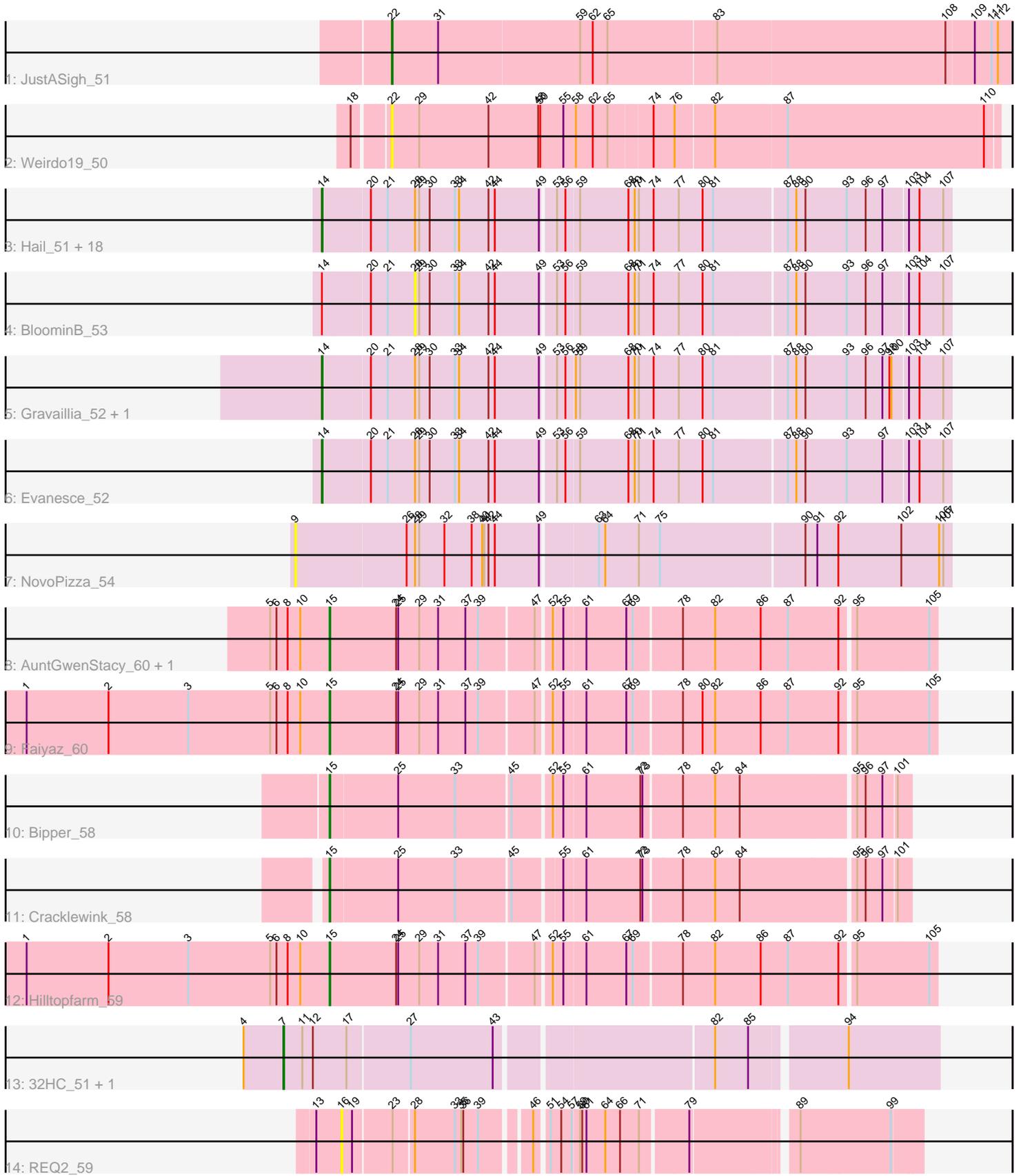


Pham 284013



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 284013 Report

This analysis was run 02/23/26 on database version 636.

Pham number 284013 has 35 members, 6 are drafts.

Phages represented in each track:

- Track 1 : JustASigh_51
- Track 2 : Weirdo19_50
- Track 3 : Hail_51, Ubuntu_53, LilHazelNut_53, Hadrien_53, DeepSoil15_53, Wishmaker_51, Giles_51, Ein37_53, Webster2_53, Amymech_53, Forge_51, Dewey_51, HH92_52, Amochick_53, Daegal_55, Luke_53, Gancho_52, Kinbote_53, Luna22_51
- Track 4 : BloominB_53
- Track 5 : Gravaillia_52, OBUpride_53
- Track 6 : Evanesce_52
- Track 7 : NovoPizza_54
- Track 8 : AuntGwenStacy_60, Typha_59
- Track 9 : Faiyaz_60
- Track 10 : Bipper_58
- Track 11 : Cracklewink_58
- Track 12 : Hilltopfarm_59
- Track 13 : 32HC_51, Rem711_50
- Track 14 : REQ2_59

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

The start number called the most often in the published annotations is 14, it was called in 22 of the 29 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amochick_53, Amymech_53, Daegal_55, DeepSoil15_53, Dewey_51, Ein37_53, Evanesce_52, Forge_51, Gancho_52, Giles_51, Gravaillia_52, HH92_52, Hadrien_53, Hail_51, Kinbote_53, LilHazelNut_53, Luke_53, Luna22_51, OBUpride_53, Ubuntu_53, Webster2_53, Wishmaker_51,

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

- BloominB_53,

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

- 32HC_51, AuntGwenStacy_60, Bipper_58, Cracklewink_58, Faiyaz_60, Hilltopfarm_59, JustASigh_51, NovoPizza_54, REQ2_59, Rem711_50, Typha_59, Weirdo19_50,

Summary by start number:

Start 7:

- Found in 2 of 35 (5.7%) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 32HC_51 (Z), Rem711_50 (Z),

Start 9:

- Found in 1 of 35 (2.9%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NovoPizza_54 (Q),

Start 14:

- Found in 23 of 35 (65.7%) of genes in pham
- Manual Annotations of this start: 22 of 29
- Called 95.7% of time when present
- Phage (with cluster) where this start called: Amochick_53 (Q), Amymech_53 (Q), Daegal_55 (Q), DeepSoil15_53 (Q), Dewey_51 (Q), Ein37_53 (Q), Evanesce_52 (Q), Forge_51 (Q), Gancho_52 (Q), Giles_51 (Q), Gravaillia_52 (Q), HH92_52 (Q), Hadrien_53 (Q), Hail_51 (Q), Kinbote_53 (Q), LilHazelnut_53 (Q), Luke_53 (Q), Luna22_51 (Q), OBUpride_53 (Q), Ubuntu_53 (Q), Webster2_53 (Q), Wishmaker_51 (Q),

Start 15:

- Found in 6 of 35 (17.1%) of genes in pham
- Manual Annotations of this start: 5 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy_60 (Y), Bipper_58 (Y), Cracklewink_58 (Y), Faiyaz_60 (Y), Hilltopfarm_59 (Y), Typha_59 (Y),

Start 16:

- Found in 1 of 35 (2.9%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: REQ2_59 (singleton),

Start 22:

- Found in 2 of 35 (5.7%) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JustASigh_51 (AH), Weirdo19_50 (AH),

Start 28:

- Found in 25 of 35 (71.4%) of genes in pham
- No Manual Annotations of this start.
- Called 4.0% of time when present
- Phage (with cluster) where this start called: BloominB_53 (Q),

Summary by clusters:

There are 5 clusters represented in this pham: Q, AH, singleton, Z, Y,

Info for manual annotations of cluster AH:

- Start number 22 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster Q:

- Start number 14 was manually annotated 22 times for cluster Q.

Info for manual annotations of cluster Y:

- Start number 15 was manually annotated 5 times for cluster Y.

Info for manual annotations of cluster Z:

- Start number 7 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_51 Start: 34909, Stop: 35787, Start Num: 7

Candidate Starts for 32HC_51:

(4, 34852), (Start: 7 @34909 has 1 MA's), (11, 34936), (12, 34951), (17, 34999), (27, 35086), (43, 35203), (82, 35488), (85, 35533), (94, 35659),

Gene: Amochick_53 Start: 37915, Stop: 38778, Start Num: 14

Candidate Starts for Amochick_53:

(Start: 14 @37915 has 22 MA's), (20, 37981), (21, 38005), (28, 38044), (29, 38050), (30, 38065), (33, 38101), (34, 38107), (42, 38149), (44, 38158), (49, 38221), (53, 38239), (56, 38251), (59, 38269), (68, 38338), (70, 38347), (71, 38353), (74, 38374), (77, 38407), (80, 38440), (81, 38455), (87, 38554), (88, 38566), (90, 38578), (93, 38635), (96, 38662), (97, 38686), (103, 38719), (104, 38734), (107, 38767),

Gene: Amymech_53 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Amymech_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: AuntGwenStacy_60 Start: 43522, Stop: 44343, Start Num: 15

Candidate Starts for AuntGwenStacy_60:

(5, 43438), (6, 43447), (8, 43462), (10, 43480), (Start: 15 @43522 has 5 MA's), (24, 43615), (25, 43618), (29, 43648), (31, 43675), (37, 43714), (39, 43732), (47, 43807), (52, 43825), (55, 43837), (61, 43867), (67, 43924), (69, 43933), (78, 43996), (82, 44041), (86, 44104), (87, 44143), (92, 44212), (95, 44230), (105, 44332),

Gene: Bipper_58 Start: 42349, Stop: 43125, Start Num: 15

Candidate Starts for Bipper_58:

(Start: 15 @42349 has 5 MA's), (25, 42442), (33, 42523), (45, 42598), (52, 42649), (55, 42661), (61, 42691), (72, 42766), (73, 42769), (78, 42820), (82, 42865), (84, 42898), (95, 43054), (96, 43066), (97, 43090), (101, 43108),

Gene: BloominB_53 Start: 38020, Stop: 38754, Start Num: 28

Candidate Starts for BloominB_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Cracklewink_58 Start: 42330, Stop: 43106, Start Num: 15

Candidate Starts for Cracklewink_58:

(Start: 15 @42330 has 5 MA's), (25, 42423), (33, 42504), (45, 42579), (55, 42642), (61, 42672), (72, 42747), (73, 42750), (78, 42801), (82, 42846), (84, 42879), (95, 43035), (96, 43047), (97, 43071), (101, 43089),

Gene: Daegal_55 Start: 38475, Stop: 39338, Start Num: 14

Candidate Starts for Daegal_55:

(Start: 14 @38475 has 22 MA's), (20, 38541), (21, 38565), (28, 38604), (29, 38610), (30, 38625), (33, 38661), (34, 38667), (42, 38709), (44, 38718), (49, 38781), (53, 38799), (56, 38811), (59, 38829), (68, 38898), (70, 38907), (71, 38913), (74, 38934), (77, 38967), (80, 39000), (81, 39015), (87, 39114), (88, 39126), (90, 39138), (93, 39195), (96, 39222), (97, 39246), (103, 39279), (104, 39294), (107, 39327),

Gene: DeepSoil15_53 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for DeepSoil15_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Dewey_51 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Dewey_51:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Ein37_53 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Ein37_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Evanesce_52 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Evanesce_52:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Faiyaz_60 Start: 43512, Stop: 44333, Start Num: 15

Candidate Starts for Faiyaz_60:

(1, 43080), (2, 43197), (3, 43311), (5, 43428), (6, 43437), (8, 43452), (10, 43470), (Start: 15 @43512 has 5 MA's), (24, 43605), (25, 43608), (29, 43638), (31, 43665), (37, 43704), (39, 43722), (47, 43797), (52, 43815), (55, 43827), (61, 43857), (67, 43914), (69, 43923), (78, 43986), (80, 44013), (82, 44031),

(86, 44094), (87, 44133), (92, 44202), (95, 44220), (105, 44322),

Gene: Forge_51 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Forge_51:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Gancho_52 Start: 37614, Stop: 38477, Start Num: 14

Candidate Starts for Gancho_52:

(Start: 14 @37614 has 22 MA's), (20, 37680), (21, 37704), (28, 37743), (29, 37749), (30, 37764), (33, 37800), (34, 37806), (42, 37848), (44, 37857), (49, 37920), (53, 37938), (56, 37950), (59, 37968), (68, 38037), (70, 38046), (71, 38052), (74, 38073), (77, 38106), (80, 38139), (81, 38154), (87, 38253), (88, 38265), (90, 38277), (93, 38334), (96, 38361), (97, 38385), (103, 38418), (104, 38433), (107, 38466),

Gene: Giles_51 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Giles_51:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Gravaillia_52 Start: 37905, Stop: 38768, Start Num: 14

Candidate Starts for Gravaillia_52:

(Start: 14 @37905 has 22 MA's), (20, 37971), (21, 37995), (28, 38034), (29, 38040), (30, 38055), (33, 38091), (34, 38097), (42, 38139), (44, 38148), (49, 38211), (53, 38229), (56, 38241), (58, 38253), (59, 38259), (68, 38328), (70, 38337), (71, 38343), (74, 38364), (77, 38397), (80, 38430), (81, 38445), (87, 38544), (88, 38556), (90, 38568), (93, 38625), (96, 38652), (97, 38676), (98, 38685), (100, 38688), (103, 38709), (104, 38724), (107, 38757),

Gene: HH92_52 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for HH92_52:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Hadrien_53 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Hadrien_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Hail_51 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Hail_51:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Hilltopfarm_59 Start: 43214, Stop: 44035, Start Num: 15

Candidate Starts for Hilltopfarm_59:

(1, 42782), (2, 42899), (3, 43013), (5, 43130), (6, 43139), (8, 43154), (10, 43172), (Start: 15 @43214 has 5 MA's), (24, 43307), (25, 43310), (29, 43340), (31, 43367), (37, 43406), (39, 43424), (47, 43499), (52, 43517), (55, 43529), (61, 43559), (67, 43616), (69, 43625), (78, 43688), (82, 43733), (86, 43796), (87, 43835), (92, 43904), (95, 43922), (105, 44024),

Gene: JustASigh_51 Start: 35983, Stop: 36849, Start Num: 22

Candidate Starts for JustASigh_51:

(Start: 22 @35983 has 1 MA's), (31, 36049), (59, 36244), (62, 36262), (65, 36283), (83, 36436), (108, 36757), (109, 36796), (111, 36820), (112, 36829),

Gene: Kinbote_53 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Kinbote_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: LilHazelnut_53 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for LilHazelnut_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Luke_53 Start: 37846, Stop: 38709, Start Num: 14

Candidate Starts for Luke_53:

(Start: 14 @37846 has 22 MA's), (20, 37912), (21, 37936), (28, 37975), (29, 37981), (30, 37996), (33, 38032), (34, 38038), (42, 38080), (44, 38089), (49, 38152), (53, 38170), (56, 38182), (59, 38200), (68, 38269), (70, 38278), (71, 38284), (74, 38305), (77, 38338), (80, 38371), (81, 38386), (87, 38485), (88, 38497), (90, 38509), (93, 38566), (96, 38593), (97, 38617), (103, 38650), (104, 38665), (107, 38698),

Gene: Luna22_51 Start: 37875, Stop: 38738, Start Num: 14

Candidate Starts for Luna22_51:

(Start: 14 @37875 has 22 MA's), (20, 37941), (21, 37965), (28, 38004), (29, 38010), (30, 38025), (33, 38061), (34, 38067), (42, 38109), (44, 38118), (49, 38181), (53, 38199), (56, 38211), (59, 38229), (68, 38298), (70, 38307), (71, 38313), (74, 38334), (77, 38367), (80, 38400), (81, 38415), (87, 38514), (88, 38526), (90, 38538), (93, 38595), (96, 38622), (97, 38646), (103, 38679), (104, 38694), (107, 38727),

Gene: NovoPizza_54 Start: 38434, Stop: 39345, Start Num: 9

Candidate Starts for NovoPizza_54:

(9, 38434), (26, 38590), (28, 38602), (29, 38608), (32, 38644), (38, 38683), (40, 38698), (41, 38701), (42, 38707), (44, 38716), (49, 38779), (63, 38854), (64, 38863), (71, 38911), (75, 38941), (90, 39139), (91, 39154), (92, 39184), (102, 39274), (106, 39328), (107, 39334),

Gene: OBUpride_53 Start: 37905, Stop: 38768, Start Num: 14

Candidate Starts for OBUpride_53:

(Start: 14 @37905 has 22 MA's), (20, 37971), (21, 37995), (28, 38034), (29, 38040), (30, 38055), (33, 38091), (34, 38097), (42, 38139), (44, 38148), (49, 38211), (53, 38229), (56, 38241), (58, 38253), (59, 38259), (68, 38328), (70, 38337), (71, 38343), (74, 38364), (77, 38397), (80, 38430), (81, 38445), (87, 38544), (88, 38556), (90, 38568), (93, 38625), (96, 38652), (97, 38676), (98, 38685), (100, 38688), (103, 38709), (104, 38724), (107, 38757),

Gene: REQ2_59 Start: 39789, Stop: 40529, Start Num: 16

Candidate Starts for REQ2_59:

(13, 39753), (16, 39789), (19, 39804), (23, 39855), (28, 39882), (33, 39939), (35, 39948), (36, 39951), (39, 39972), (46, 40032), (51, 40047), (54, 40062), (57, 40077), (59, 40086), (60, 40089), (61, 40095), (64, 40122), (66, 40143), (71, 40170), (79, 40230), (89, 40362), (99, 40488),

Gene: Rem711_50 Start: 34893, Stop: 35771, Start Num: 7

Candidate Starts for Rem711_50:

(4, 34836), (Start: 7 @34893 has 1 MA's), (11, 34920), (12, 34935), (17, 34983), (27, 35070), (43, 35187), (82, 35472), (85, 35517), (94, 35643),

Gene: Typha_59 Start: 43522, Stop: 44343, Start Num: 15

Candidate Starts for Typha_59:

(5, 43438), (6, 43447), (8, 43462), (10, 43480), (Start: 15 @43522 has 5 MA's), (24, 43615), (25, 43618), (29, 43648), (31, 43675), (37, 43714), (39, 43732), (47, 43807), (52, 43825), (55, 43837), (61, 43867), (67, 43924), (69, 43933), (78, 43996), (82, 44041), (86, 44104), (87, 44143), (92, 44212), (95, 44230), (105, 44332),

Gene: Ubuntu_53 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Ubuntu_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Webster2_53 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Webster2_53:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),

Gene: Weirido19_50 Start: 36157, Stop: 37002, Start Num: 22

Candidate Starts for Weirido19_50:

(18, 36112), (Start: 22 @36157 has 1 MA's), (29, 36196), (42, 36295), (48, 36364), (50, 36367), (55, 36400), (58, 36418), (62, 36442), (65, 36463), (74, 36523), (76, 36553), (82, 36607), (87, 36706), (110, 36985),

Gene: Wishmaker_51 Start: 37891, Stop: 38754, Start Num: 14

Candidate Starts for Wishmaker_51:

(Start: 14 @37891 has 22 MA's), (20, 37957), (21, 37981), (28, 38020), (29, 38026), (30, 38041), (33, 38077), (34, 38083), (42, 38125), (44, 38134), (49, 38197), (53, 38215), (56, 38227), (59, 38245), (68, 38314), (70, 38323), (71, 38329), (74, 38350), (77, 38383), (80, 38416), (81, 38431), (87, 38530), (88, 38542), (90, 38554), (93, 38611), (96, 38638), (97, 38662), (103, 38695), (104, 38710), (107, 38743),