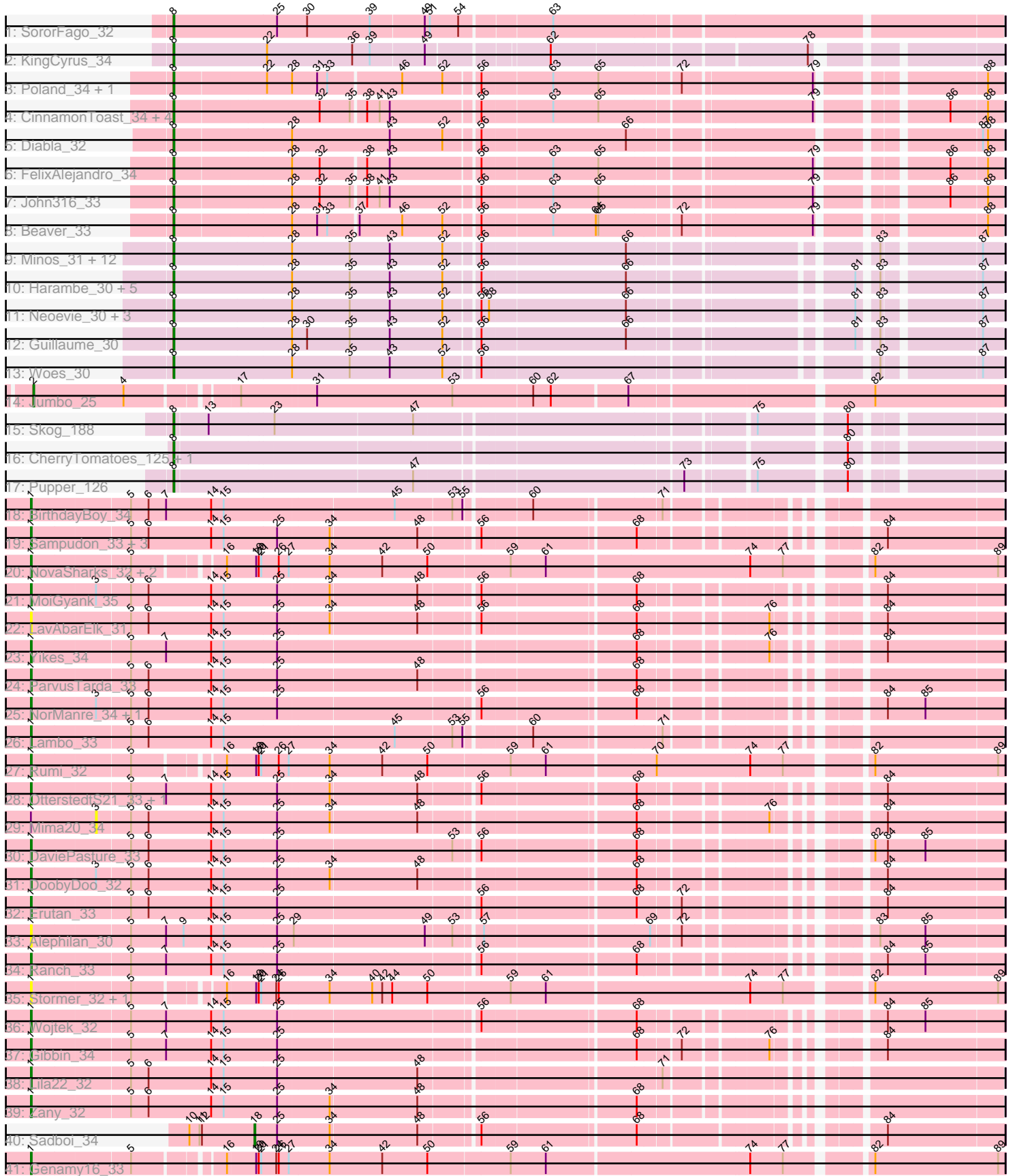


Pham 224535



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 224535 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224535 has 75 members, 8 are drafts.

Phages represented in each track:

- Track 1 : SororFago_32
- Track 2 : KingCyrus_34
- Track 3 : Poland_34, Msay19_34
- Track 4 : CinnamonToast_34, Boneham_33, Jellybones_33, Butterball_33, BirksAndSocks_33
- Track 5 : Diabla_32
- Track 6 : FelixAlejandro_34
- Track 7 : John316_33
- Track 8 : Beaver_33
- Track 9 : Minos_31, Bianmat_30, Jams_30, Lidong_30, Shelley_30, Teal_30, Berries_30, Kaseim_31, Newt_31, Hello_30, GalacticEye_30, MrWormie_30, Charianelly_30
- Track 10 : Harambe_30, Jormungandr_30, Damp_30, Lahirium_30, Sticker17_30, Luker_31
- Track 11 : Neoevie_30, Anamika_30, Nimi13_30, Hail2Pitt_30
- Track 12 : Guillaume_30
- Track 13 : Woes_30
- Track 14 : Jumbo_25
- Track 15 : Skog_188
- Track 16 : CherryTomatoes_125, SCentae_125
- Track 17 : Pupper_126
- Track 18 : BirthdayBoy_34
- Track 19 : Sampudon_33, Jalebi_32, GOATification_34, Fulcrum_34
- Track 20 : NovaSharks_32, RazorC_31, Alyssamiracle_33
- Track 21 : MoiGyank_35
- Track 22 : LavAbarElk_31
- Track 23 : Yikes_34
- Track 24 : ParvusTarda_33
- Track 25 : NorManre_34, Patos_34
- Track 26 : Lambo_33
- Track 27 : Rumi_32
- Track 28 : OtterstedtS21_33, Gretellyn_33
- Track 29 : Mima20_34
- Track 30 : DaviePasture_33
- Track 31 : DoobyDoo_32
- Track 32 : Erutan_33
- Track 33 : Alephilan_30

- Track 34 : Ranch_33
- Track 35 : Stormer_32, Avian_31
- Track 36 : Wojtek_32
- Track 37 : Gibbin_34
- Track 38 : Lila22_32
- Track 39 : Zany_32
- Track 40 : Sadboi_34
- Track 41 : Genamy16_33

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

The start number called the most often in the published annotations is 8, it was called in 40 of the 67 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anamika_30, Beaver_33, Berries_30, Bianmat_30, BirksAndSocks_33, Boneham_33, Butterball_33, Charianelly_30, CherryTomatoes_125, CinnamonToast_34, Damp_30, Diabla_32, FelixAlejandro_34, GalacticEye_30, Guillaume_30, Hail2Pitt_30, Harambe_30, Hello_30, Jams_30, Jellybones_33, John316_33, Jormungandr_30, Kaseim_31, KingCyrus_34, Lahirium_30, Lidong_30, Luker_31, Minos_31, MrWormie_30, Msay19_34, Neoevie_30, Newt_31, Nimi13_30, Poland_34, Pupper_126, SCentae_125, Shelley_30, Skog_188, SororFago_32, Sticker17_30, Teal_30, Woes_30,

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

-

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

- Alephilan_30, Alyssamiracle_33, Avian_31, BirthdayBoy_34, DaviePasture_33, DoobyDoo_32, Erutan_33, Fulcrum_34, GOATification_34, Genamy16_33, Gibbin_34, GretelLyn_33, Jalebi_32, Jumbo_25, Lambo_33, LavAbarEik_31, Lila22_32, Mima20_34, MoiGyank_35, NorManre_34, NovaSharks_32, OtterstedtS21_33, ParvusTarda_33, Patos_34, Ranch_33, RazorC_31, Rumi_32, Sadboi_34, Sampudon_33, Stormer_32, Wojtek_32, Yikes_34, Zany_32,

Summary by start number:

Start 1:

- Found in 31 of 75 (41.3%) of genes in pham
- Manual Annotations of this start: 25 of 67
- Called 96.8% of time when present
- Phage (with cluster) where this start called: Alephilan_30 (DV), Alyssamiracle_33 (DV), Avian_31 (DV), BirthdayBoy_34 (DV), DaviePasture_33 (DV), DoobyDoo_32 (DV), Erutan_33 (DV), Fulcrum_34 (DV), GOATification_34 (DV), Genamy16_33 (DV), Gibbin_34 (DV), GretelLyn_33 (DV), Jalebi_32 (DV), Lambo_33 (DV), LavAbarEik_31 (DV), Lila22_32 (DV), MoiGyank_35 (DV), NorManre_34 (DV), NovaSharks_32 (DV), OtterstedtS21_33 (DV), ParvusTarda_33 (DV), Patos_34 (DV), Ranch_33 (DV), RazorC_31 (DV), Rumi_32 (DV), Sampudon_33 (DV), Stormer_32 (DV), Wojtek_32 (DV), Yikes_34 (DV), Zany_32 (DV),

Start 2:

- Found in 1 of 75 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jumbo_25 (DF3),

Start 3:

- Found in 5 of 75 (6.7%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Mima20_34 (DV),

Start 8:

- Found in 42 of 75 (56.0%) of genes in pham
- Manual Annotations of this start: 40 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anamika_30 (CS3), Beaver_33 (CS2), Berries_30 (CS3), Bianmat_30 (CS3), BirksAndSocks_33 (CS2), Boneham_33 (CS2), Butterball_33 (CS2), Charianelly_30 (CS3), CherryTomatoes_125 (DO), CinnamonToast_34 (CS2), Damp_30 (CS3), Diabla_32 (CS2), FelixAlejandro_34 (CS2), GalacticEye_30 (CS3), Guillaume_30 (CS3), Hail2Pitt_30 (CS3), Harambe_30 (CS3), Hello_30 (CS3), Jams_30 (CS3), Jellybones_33 (CS2), John316_33 (CS2), Jormungandr_30 (CS3), Kaseim_31 (CS3), KingCyrus_34 (A2), Lahirium_30 (CS3), Lidong_30 (CS3), Luker_31 (CS3), Minos_31 (CS3), MrWormie_30 (CS3), Msay19_34 (CS2), Neoevie_30 (CS3), Newt_31 (CS3), Nimi13_30 (CS3), Poland_34 (CS2), Pupper_126 (DO), SCentae_125 (DO), Shelley_30 (CS3), Skog_188 (DO), SororFago_32 (A14), Sticker17_30 (CS3), Teal_30 (CS3), Woes_30 (CS3),

Start 18:

- Found in 1 of 75 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sadboi_34 (DV),

Summary by clusters:

There are 7 clusters represented in this pham: DO, A14, DF3, A2, DV, CS3, CS2,

Info for manual annotations of cluster A14:

- Start number 8 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A2:

- Start number 8 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster CS2:

- Start number 8 was manually annotated 10 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 8 was manually annotated 24 times for cluster CS3.

Info for manual annotations of cluster DF3:

- Start number 2 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DO:

- Start number 8 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DV:

- Start number 1 was manually annotated 25 times for cluster DV.
- Start number 18 was manually annotated 1 time for cluster DV.

Gene Information:

Gene: Alephilan_30 Start: 28717, Stop: 29766, Start Num: 1

Candidate Starts for Alephilan_30:

(Start: 1 @28717 has 25 MA's), (5, 28831), (7, 28873), (9, 28894), (14, 28927), (15, 28942), (25, 29005), (29, 29023), (49, 29176), (53, 29206), (57, 29233), (69, 29416), (72, 29446), (83, 29620), (85, 29674),

Gene: Alyssamiracle_33 Start: 27521, Stop: 28618, Start Num: 1

Candidate Starts for Alyssamiracle_33:

(Start: 1 @27521 has 25 MA's), (5, 27635), (16, 27728), (19, 27761), (20, 27764), (21, 27767), (26, 27788), (27, 27800), (34, 27848), (42, 27911), (50, 27965), (59, 28061), (61, 28103), (74, 28337), (77, 28376), (82, 28463), (89, 28610),

Gene: Anamika_30 Start: 38386, Stop: 39288, Start Num: 8

Candidate Starts for Anamika_30:

(Start: 8 @38386 has 40 MA's), (28, 38524), (35, 38593), (43, 38641), (52, 38704), (56, 38740), (58, 38749), (66, 38908), (81, 39142), (83, 39160), (87, 39265),

Gene: Avian_31 Start: 27503, Stop: 28600, Start Num: 1

Candidate Starts for Avian_31:

(Start: 1 @27503 has 25 MA's), (5, 27617), (16, 27710), (19, 27743), (20, 27746), (21, 27749), (24, 27767), (26, 27770), (34, 27830), (40, 27881), (42, 27893), (44, 27905), (50, 27947), (59, 28043), (61, 28085), (74, 28319), (77, 28358), (82, 28445), (89, 28592),

Gene: Beaver_33 Start: 37866, Stop: 38768, Start Num: 8

Candidate Starts for Beaver_33:

(Start: 8 @37866 has 40 MA's), (28, 38001), (31, 38031), (33, 38043), (37, 38076), (46, 38127), (52, 38175), (56, 38211), (63, 38292), (64, 38343), (65, 38346), (72, 38436), (79, 38583), (88, 38751),

Gene: Berries_30 Start: 38356, Stop: 39258, Start Num: 8

Candidate Starts for Berries_30:

(Start: 8 @38356 has 40 MA's), (28, 38494), (35, 38563), (43, 38611), (52, 38674), (56, 38710), (66, 38878), (83, 39130), (87, 39235),

Gene: Bianmat_30 Start: 38396, Stop: 39298, Start Num: 8

Candidate Starts for Bianmat_30:

(Start: 8 @38396 has 40 MA's), (28, 38534), (35, 38603), (43, 38651), (52, 38714), (56, 38750), (66, 38918), (83, 39170), (87, 39275),

Gene: BirksAndSocks_33 Start: 37840, Stop: 38742, Start Num: 8

Candidate Starts for BirksAndSocks_33:

(Start: 8 @37840 has 40 MA's), (32, 38008), (35, 38044), (38, 38059), (41, 38074), (43, 38086), (56, 38185), (63, 38266), (65, 38320), (79, 38557), (86, 38683), (88, 38725),

Gene: BirthdayBoy_34 Start: 29543, Stop: 30589, Start Num: 1

Candidate Starts for BirthdayBoy_34:

(Start: 1 @29543 has 25 MA's), (5, 29657), (6, 29678), (7, 29699), (14, 29753), (15, 29768), (45, 29966), (53, 30032), (55, 30044), (60, 30113), (71, 30254),

Gene: Boneham_33 Start: 37839, Stop: 38741, Start Num: 8

Candidate Starts for Boneham_33:

(Start: 8 @37839 has 40 MA's), (32, 38007), (35, 38043), (38, 38058), (41, 38073), (43, 38085), (56, 38184), (63, 38265), (65, 38319), (79, 38556), (86, 38682), (88, 38724),

Gene: Butterball_33 Start: 37839, Stop: 38741, Start Num: 8

Candidate Starts for Butterball_33:

(Start: 8 @37839 has 40 MA's), (32, 38007), (35, 38043), (38, 38058), (41, 38073), (43, 38085), (56, 38184), (63, 38265), (65, 38319), (79, 38556), (86, 38682), (88, 38724),

Gene: Charianelly_30 Start: 38106, Stop: 39008, Start Num: 8

Candidate Starts for Charianelly_30:

(Start: 8 @38106 has 40 MA's), (28, 38244), (35, 38313), (43, 38361), (52, 38424), (56, 38460), (66, 38628), (83, 38880), (87, 38985),

Gene: CherryTomatoes_125 Start: 82351, Stop: 83241, Start Num: 8

Candidate Starts for CherryTomatoes_125:

(Start: 8 @82351 has 40 MA's), (80, 83086),

Gene: CinnamonToast_34 Start: 37893, Stop: 38795, Start Num: 8

Candidate Starts for CinnamonToast_34:

(Start: 8 @37893 has 40 MA's), (32, 38061), (35, 38097), (38, 38112), (41, 38127), (43, 38139), (56, 38238), (63, 38319), (65, 38373), (79, 38610), (86, 38736), (88, 38778),

Gene: Damp_30 Start: 37270, Stop: 38172, Start Num: 8

Candidate Starts for Damp_30:

(Start: 8 @37270 has 40 MA's), (28, 37408), (35, 37477), (43, 37525), (52, 37588), (56, 37624), (66, 37792), (81, 38026), (83, 38044), (87, 38149),

Gene: DaviePasture_33 Start: 29342, Stop: 30391, Start Num: 1

Candidate Starts for DaviePasture_33:

(Start: 1 @29342 has 25 MA's), (5, 29456), (6, 29477), (14, 29552), (15, 29567), (25, 29630), (53, 29831), (56, 29855), (68, 30026), (82, 30239), (84, 30254), (85, 30299),

Gene: Diabla_32 Start: 37690, Stop: 38598, Start Num: 8

Candidate Starts for Diabla_32:

(Start: 8 @37690 has 40 MA's), (28, 37825), (43, 37942), (52, 38005), (56, 38041), (66, 38209), (87, 38575), (88, 38581),

Gene: DoobyDoo_32 Start: 28492, Stop: 29541, Start Num: 1

Candidate Starts for DoobyDoo_32:

(Start: 1 @28492 has 25 MA's), (3, 28567), (5, 28606), (6, 28627), (14, 28702), (15, 28717), (25, 28780), (34, 28840), (48, 28942), (68, 29176), (84, 29404),

Gene: Erutan_33 Start: 29002, Stop: 30048, Start Num: 1

Candidate Starts for Erutan_33:

(Start: 1 @29002 has 25 MA's), (5, 29116), (6, 29137), (14, 29212), (15, 29227), (25, 29290), (56, 29515), (68, 29686), (72, 29731), (84, 29914),

Gene: FelixAlejandro_34 Start: 38037, Stop: 38939, Start Num: 8

Candidate Starts for FelixAlejandro_34:

(Start: 8 @38037 has 40 MA's), (28, 38172), (32, 38205), (38, 38256), (43, 38283), (56, 38382), (63, 38463), (65, 38517), (79, 38754), (86, 38880), (88, 38922),

Gene: Fulcrum_34 Start: 29520, Stop: 30569, Start Num: 1

Candidate Starts for Fulcrum_34:

(Start: 1 @29520 has 25 MA's), (5, 29634), (6, 29655), (14, 29730), (15, 29745), (25, 29808), (34, 29868), (48, 29970), (56, 30033), (68, 30204), (84, 30432),

Gene: GOATification_34 Start: 29520, Stop: 30569, Start Num: 1

Candidate Starts for GOATification_34:

(Start: 1 @29520 has 25 MA's), (5, 29634), (6, 29655), (14, 29730), (15, 29745), (25, 29808), (34, 29868), (48, 29970), (56, 30033), (68, 30204), (84, 30432),

Gene: GalacticEye_30 Start: 38068, Stop: 38970, Start Num: 8

Candidate Starts for GalacticEye_30:

(Start: 8 @38068 has 40 MA's), (28, 38206), (35, 38275), (43, 38323), (52, 38386), (56, 38422), (66, 38590), (83, 38842), (87, 38947),

Gene: Genamy16_33 Start: 27521, Stop: 28618, Start Num: 1

Candidate Starts for Genamy16_33:

(Start: 1 @27521 has 25 MA's), (5, 27635), (16, 27728), (19, 27761), (20, 27764), (21, 27767), (24, 27785), (26, 27788), (27, 27800), (34, 27848), (42, 27911), (50, 27965), (59, 28061), (61, 28103), (74, 28337), (77, 28376), (82, 28463), (89, 28610),

Gene: Gibbin_34 Start: 29619, Stop: 30668, Start Num: 1

Candidate Starts for Gibbin_34:

(Start: 1 @29619 has 25 MA's), (5, 29733), (7, 29775), (14, 29829), (15, 29844), (25, 29907), (68, 30303), (72, 30348), (76, 30438), (84, 30531),

Gene: Gretellyn_33 Start: 29878, Stop: 30933, Start Num: 1

Candidate Starts for Gretellyn_33:

(Start: 1 @29878 has 25 MA's), (5, 29992), (7, 30034), (14, 30088), (15, 30103), (25, 30166), (34, 30226), (48, 30328), (56, 30391), (68, 30562), (84, 30796),

Gene: Guillaume_30 Start: 38118, Stop: 39020, Start Num: 8

Candidate Starts for Guillaume_30:

(Start: 8 @38118 has 40 MA's), (28, 38256), (30, 38274), (35, 38325), (43, 38373), (52, 38436), (56, 38472), (66, 38640), (81, 38874), (83, 38892), (87, 38997),

Gene: Hail2Pitt_30 Start: 38595, Stop: 39497, Start Num: 8

Candidate Starts for Hail2Pitt_30:

(Start: 8 @38595 has 40 MA's), (28, 38733), (35, 38802), (43, 38850), (52, 38913), (56, 38949), (58, 38958), (66, 39117), (81, 39351), (83, 39369), (87, 39474),

Gene: Harambe_30 Start: 38385, Stop: 39287, Start Num: 8

Candidate Starts for Harambe_30:

(Start: 8 @38385 has 40 MA's), (28, 38523), (35, 38592), (43, 38640), (52, 38703), (56, 38739), (66, 38907), (81, 39141), (83, 39159), (87, 39264),

Gene: Hello_30 Start: 38347, Stop: 39249, Start Num: 8

Candidate Starts for Hello_30:

(Start: 8 @38347 has 40 MA's), (28, 38485), (35, 38554), (43, 38602), (52, 38665), (56, 38701), (66, 38869), (83, 39121), (87, 39226),

Gene: Jalebi_32 Start: 30054, Stop: 31103, Start Num: 1

Candidate Starts for Jalebi_32:

(Start: 1 @30054 has 25 MA's), (5, 30168), (6, 30189), (14, 30264), (15, 30279), (25, 30342), (34, 30402), (48, 30504), (56, 30567), (68, 30738), (84, 30966),

Gene: Jams_30 Start: 37556, Stop: 38458, Start Num: 8

Candidate Starts for Jams_30:

(Start: 8 @37556 has 40 MA's), (28, 37694), (35, 37763), (43, 37811), (52, 37874), (56, 37910), (66, 38078), (83, 38330), (87, 38435),

Gene: Jellybones_33 Start: 37898, Stop: 38800, Start Num: 8

Candidate Starts for Jellybones_33:

(Start: 8 @37898 has 40 MA's), (32, 38066), (35, 38102), (38, 38117), (41, 38132), (43, 38144), (56, 38243), (63, 38324), (65, 38378), (79, 38615), (86, 38741), (88, 38783),

Gene: John316_33 Start: 37851, Stop: 38753, Start Num: 8

Candidate Starts for John316_33:

(Start: 8 @37851 has 40 MA's), (28, 37986), (32, 38019), (35, 38055), (38, 38070), (41, 38085), (43, 38097), (56, 38196), (63, 38277), (65, 38331), (79, 38568), (86, 38694), (88, 38736),

Gene: Jormungandr_30 Start: 38100, Stop: 39002, Start Num: 8

Candidate Starts for Jormungandr_30:

(Start: 8 @38100 has 40 MA's), (28, 38238), (35, 38307), (43, 38355), (52, 38418), (56, 38454), (66, 38622), (81, 38856), (83, 38874), (87, 38979),

Gene: Jumbo_25 Start: 36377, Stop: 37471, Start Num: 2

Candidate Starts for Jumbo_25:

(Start: 2 @36377 has 1 MA's), (4, 36485), (17, 36602), (31, 36689), (53, 36851), (60, 36944), (62, 36965), (67, 37052), (82, 37319),

Gene: Kaseim_31 Start: 37541, Stop: 38443, Start Num: 8

Candidate Starts for Kaseim_31:

(Start: 8 @37541 has 40 MA's), (28, 37679), (35, 37748), (43, 37796), (52, 37859), (56, 37895), (66, 38063), (83, 38315), (87, 38420),

Gene: KingCyrus_34 Start: 25662, Stop: 26561, Start Num: 8

Candidate Starts for KingCyrus_34:

(Start: 8 @25662 has 40 MA's), (22, 25773), (36, 25875), (39, 25896), (49, 25959), (62, 26091), (78, 26373),

Gene: Lahirium_30 Start: 38622, Stop: 39524, Start Num: 8

Candidate Starts for Lahirium_30:

(Start: 8 @38622 has 40 MA's), (28, 38760), (35, 38829), (43, 38877), (52, 38940), (56, 38976), (66, 39144), (81, 39378), (83, 39396), (87, 39501),

Gene: Lambo_33 Start: 29541, Stop: 30587, Start Num: 1

Candidate Starts for Lambo_33:

(Start: 1 @29541 has 25 MA's), (5, 29655), (6, 29676), (14, 29751), (15, 29766), (45, 29964), (53, 30030), (55, 30042), (60, 30111), (71, 30252),

Gene: LavAbarElk_31 Start: 27993, Stop: 29042, Start Num: 1

Candidate Starts for LavAbarElk_31:

(Start: 1 @27993 has 25 MA's), (5, 28107), (6, 28128), (14, 28203), (15, 28218), (25, 28281), (34, 28341), (48, 28443), (56, 28506), (68, 28677), (76, 28812), (84, 28905),

Gene: Lidong_30 Start: 38356, Stop: 39258, Start Num: 8

Candidate Starts for Lidong_30:

(Start: 8 @38356 has 40 MA's), (28, 38494), (35, 38563), (43, 38611), (52, 38674), (56, 38710), (66, 38878), (83, 39130), (87, 39235),

Gene: Lila22_32 Start: 29496, Stop: 30542, Start Num: 1

Candidate Starts for Lila22_32:

(Start: 1 @29496 has 25 MA's), (5, 29610), (6, 29631), (14, 29706), (15, 29721), (25, 29784), (48, 29946), (71, 30207),

Gene: Luker_31 Start: 38575, Stop: 39477, Start Num: 8

Candidate Starts for Luker_31:

(Start: 8 @38575 has 40 MA's), (28, 38713), (35, 38782), (43, 38830), (52, 38893), (56, 38929), (66, 39097), (81, 39331), (83, 39349), (87, 39454),

Gene: Mima20_34 Start: 29318, Stop: 30292, Start Num: 3

Candidate Starts for Mima20_34:

(Start: 1 @29243 has 25 MA's), (3, 29318), (5, 29357), (6, 29378), (14, 29453), (15, 29468), (25, 29531), (34, 29591), (48, 29693), (68, 29927), (76, 30062), (84, 30155),

Gene: Minos_31 Start: 38098, Stop: 39000, Start Num: 8

Candidate Starts for Minos_31:

(Start: 8 @38098 has 40 MA's), (28, 38236), (35, 38305), (43, 38353), (52, 38416), (56, 38452), (66, 38620), (83, 38872), (87, 38977),

Gene: MoiGyank_35 Start: 29924, Stop: 30973, Start Num: 1

Candidate Starts for MoiGyank_35:

(Start: 1 @29924 has 25 MA's), (3, 29999), (5, 30038), (6, 30059), (14, 30134), (15, 30149), (25, 30212), (34, 30272), (48, 30374), (56, 30437), (68, 30608), (84, 30836),

Gene: MrWormie_30 Start: 37259, Stop: 38161, Start Num: 8

Candidate Starts for MrWormie_30:

(Start: 8 @37259 has 40 MA's), (28, 37397), (35, 37466), (43, 37514), (52, 37577), (56, 37613), (66, 37781), (83, 38033), (87, 38138),

Gene: Msay19_34 Start: 38032, Stop: 38934, Start Num: 8

Candidate Starts for Msay19_34:

(Start: 8 @38032 has 40 MA's), (22, 38137), (28, 38167), (31, 38197), (33, 38209), (46, 38293), (52, 38341), (56, 38377), (63, 38458), (65, 38512), (72, 38602), (79, 38749), (88, 38917),

Gene: Neoevie_30 Start: 38362, Stop: 39264, Start Num: 8

Candidate Starts for Neoevie_30:

(Start: 8 @38362 has 40 MA's), (28, 38500), (35, 38569), (43, 38617), (52, 38680), (56, 38716), (58, 38725), (66, 38884), (81, 39118), (83, 39136), (87, 39241),

Gene: Newt_31 Start: 38589, Stop: 39491, Start Num: 8
Candidate Starts for Newt_31:
(Start: 8 @38589 has 40 MA's), (28, 38727), (35, 38796), (43, 38844), (52, 38907), (56, 38943), (66, 39111), (83, 39363), (87, 39468),

Gene: Nimi13_30 Start: 38107, Stop: 39009, Start Num: 8
Candidate Starts for Nimi13_30:
(Start: 8 @38107 has 40 MA's), (28, 38245), (35, 38314), (43, 38362), (52, 38425), (56, 38461), (58, 38470), (66, 38629), (81, 38863), (83, 38881), (87, 38986),

Gene: NorManre_34 Start: 29125, Stop: 30174, Start Num: 1
Candidate Starts for NorManre_34:
(Start: 1 @29125 has 25 MA's), (3, 29200), (5, 29239), (6, 29260), (14, 29335), (15, 29350), (25, 29413), (56, 29638), (68, 29809), (84, 30037), (85, 30082),

Gene: NovaSharks_32 Start: 27111, Stop: 28208, Start Num: 1
Candidate Starts for NovaSharks_32:
(Start: 1 @27111 has 25 MA's), (5, 27225), (16, 27318), (19, 27351), (20, 27354), (21, 27357), (26, 27378), (27, 27390), (34, 27438), (42, 27501), (50, 27555), (59, 27651), (61, 27693), (74, 27927), (77, 27966), (82, 28053), (89, 28200),

Gene: OtterstedtS21_33 Start: 29200, Stop: 30249, Start Num: 1
Candidate Starts for OtterstedtS21_33:
(Start: 1 @29200 has 25 MA's), (5, 29314), (7, 29356), (14, 29410), (15, 29425), (25, 29488), (34, 29548), (48, 29650), (56, 29713), (68, 29884), (84, 30112),

Gene: ParvusTarda_33 Start: 28670, Stop: 29716, Start Num: 1
Candidate Starts for ParvusTarda_33:
(Start: 1 @28670 has 25 MA's), (5, 28784), (6, 28805), (14, 28880), (15, 28895), (25, 28958), (48, 29120), (68, 29354),

Gene: Patos_34 Start: 29125, Stop: 30174, Start Num: 1
Candidate Starts for Patos_34:
(Start: 1 @29125 has 25 MA's), (3, 29200), (5, 29239), (6, 29260), (14, 29335), (15, 29350), (25, 29413), (56, 29638), (68, 29809), (84, 30037), (85, 30082),

Gene: Poland_34 Start: 38011, Stop: 38913, Start Num: 8
Candidate Starts for Poland_34:
(Start: 8 @38011 has 40 MA's), (22, 38116), (28, 38146), (31, 38176), (33, 38188), (46, 38272), (52, 38320), (56, 38356), (63, 38437), (65, 38491), (72, 38581), (79, 38728), (88, 38896),

Gene: Pupper_126 Start: 83200, Stop: 84090, Start Num: 8
Candidate Starts for Pupper_126:
(Start: 8 @83200 has 40 MA's), (47, 83473), (73, 83770), (75, 83839), (80, 83935),

Gene: Ranch_33 Start: 28024, Stop: 29073, Start Num: 1
Candidate Starts for Ranch_33:
(Start: 1 @28024 has 25 MA's), (5, 28138), (7, 28180), (14, 28234), (15, 28249), (25, 28312), (56, 28537), (68, 28708), (84, 28936), (85, 28981),

Gene: RazorC_31 Start: 27503, Stop: 28600, Start Num: 1
Candidate Starts for RazorC_31:

(Start: 1 @27503 has 25 MA's), (5, 27617), (16, 27710), (19, 27743), (20, 27746), (21, 27749), (26, 27770), (27, 27782), (34, 27830), (42, 27893), (50, 27947), (59, 28043), (61, 28085), (74, 28319), (77, 28358), (82, 28445), (89, 28592),

Gene: Rumi_32 Start: 27114, Stop: 28211, Start Num: 1

Candidate Starts for Rumi_32:

(Start: 1 @27114 has 25 MA's), (5, 27228), (16, 27321), (19, 27354), (20, 27357), (21, 27360), (26, 27381), (27, 27393), (34, 27441), (42, 27504), (50, 27558), (59, 27654), (61, 27696), (70, 27822), (74, 27930), (77, 27969), (82, 28056), (89, 28203),

Gene: SCentae_125 Start: 83353, Stop: 84243, Start Num: 8

Candidate Starts for SCentae_125:

(Start: 8 @83353 has 40 MA's), (80, 84088),

Gene: Sadboi_34 Start: 30140, Stop: 30934, Start Num: 18

Candidate Starts for Sadboi_34:

(10, 30062), (11, 30074), (12, 30077), (Start: 18 @30140 has 1 MA's), (25, 30167), (34, 30227), (48, 30329), (56, 30392), (68, 30563), (84, 30797),

Gene: Sampudon_33 Start: 30054, Stop: 31103, Start Num: 1

Candidate Starts for Sampudon_33:

(Start: 1 @30054 has 25 MA's), (5, 30168), (6, 30189), (14, 30264), (15, 30279), (25, 30342), (34, 30402), (48, 30504), (56, 30567), (68, 30738), (84, 30966),

Gene: Shelley_30 Start: 37583, Stop: 38485, Start Num: 8

Candidate Starts for Shelley_30:

(Start: 8 @37583 has 40 MA's), (28, 37721), (35, 37790), (43, 37838), (52, 37901), (56, 37937), (66, 38105), (83, 38357), (87, 38462),

Gene: Skog_188 Start: 113083, Stop: 113973, Start Num: 8

Candidate Starts for Skog_188:

(Start: 8 @113083 has 40 MA's), (13, 113122), (23, 113194), (47, 113356), (75, 113722), (80, 113818),

Gene: SororFago_32 Start: 24455, Stop: 25399, Start Num: 8

Candidate Starts for SororFago_32:

(Start: 8 @24455 has 40 MA's), (25, 24578), (30, 24614), (39, 24689), (49, 24752), (51, 24758), (54, 24791), (63, 24893),

Gene: Sticker17_30 Start: 38098, Stop: 39000, Start Num: 8

Candidate Starts for Sticker17_30:

(Start: 8 @38098 has 40 MA's), (28, 38236), (35, 38305), (43, 38353), (52, 38416), (56, 38452), (66, 38620), (81, 38854), (83, 38872), (87, 38977),

Gene: Stormer_32 Start: 27117, Stop: 28214, Start Num: 1

Candidate Starts for Stormer_32:

(Start: 1 @27117 has 25 MA's), (5, 27231), (16, 27324), (19, 27357), (20, 27360), (21, 27363), (24, 27381), (26, 27384), (34, 27444), (40, 27495), (42, 27507), (44, 27519), (50, 27561), (59, 27657), (61, 27699), (74, 27933), (77, 27972), (82, 28059), (89, 28206),

Gene: Teal_30 Start: 38566, Stop: 39468, Start Num: 8

Candidate Starts for Teal_30:

(Start: 8 @38566 has 40 MA's), (28, 38704), (35, 38773), (43, 38821), (52, 38884), (56, 38920), (66, 39088), (83, 39340), (87, 39445),

Gene: Woes_30 Start: 38617, Stop: 39519, Start Num: 8

Candidate Starts for Woes_30:

(Start: 8 @38617 has 40 MA's), (28, 38755), (35, 38824), (43, 38872), (52, 38935), (56, 38971), (83, 39391), (87, 39496),

Gene: Wojtek_32 Start: 28749, Stop: 29798, Start Num: 1

Candidate Starts for Wojtek_32:

(Start: 1 @28749 has 25 MA's), (5, 28863), (7, 28905), (14, 28959), (15, 28974), (25, 29037), (56, 29262), (68, 29433), (84, 29661), (85, 29706),

Gene: Yikes_34 Start: 30133, Stop: 31182, Start Num: 1

Candidate Starts for Yikes_34:

(Start: 1 @30133 has 25 MA's), (5, 30247), (7, 30289), (14, 30343), (15, 30358), (25, 30421), (68, 30817), (76, 30952), (84, 31045),

Gene: Zany_32 Start: 29660, Stop: 30706, Start Num: 1

Candidate Starts for Zany_32:

(Start: 1 @29660 has 25 MA's), (5, 29774), (6, 29795), (14, 29870), (15, 29885), (25, 29948), (34, 30008), (48, 30110), (68, 30344),