_57:

(Start: 32 @35193 has 39 MA's), (Start: 35 @35205 has 1 MA's), (53, 35331), (65, 35424),

Gene: BillyTP_58 Start: 34791, Stop: 35069, Start Num: 32

Candidate Starts for BillyTP_58:

(Start: 32 @34791 has 39 MA's), (51, 34905), (53, 34929), (65, 35022),

Gene: BlackSpider_43 Start: 29911, Stop: 30186, Start Num: 32

Candidate Starts for BlackSpider_43:

(Start: 32 @29911 has 39 MA's), (51, 30028), (61, 30103),

Gene: BlueShadow_56 Start: 33581, Stop: 33859, Start Num: 32

Candidate Starts for BlueShadow_56:

(Start: 32 @33581 has 39 MA's), (53, 33719), (65, 33812),

Gene: BrayBeast_39 Start: 26993, Stop: 27220, Start Num: 41

Candidate Starts for BrayBeast_39:

(Start: 32 @26948 has 39 MA's), (Start: 41 @26993 has 1 MA's), (44, 27008), (51, 27059), (53, 27083), (55, 27086), (58, 27095),

Gene: Cassini_51 Start: 32280, Stop: 32558, Start Num: 32

Candidate Starts for Cassini_51:

(10, 32145), (Start: 32 @32280 has 39 MA's), (53, 32418), (65, 32511),

Gene: Conan_64 Start: 43034, Stop: 42702, Start Num: 21
Candidate Starts for Conan_64:
(Start: 21 @43034 has 7 MA's), (22, 43028), (34, 42980), (68, 42740), (74, 42713),

Gene: CookieBear_56 Start: 33175, Stop: 33453, Start Num: 32
Candidate Starts for CookieBear_56:
(Start: 32 @33175 has 39 MA's), (51, 33289), (53, 33313), (65, 33406),

Gene: CosmicBrownie_51 Start: 31627, Stop: 31905, Start Num: 32
Candidate Starts for CosmicBrownie_51:
(Start: 32 @31627 has 39 MA's), (37, 31642), (53, 31765), (65, 31858),

Gene: Crescenzo_57 Start: 34320, Stop: 34598, Start Num: 32
Candidate Starts for Crescenzo_57:
(Start: 32 @34320 has 39 MA's), (37, 34335), (51, 34434), (53, 34458),

Gene: DarwinJr_59 Start: 34388, Stop: 34666, Start Num: 32
Candidate Starts for DarwinJr_59:
(Start: 32 @34388 has 39 MA's), (37, 34403), (51, 34502), (53, 34526), (65, 34619),

Gene: DillyDally_33 Start: 25298, Stop: 25567, Start Num: 29
Candidate Starts for DillyDally_33:
(Start: 29 @25298 has 3 MA's), (31, 25301), (Start: 41 @25346 has 1 MA's), (43, 25358), (67, 25538),

Gene: Ding_51 Start: 31537, Stop: 31797, Start Num: 37
Candidate Starts for Ding_51:
(Start: 32 @31522 has 39 MA's), (37, 31537), (48, 31606), (51, 31636), (53, 31660),

Gene: DreamEater_42 Start: 31457, Stop: 31732, Start Num: 29
Candidate Starts for DreamEater_42:
(Start: 29 @31457 has 3 MA's), (42, 31508), (50, 31556), (51, 31571), (60, 31643), (72, 31712),

Gene: EMSquaredA_46 Start: 35783, Stop: 36061, Start Num: 30
Candidate Starts for EMSquaredA_46:
(11, 35687), (18, 35717), (20, 35729), (Start: 30 @35783 has 3 MA's), (45, 35846), (52, 35906), (55, 35930), (62, 35984), (69, 36029),

Gene: ElGato_64 Start: 42905, Stop: 42573, Start Num: 21
Candidate Starts for ElGato_64:
(Start: 21 @42905 has 7 MA's), (22, 42899), (34, 42851), (68, 42611), (74, 42584),

Gene: EvePickles_52 Start: 33387, Stop: 33653, Start Num: 35
Candidate Starts for EvePickles_52:
(Start: 32 @33375 has 39 MA's), (Start: 35 @33387 has 1 MA's), (53, 33513), (65, 33606),

Gene: Faja_57 Start: 34759, Stop: 35037, Start Num: 32
Candidate Starts for Faja_57:
(Start: 32 @34759 has 39 MA's), (51, 34873), (53, 34897), (65, 34990),

Gene: Floral_46 Start: 37267, Stop: 37545, Start Num: 30
Candidate Starts for Floral_46:
(6, 37063), (11, 37171), (18, 37201), (20, 37213), (Start: 30 @37267 has 3 MA's), (45, 37330), (52, 37390), (55, 37414), (62, 37468), (69, 37513),

Gene: GUPitcher_44 Start: 31945, Stop: 32220, Start Num: 29

Candidate Starts for GUPitcher_44:

(Start: 29 @31945 has 3 MA's), (Start: 41 @31993 has 1 MA's), (47, 32026), (60, 32131), (72, 32200),

Gene: Gibbzilla_45 Start: 27546, Stop: 27773, Start Num: 41

Candidate Starts for Gibbzilla_45:

(Start: 32 @27501 has 39 MA's), (Start: 41 @27546 has 1 MA's), (44, 27561), (51, 27612), (53, 27636),

Gene: GirlDinner_64 Start: 43325, Stop: 42996, Start Num: 21

Candidate Starts for GirlDinner_64:

(Start: 21 @43325 has 7 MA's), (22, 43319), (34, 43271), (36, 43262), (54, 43127), (57, 43118), (68, 43031), (70, 43025), (74, 43007),

Gene: Globfish_56 Start: 33274, Stop: 33552, Start Num: 32

Candidate Starts for Globfish_56:

(Start: 32 @33274 has 39 MA's), (Start: 35 @33286 has 1 MA's), (53, 33412), (65, 33505),

Gene: Gorpy_56 Start: 34167, Stop: 34445, Start Num: 32

Candidate Starts for Gorpy_56:

(Start: 32 @34167 has 39 MA's), (53, 34305), (65, 34398),

Gene: GumGum_55 Start: 32309, Stop: 32587, Start Num: 32

Candidate Starts for GumGum_55:

(Start: 32 @32309 has 39 MA's), (Start: 35 @32321 has 1 MA's), (53, 32447), (65, 32540),

Gene: Hestia_49 Start: 30820, Stop: 31089, Start Num: 33

Candidate Starts for Hestia_49:

(4, 30547), (9, 30664), (12, 30703), (Start: 33 @30820 has 5 MA's), (Start: 41 @30865 has 1 MA's), (51, 30931),

Gene: Hillester_60 Start: 34520, Stop: 34798, Start Num: 32

Candidate Starts for Hillester_60:

(Start: 32 @34520 has 39 MA's), (53, 34658), (65, 34751),

Gene: Isolde_55 Start: 32844, Stop: 33122, Start Num: 32

Candidate Starts for Isolde_55:

(Start: 32 @32844 has 39 MA's), (51, 32958), (53, 32982), (65, 33075),

Gene: Jace_34 Start: 27442, Stop: 27693, Start Num: 39

Candidate Starts for Jace_34:

(23, 27382), (Start: 39 @27442 has 1 MA's), (50, 27520), (52, 27544), (71, 27667),

Gene: JakeTheSnake_62 Start: 35618, Stop: 35890, Start Num: 32

Candidate Starts for JakeTheSnake_62:

(Start: 32 @35618 has 39 MA's), (69, 35855),

Gene: Janus_65 Start: 43665, Stop: 43336, Start Num: 21

Candidate Starts for Janus_65:

(Start: 21 @43665 has 7 MA's), (22, 43659), (34, 43611), (36, 43602), (54, 43467), (57, 43458), (68, 43371), (70, 43365), (74, 43347),

Gene: JeanClaude_41 Start: 25994, Stop: 26266, Start Num: 32

Candidate Starts for JeanClaude_41:
(Start: 32 @25994 has 39 MA's), (51, 26105), (53, 26129),

Gene: JellyBread_53 Start: 31965, Stop: 32243, Start Num: 32
Candidate Starts for JellyBread_53:
(Start: 32 @31965 has 39 MA's), (51, 32079), (53, 32103), (65, 32196),

Gene: Kabloowy_56 Start: 33861, Stop: 34139, Start Num: 32
Candidate Starts for Kabloowy_56:
(Start: 32 @33861 has 39 MA's), (Start: 35 @33873 has 1 MA's), (53, 33999), (65, 34092),

Gene: Kukla_45 Start: 31182, Stop: 31457, Start Num: 29
Candidate Starts for Kukla_45:
(16, 31095), (Start: 29 @31182 has 3 MA's), (47, 31263), (58, 31335), (60, 31368), (72, 31437),

Gene: Kumotta_37 Start: 27134, Stop: 27412, Start Num: 33
Candidate Starts for Kumotta_37:
(Start: 33 @27134 has 5 MA's), (40, 27173), (Start: 41 @27185 has 1 MA's), (49, 27224), (51, 27251),
(59, 27293), (69, 27377),

Gene: Lasker_55 Start: 33619, Stop: 33897, Start Num: 32
Candidate Starts for Lasker_55:
(Start: 32 @33619 has 39 MA's), (50, 33721), (51, 33733), (53, 33757), (65, 33850),

Gene: Lawnathon_57 Start: 33336, Stop: 33614, Start Num: 32
Candidate Starts for Lawnathon_57:
(Start: 32 @33336 has 39 MA's), (Start: 35 @33348 has 1 MA's), (51, 33450), (53, 33474), (65, 33567),

Gene: LeBruni_55 Start: 32543, Stop: 32821, Start Num: 32
Candidate Starts for LeBruni_55:
(1, 32219), (2, 32270), (5, 32285), (8, 32387), (Start: 32 @32543 has 39 MA's), (37, 32558), (53, 32681), (65, 32774),

Gene: MUWow_56 Start: 33256, Stop: 33534, Start Num: 32
Candidate Starts for MUWow_56:
(Start: 32 @33256 has 39 MA's), (37, 33271), (53, 33394), (65, 33487),

Gene: Mapleville_52 Start: 32667, Stop: 32945, Start Num: 32
Candidate Starts for Mapleville_52:
(Start: 32 @32667 has 39 MA's), (51, 32781), (53, 32805), (65, 32898),

Gene: MargaretKali_37 Start: 26763, Stop: 27047, Start Num: 33
Candidate Starts for MargaretKali_37:
(Start: 33 @26763 has 5 MA's), (38, 26778), (40, 26802), (Start: 41 @26814 has 1 MA's), (51, 26880),
(59, 26922), (61, 26955), (63, 26964), (64, 26970), (66, 27006), (69, 27012), (73, 27033), (74, 27036),

Gene: MaterMagnus_57 Start: 33769, Stop: 34047, Start Num: 32
Candidate Starts for MaterMagnus_57:
(8, 33613), (Start: 32 @33769 has 39 MA's), (51, 33883), (53, 33907), (65, 34000),

Gene: MidnightRain_60 Start: 34697, Stop: 34975, Start Num: 32
Candidate Starts for MidnightRain_60:
(Start: 32 @34697 has 39 MA's), (51, 34811), (53, 34835), (65, 34928),

Gene: MurphyJoseph_53 Start: 32153, Stop: 32383, Start Num: 41
Candidate Starts for MurphyJoseph_53:
(5, 31856), (10, 31979), (Start: 32 @32108 has 39 MA's), (Start: 41 @32153 has 1 MA's), (65, 32336),

Gene: NewKitty_58 Start: 33052, Stop: 33318, Start Num: 35
Candidate Starts for NewKitty_58:
(Start: 32 @33040 has 39 MA's), (Start: 35 @33052 has 1 MA's), (53, 33178), (65, 33271),

Gene: Nyilah_55 Start: 31786, Stop: 32061, Start Num: 32
Candidate Starts for Nyilah_55:
(Start: 32 @31786 has 39 MA's), (Start: 41 @31831 has 1 MA's), (65, 32014),

Gene: Persistence_52 Start: 32315, Stop: 32587, Start Num: 32
Candidate Starts for Persistence_52:
(Start: 32 @32315 has 39 MA's),

Gene: PetriParty_47 Start: 31419, Stop: 31694, Start Num: 29
Candidate Starts for PetriParty_47:
(14, 31323), (Start: 29 @31419 has 3 MA's), (47, 31500), (60, 31605), (72, 31674),

Gene: Phrank15_57 Start: 33473, Stop: 33751, Start Num: 32
Candidate Starts for Phrank15_57:
(2, 33200), (3, 33203), (5, 33215), (8, 33317), (10, 33338), (Start: 32 @33473 has 39 MA's), (Start: 35 @33485 has 1 MA's), (51, 33587), (53, 33611), (65, 33704),

Gene: Pigu_39 Start: 26113, Stop: 26385, Start Num: 32
Candidate Starts for Pigu_39:
(Start: 32 @26113 has 39 MA's), (Start: 41 @26158 has 1 MA's), (50, 26212), (53, 26248),

Gene: Provolone_64 Start: 43117, Stop: 42785, Start Num: 21
Candidate Starts for Provolone_64:
(Start: 21 @43117 has 7 MA's), (22, 43111), (34, 43063), (68, 42823), (74, 42796),

Gene: RadFad_60 Start: 34520, Stop: 34798, Start Num: 32
Candidate Starts for RadFad_60:
(Start: 32 @34520 has 39 MA's), (53, 34658), (65, 34751),

Gene: Raphaella_55 Start: 32779, Stop: 33057, Start Num: 32
Candidate Starts for Raphaella_55:
(Start: 32 @32779 has 39 MA's), (Start: 35 @32791 has 1 MA's), (53, 32917), (65, 33010),

Gene: Raqqa_49 Start: 30784, Stop: 31062, Start Num: 32
Candidate Starts for Raqqa_49:
(8, 30628), (Start: 32 @30784 has 39 MA's), (37, 30799), (53, 30922), (65, 31015),

Gene: Richie_58 Start: 33845, Stop: 34123, Start Num: 32
Candidate Starts for Richie_58:
(Start: 32 @33845 has 39 MA's), (51, 33959), (53, 33983), (55, 33986), (65, 34076),

Gene: Rooter_40 Start: 26486, Stop: 26758, Start Num: 32
Candidate Starts for Rooter_40:
(Start: 32 @26486 has 39 MA's), (Start: 41 @26531 has 1 MA's), (48, 26567), (51, 26597), (53, 26621),

Gene: Sakai_55 Start: 32878, Stop: 33156, Start Num: 32
Candidate Starts for Sakai_55:
(Start: 32 @32878 has 39 MA's), (53, 33016), (65, 33109),

Gene: Sarge_37 Start: 25294, Stop: 25566, Start Num: 32
Candidate Starts for Sarge_37:
(Start: 32 @25294 has 39 MA's), (51, 25405), (53, 25429),

Gene: Sashimi_56 Start: 34105, Stop: 34380, Start Num: 32
Candidate Starts for Sashimi_56:
(Start: 32 @34105 has 39 MA's), (Start: 35 @34117 has 1 MA's), (51, 34219), (53, 34243),

Gene: Satrap_57 Start: 33307, Stop: 33585, Start Num: 32
Candidate Starts for Satrap_57:
(Start: 32 @33307 has 39 MA's), (51, 33421), (53, 33445), (65, 33538),

Gene: Seahorse_59 Start: 35114, Stop: 35410, Start Num: 32
Candidate Starts for Seahorse_59:
(Start: 32 @35114 has 39 MA's), (Start: 35 @35126 has 1 MA's), (51, 35228), (56, 35261),

Gene: Shoya_43 Start: 27262, Stop: 27534, Start Num: 32
Candidate Starts for Shoya_43:
(Start: 32 @27262 has 39 MA's), (51, 27373), (53, 27397),

Gene: Shukran_52 Start: 31705, Stop: 31980, Start Num: 32
Candidate Starts for Shukran_52:
(Start: 32 @31705 has 39 MA's), (48, 31789), (51, 31819), (53, 31843),

Gene: SonDevVon_60 Start: 33484, Stop: 33762, Start Num: 32
Candidate Starts for SonDevVon_60:
(Start: 32 @33484 has 39 MA's), (Start: 35 @33496 has 1 MA's), (51, 33598), (53, 33622), (65, 33715),

Gene: SpicyFrank_60 Start: 34383, Stop: 34661, Start Num: 32
Candidate Starts for SpicyFrank_60:
(10, 34248), (Start: 32 @34383 has 39 MA's), (53, 34521), (65, 34614),

Gene: Sporco_60 Start: 34336, Stop: 34611, Start Num: 33
Candidate Starts for Sporco_60:
(15, 34246), (Start: 33 @34336 has 5 MA's), (Start: 35 @34345 has 1 MA's), (51, 34447), (53, 34471),
(65, 34564),

Gene: SqueakyClean_65 Start: 43843, Stop: 43514, Start Num: 21
Candidate Starts for SqueakyClean_65:
(Start: 21 @43843 has 7 MA's), (22, 43837), (34, 43789), (36, 43780), (46, 43714), (54, 43645), (57,
43636), (68, 43549), (70, 43543), (74, 43525),

Gene: ThayneTheZag_57 Start: 32952, Stop: 33230, Start Num: 32
Candidate Starts for ThayneTheZag_57:
(Start: 32 @32952 has 39 MA's), (Start: 35 @32964 has 1 MA's), (53, 33090), (55, 33093), (65, 33183),

Gene: Tiff81_52 Start: 31289, Stop: 31567, Start Num: 32
Candidate Starts for Tiff81_52:

(Start: 32 @31289 has 39 MA's), (51, 31403), (53, 31427), (65, 31520),

Gene: TripleJ_46 Start: 31114, Stop: 31410, Start Num: 25

Candidate Starts for TripleJ_46:

(Start: 25 @31114 has 1 MA's), (26, 31117), (28, 31126), (37, 31147), (38, 31150), (42, 31189), (47, 31216), (60, 31321), (72, 31390),

Gene: Vopal_59 Start: 36414, Stop: 36692, Start Num: 32

Candidate Starts for Vopal_59:

(Start: 32 @36414 has 39 MA's), (51, 36528), (53, 36552), (65, 36645),

Gene: Windest_58 Start: 32184, Stop: 32462, Start Num: 32

Candidate Starts for Windest_58:

(Start: 32 @32184 has 39 MA's), (37, 32199), (51, 32298), (53, 32322), (65, 32415),

Gene: YoungHarleezy_56 Start: 33342, Stop: 33620, Start Num: 32

Candidate Starts for YoungHarleezy_56:

(Start: 32 @33342 has 39 MA's), (51, 33456), (53, 33480), (65, 33573),

Gene: Zucker_48 Start: 31843, Stop: 32112, Start Num: 33

Candidate Starts for Zucker_48:

(Start: 33 @31843 has 5 MA's), (Start: 41 @31888 has 1 MA's), (51, 31954),