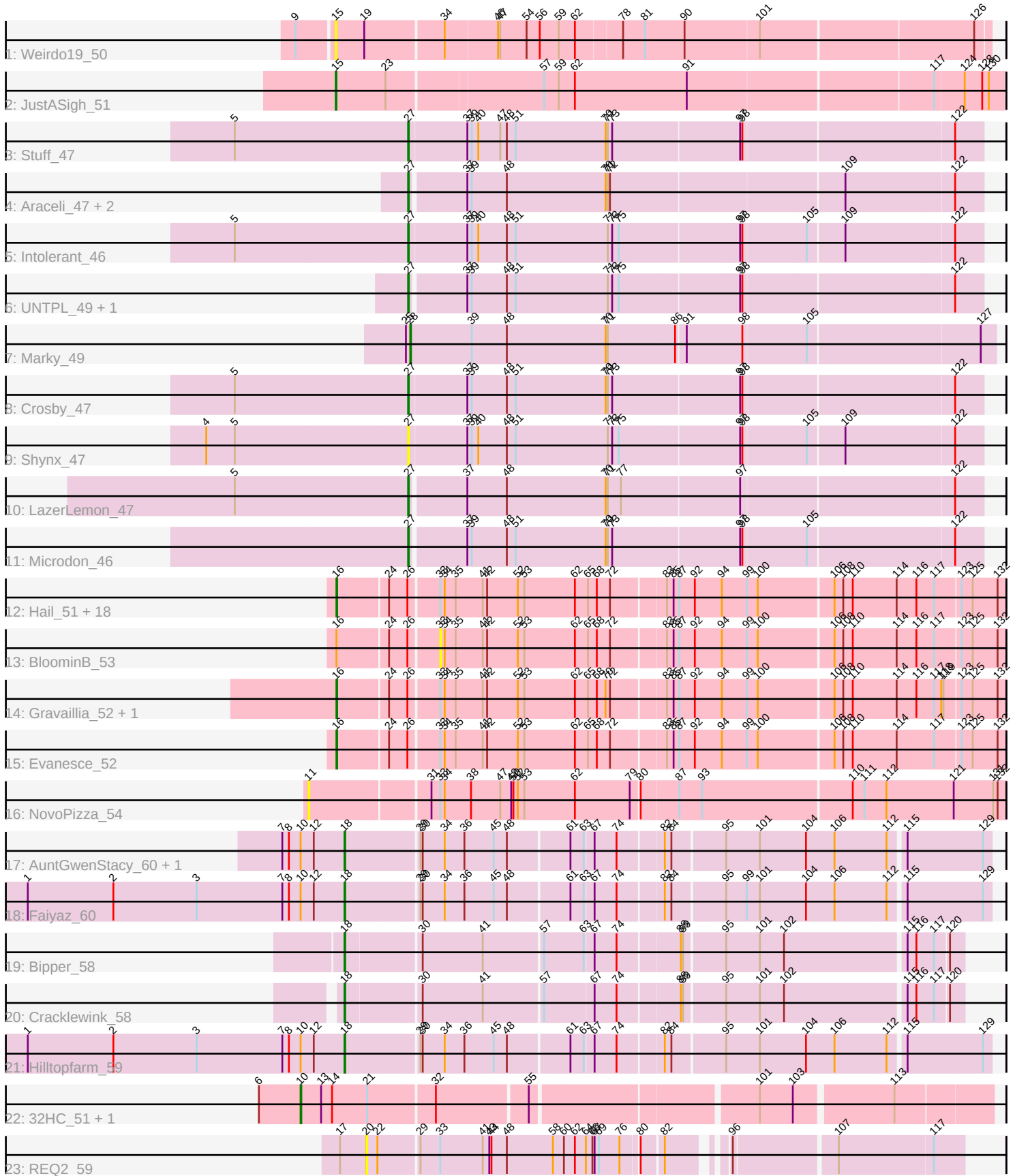


Pham 280558



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 280558 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280558 has 47 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Weirido19_50
- Track 2 : JustASigh_51
- Track 3 : Stuff_47
- Track 4 : Araceli_47, Henoccus_47, JackieB_47
- Track 5 : Intolerant_46
- Track 6 : UNTPL_49, Bogota_48
- Track 7 : Marky_49
- Track 8 : Crosby_47
- Track 9 : Shynx_47
- Track 10 : LazerLemon_47
- Track 11 : Microdon_46
- Track 12 : Hail_51, Ubuntu_53, LilHazelNut_53, Hadrien_53, Wishmaker_51, Giles_51, Ein37_53, Webster2_53, Amymech_53, DeepSoil15_53, Forge_51, Dewey_51, HH92_52, Amochick_53, Daegal_55, Luke_53, Gancho_52, Kinbote_53, Luna22_51
- Track 13 : BloominB_53
- Track 14 : Gravaillia_52, OBUpride_53
- Track 15 : Evanesce_52
- Track 16 : NovoPizza_54
- Track 17 : AuntGwenStacy_60, Typha_59
- Track 18 : Faiyaz_60
- Track 19 : Bipper_58
- Track 20 : Cracklewink_58
- Track 21 : Hilltopfarm_59
- Track 22 : 32HC_51, Rem711_50
- Track 23 : 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 16, it was called in 22 of the 40 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, Araceli_47, AuntGwenStacy_60, Bipper_58, Bogota_48, Cracklewink_58, Crosby_47, Faiyaz_60, Henoccus_47, Hilltopfarm_59, Intolerant_46, JackieB_47, JustASigh_51, LazerLemon_47, Marky_49, Microdon_46, NovoPizza_54, REQ2_59, Rem711_50, Shynx_47, Stuff_47, Typha_59, UNTPL_49, Weirido19_50,

Summary by start number:

Start 10:

- Found in 6 of 47 (12.8%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 33.3% of time when present
- Phage (with cluster) where this start called: 32HC_51 (Z), Rem711_50 (Z),

Start 11:

- Found in 1 of 47 (2.1%) 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 15:

- Found in 2 of 47 (4.3%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JustASigh_51 (AH), Weirido19_50 (AH),

Start 16:

- Found in 23 of 47 (48.9%) of genes in pham
- Manual Annotations of this start: 22 of 40
- 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 18:

- Found in 6 of 47 (12.8%) of genes in pham
- Manual Annotations of this start: 5 of 40
- 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 20:

- Found in 1 of 47 (2.1%) 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 27:

- Found in 11 of 47 (23.4%) of genes in pham
- Manual Annotations of this start: 10 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Araceli_47 (BH), Bogota_48 (BH), Crosby_47 (BH), Henoccus_47 (BH), Intolerant_46 (BH), JackieB_47 (BH), LazerLemon_47 (BH), Microdon_46 (BH), Shynx_47 (BH), Stuff_47 (BH), UNTPL_49 (BH),

Start 28:

- Found in 1 of 47 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marky_49 (BH),

Start 33:

- Found in 25 of 47 (53.2%) 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 6 clusters represented in this pham: singleton, AH, BH, Q, Y, Z,

Info for manual annotations of cluster AH:

- Start number 15 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster BH:

- Start number 27 was manually annotated 10 times for cluster BH.
- Start number 28 was manually annotated 1 time for cluster BH.

Info for manual annotations of cluster Q:

- Start number 16 was manually annotated 22 times for cluster Q.

Info for manual annotations of cluster Y:

- Start number 18 was manually annotated 5 times for cluster Y.

Info for manual annotations of cluster Z:

- Start number 10 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_51 Start: 34909, Stop: 35787, Start Num: 10

Candidate Starts for 32HC_51:

(6, 34852), (Start: 10 @34909 has 1 MA's), (13, 34936), (14, 34951), (21, 34999), (32, 35086), (55, 35203), (101, 35488), (103, 35533), (113, 35659),

Gene: Amochick_53 Start: 37915, Stop: 38778, Start Num: 16

Candidate Starts for Amochick_53:

(Start: 16 @37915 has 22 MA's), (24, 37981), (26, 38005), (33, 38044), (34, 38050), (35, 38065), (41, 38101), (42, 38107), (52, 38149), (53, 38158), (62, 38221), (65, 38239), (68, 38251), (72, 38269), (83, 38338), (85, 38347), (87, 38353), (92, 38374), (94, 38407), (99, 38440), (100, 38455), (106, 38554), (108, 38566), (110, 38578), (114, 38635), (116, 38662), (117, 38686), (123, 38719), (125, 38734), (132, 38767),

Gene: Amymech_53 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Amymech_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Araceli_47 Start: 34357, Stop: 35109, Start Num: 27

Candidate Starts for Araceli_47:

(Start: 27 @34357 has 10 MA's), (37, 34429), (39, 34435), (48, 34483), (70, 34618), (71, 34621), (72, 34624), (109, 34930), (122, 35074),

Gene: AuntGwenStacy_60 Start: 43522, Stop: 44343, Start Num: 18

Candidate Starts for AuntGwenStacy_60:

(7, 43438), (8, 43447), (Start: 10 @43462 has 1 MA's), (12, 43480), (Start: 18 @43522 has 5 MA's), (29, 43615), (30, 43618), (34, 43648), (36, 43675), (45, 43714), (48, 43732), (61, 43807), (63, 43825), (67, 43837), (74, 43867), (82, 43924), (84, 43933), (95, 43996), (101, 44041), (104, 44104), (106, 44143), (112, 44212), (115, 44230), (129, 44332),

Gene: Bipper_58 Start: 42349, Stop: 43125, Start Num: 18

Candidate Starts for Bipper_58:

(Start: 18 @42349 has 5 MA's), (30, 42442), (41, 42523), (57, 42598), (63, 42649), (67, 42661), (74, 42691), (88, 42766), (89, 42769), (95, 42820), (101, 42865), (102, 42898), (115, 43054), (116, 43066), (117, 43090), (120, 43108),

Gene: BloominB_53 Start: 38020, Stop: 38754, Start Num: 33

Candidate Starts for BloominB_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Bogota_48 Start: 34899, Stop: 35651, Start Num: 27

Candidate Starts for Bogota_48:

(Start: 27 @34899 has 10 MA's), (37, 34971), (39, 34977), (48, 35025), (51, 35037), (71, 35163), (73, 35169), (75, 35178), (97, 35337), (98, 35340), (122, 35616),

Gene: Cracklewink_58 Start: 42330, Stop: 43106, Start Num: 18

Candidate Starts for Cracklewink_58:

(Start: 18 @42330 has 5 MA's), (30, 42423), (41, 42504), (57, 42579), (67, 42642), (74, 42672), (88, 42747), (89, 42750), (95, 42801), (101, 42846), (102, 42879), (115, 43035), (116, 43047), (117, 43071), (120, 43089),

Gene: Crosby_47 Start: 34650, Stop: 35408, Start Num: 27

Candidate Starts for Crosby_47:

(5, 34416), (Start: 27 @34650 has 10 MA's), (37, 34728), (39, 34734), (48, 34782), (51, 34794), (70, 34917), (71, 34920), (73, 34926), (97, 35094), (98, 35097), (122, 35373),

Gene: Daegal_55 Start: 38475, Stop: 39338, Start Num: 16

Candidate Starts for Daegal_55:

(Start: 16 @38475 has 22 MA's), (24, 38541), (26, 38565), (33, 38604), (34, 38610), (35, 38625), (41, 38661), (42, 38667), (52, 38709), (53, 38718), (62, 38781), (65, 38799), (68, 38811), (72, 38829), (83, 38898), (85, 38907), (87, 38913), (92, 38934), (94, 38967), (99, 39000), (100, 39015), (106, 39114), (108, 39126), (110, 39138), (114, 39195), (116, 39222), (117, 39246), (123, 39279), (125, 39294), (132, 39327),

Gene: DeepSoil15_53 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for DeepSoil15_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Dewey_51 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Dewey_51:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Ein37_53 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Ein37_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Evanesce_52 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Evanesce_52:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Faiyaz_60 Start: 43512, Stop: 44333, Start Num: 18

Candidate Starts for Faiyaz_60:

(1, 43080), (2, 43197), (3, 43311), (7, 43428), (8, 43437), (Start: 10 @43452 has 1 MA's), (12, 43470), (Start: 18 @43512 has 5 MA's), (29, 43605), (30, 43608), (34, 43638), (36, 43665), (45, 43704), (48, 43722), (61, 43797), (63, 43815), (67, 43827), (74, 43857), (82, 43914), (84, 43923), (95, 43986), (99,

44013), (101, 44031), (104, 44094), (106, 44133), (112, 44202), (115, 44220), (129, 44322),

Gene: Forge_51 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Forge_51:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Gancho_52 Start: 37614, Stop: 38477, Start Num: 16

Candidate Starts for Gancho_52:

(Start: 16 @37614 has 22 MA's), (24, 37680), (26, 37704), (33, 37743), (34, 37749), (35, 37764), (41, 37800), (42, 37806), (52, 37848), (53, 37857), (62, 37920), (65, 37938), (68, 37950), (72, 37968), (83, 38037), (85, 38046), (87, 38052), (92, 38073), (94, 38106), (99, 38139), (100, 38154), (106, 38253), (108, 38265), (110, 38277), (114, 38334), (116, 38361), (117, 38385), (123, 38418), (125, 38433), (132, 38466),

Gene: Giles_51 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Giles_51:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Gravaillia_52 Start: 37905, Stop: 38768, Start Num: 16

Candidate Starts for Gravaillia_52:

(Start: 16 @37905 has 22 MA's), (24, 37971), (26, 37995), (33, 38034), (34, 38040), (35, 38055), (41, 38091), (42, 38097), (52, 38139), (53, 38148), (62, 38211), (65, 38229), (68, 38241), (70, 38253), (72, 38259), (83, 38328), (85, 38337), (87, 38343), (92, 38364), (94, 38397), (99, 38430), (100, 38445), (106, 38544), (108, 38556), (110, 38568), (114, 38625), (116, 38652), (117, 38676), (118, 38685), (119, 38688), (123, 38709), (125, 38724), (132, 38757),

Gene: HH92_52 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for HH92_52:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Hadrien_53 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Hadrien_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Hail_51 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Hail_51:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Henoccus_47 Start: 34374, Stop: 35126, Start Num: 27

Candidate Starts for Henoccus_47:

(Start: 27 @34374 has 10 MA's), (37, 34446), (39, 34452), (48, 34500), (70, 34635), (71, 34638), (72, 34641), (109, 34947), (122, 35091),

Gene: Hilltopfarm_59 Start: 43214, Stop: 44035, Start Num: 18

Candidate Starts for Hilltopfarm_59:

(1, 42782), (2, 42899), (3, 43013), (7, 43130), (8, 43139), (Start: 10 @43154 has 1 MA's), (12, 43172), (Start: 18 @43214 has 5 MA's), (29, 43307), (30, 43310), (34, 43340), (36, 43367), (45, 43406), (48, 43424), (61, 43499), (63, 43517), (67, 43529), (74, 43559), (82, 43616), (84, 43625), (95, 43688), (101, 43733), (104, 43796), (106, 43835), (112, 43904), (115, 43922), (129, 44024),

Gene: Intolerant_46 Start: 34591, Stop: 35349, Start Num: 27

Candidate Starts for Intolerant_46:

(5, 34357), (Start: 27 @34591 has 10 MA's), (37, 34669), (39, 34675), (40, 34684), (48, 34723), (51, 34735), (71, 34861), (73, 34867), (75, 34876), (97, 35035), (98, 35038), (105, 35122), (109, 35170), (122, 35314),

Gene: JackieB_47 Start: 34213, Stop: 34965, Start Num: 27

Candidate Starts for JackieB_47:

(Start: 27 @34213 has 10 MA's), (37, 34285), (39, 34291), (48, 34339), (70, 34474), (71, 34477), (72, 34480), (109, 34786), (122, 34930),

Gene: JustASigh_51 Start: 35983, Stop: 36849, Start Num: 15

Candidate Starts for JustASigh_51:

(Start: 15 @35983 has 1 MA's), (23, 36049), (57, 36244), (59, 36262), (62, 36283), (91, 36436), (117, 36757), (124, 36796), (128, 36820), (130, 36829),

Gene: Kinbote_53 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Kinbote_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: LazerLemon_47 Start: 35007, Stop: 35759, Start Num: 27

Candidate Starts for LazerLemon_47:

(5, 34773), (Start: 27 @35007 has 10 MA's), (37, 35079), (48, 35133), (70, 35268), (71, 35271), (77, 35289), (97, 35445), (122, 35724),

Gene: LilHazelNut_53 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for LilHazelNut_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710),

(132, 38743),

Gene: Luke_53 Start: 37846, Stop: 38709, Start Num: 16

Candidate Starts for Luke_53:

(Start: 16 @37846 has 22 MA's), (24, 37912), (26, 37936), (33, 37975), (34, 37981), (35, 37996), (41, 38032), (42, 38038), (52, 38080), (53, 38089), (62, 38152), (65, 38170), (68, 38182), (72, 38200), (83, 38269), (85, 38278), (87, 38284), (92, 38305), (94, 38338), (99, 38371), (100, 38386), (106, 38485), (108, 38497), (110, 38509), (114, 38566), (116, 38593), (117, 38617), (123, 38650), (125, 38665), (132, 38698),

Gene: Luna22_51 Start: 37875, Stop: 38738, Start Num: 16

Candidate Starts for Luna22_51:

(Start: 16 @37875 has 22 MA's), (24, 37941), (26, 37965), (33, 38004), (34, 38010), (35, 38025), (41, 38061), (42, 38067), (52, 38109), (53, 38118), (62, 38181), (65, 38199), (68, 38211), (72, 38229), (83, 38298), (85, 38307), (87, 38313), (92, 38334), (94, 38367), (99, 38400), (100, 38415), (106, 38514), (108, 38526), (110, 38538), (114, 38595), (116, 38622), (117, 38646), (123, 38679), (125, 38694), (132, 38727),

Gene: Marky_49 Start: 35097, Stop: 35876, Start Num: 28

Candidate Starts for Marky_49:

(25, 35091), (Start: 28 @35097 has 1 MA's), (39, 35181), (48, 35229), (70, 35364), (71, 35367), (86, 35457), (91, 35469), (98, 35544), (105, 35628), (127, 35856),

Gene: Microdon_46 Start: 34403, Stop: 35155, Start Num: 27

Candidate Starts for Microdon_46:

(Start: 27 @34403 has 10 MA's), (37, 34475), (39, 34481), (48, 34529), (51, 34541), (70, 34664), (71, 34667), (73, 34673), (97, 34841), (98, 34844), (105, 34928), (122, 35120),

Gene: NovoPizza_54 Start: 38434, Stop: 39345, Start Num: 11

Candidate Starts for NovoPizza_54:

(11, 38434), (31, 38590), (33, 38602), (34, 38608), (38, 38644), (47, 38683), (49, 38698), (50, 38701), (52, 38707), (53, 38716), (62, 38779), (79, 38854), (80, 38863), (87, 38911), (93, 38941), (110, 39139), (111, 39154), (112, 39184), (121, 39274), (131, 39328), (132, 39334),

Gene: OBUpride_53 Start: 37905, Stop: 38768, Start Num: 16

Candidate Starts for OBUpride_53:

(Start: 16 @37905 has 22 MA's), (24, 37971), (26, 37995), (33, 38034), (34, 38040), (35, 38055), (41, 38091), (42, 38097), (52, 38139), (53, 38148), (62, 38211), (65, 38229), (68, 38241), (70, 38253), (72, 38259), (83, 38328), (85, 38337), (87, 38343), (92, 38364), (94, 38397), (99, 38430), (100, 38445), (106, 38544), (108, 38556), (110, 38568), (114, 38625), (116, 38652), (117, 38676), (118, 38685), (119, 38688), (123, 38709), (125, 38724), (132, 38757),

Gene: REQ2_59 Start: 39789, Stop: 40529, Start Num: 20

Candidate Starts for REQ2_59:

(17, 39753), (20, 39789), (22, 39804), (29, 39855), (33, 39882), (41, 39939), (43, 39948), (44, 39951), (48, 39972), (58, 40032), (60, 40047), (62, 40062), (64, 40077), (66, 40086), (67, 40089), (69, 40095), (76, 40122), (80, 40143), (82, 40170), (96, 40230), (107, 40362), (117, 40488),

Gene: Rem711_50 Start: 34893, Stop: 35771, Start Num: 10

Candidate Starts for Rem711_50:

(6, 34836), (Start: 10 @34893 has 1 MA's), (13, 34920), (14, 34935), (21, 34983), (32, 35070), (55, 35187), (101, 35472), (103, 35517), (113, 35643),

Gene: Shynx_47 Start: 34827, Stop: 35585, Start Num: 27

Candidate Starts for Shynx_47:

(4, 34554), (5, 34593), (Start: 27 @34827 has 10 MA's), (37, 34905), (39, 34911), (40, 34920), (48, 34959), (51, 34971), (71, 35097), (73, 35103), (75, 35112), (97, 35271), (98, 35274), (105, 35358), (109, 35406), (122, 35550),

Gene: Stuff_47 Start: 34889, Stop: 35647, Start Num: 27

Candidate Starts for Stuff_47:

(5, 34655), (Start: 27 @34889 has 10 MA's), (37, 34967), (39, 34973), (40, 34982), (47, 35012), (48, 35021), (51, 35033), (70, 35156), (71, 35159), (73, 35165), (97, 35333), (98, 35336), (122, 35612),

Gene: Typha_59 Start: 43522, Stop: 44343, Start Num: 18

Candidate Starts for Typha_59:

(7, 43438), (8, 43447), (Start: 10 @43462 has 1 MA's), (12, 43480), (Start: 18 @43522 has 5 MA's), (29, 43615), (30, 43618), (34, 43648), (36, 43675), (45, 43714), (48, 43732), (61, 43807), (63, 43825), (67, 43837), (74, 43867), (82, 43924), (84, 43933), (95, 43996), (101, 44041), (104, 44104), (106, 44143), (112, 44212), (115, 44230), (129, 44332),

Gene: UNTPL_49 Start: 34934, Stop: 35686, Start Num: 27

Candidate Starts for UNTPL_49:

(Start: 27 @34934 has 10 MA's), (37, 35006), (39, 35012), (48, 35060), (51, 35072), (71, 35198), (73, 35204), (75, 35213), (97, 35372), (98, 35375), (122, 35651),

Gene: Ubuntu_53 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Ubuntu_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Webster2_53 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Webster2_53:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),

Gene: Weirdo19_50 Start: 36157, Stop: 37002, Start Num: 15

Candidate Starts for Weirdo19_50:

(9, 36112), (Start: 15 @36157 has 1 MA's), (19, 36196), (34, 36295), (46, 36364), (47, 36367), (54, 36400), (56, 36418), (59, 36442), (62, 36463), (78, 36523), (81, 36553), (90, 36607), (101, 36706), (126, 36985),

Gene: Wishmaker_51 Start: 37891, Stop: 38754, Start Num: 16

Candidate Starts for Wishmaker_51:

(Start: 16 @37891 has 22 MA's), (24, 37957), (26, 37981), (33, 38020), (34, 38026), (35, 38041), (41, 38077), (42, 38083), (52, 38125), (53, 38134), (62, 38197), (65, 38215), (68, 38227), (72, 38245), (83, 38314), (85, 38323), (87, 38329), (92, 38350), (94, 38383), (99, 38416), (100, 38431), (106, 38530), (108, 38542), (110, 38554), (114, 38611), (116, 38638), (117, 38662), (123, 38695), (125, 38710), (132, 38743),