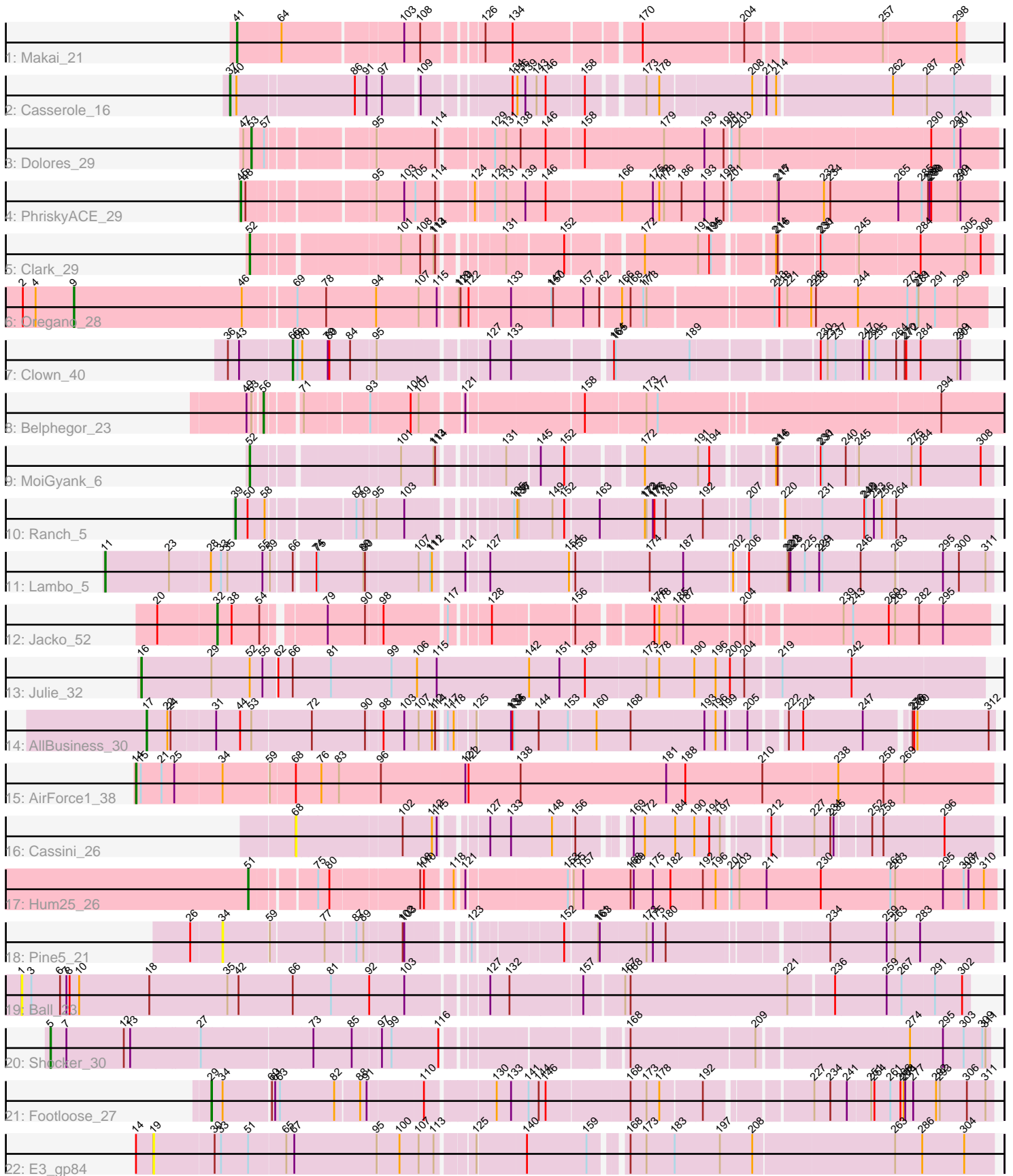


Pham 309246



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 309246 Report

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

Pham number 309246 has 22 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Makai\_21
- Track 2 : Casserole\_16
- Track 3 : Dolores\_29
- Track 4 : PhriskyACE\_29
- Track 5 : Clark\_29
- Track 6 : Oregano\_28
- Track 7 : Clown\_40
- Track 8 : Belphegor\_23
- Track 9 : MoiGyank\_6
- Track 10 : Ranch\_5
- Track 11 : Lambo\_5
- Track 12 : Jacko\_52
- Track 13 : Julie\_32
- Track 14 : AllBusiness\_30
- Track 15 : AirForce1\_38
- Track 16 : Cassini\_26
- Track 17 : Hum25\_26
- Track 18 : Pine5\_21
- Track 19 : Ball\_23
- Track 20 : Shocker\_30
- Track 21 : Footloose\_27
- Track 22 : E3\_gp84

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

The start number called the most often in the published annotations is 52, it was called in 2 of the 18 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Clark\_29, MoiGyank\_6,

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

- Julie\_32,

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

- AirForce1\_38, AllBusiness\_30, Ball\_23, Belphegor\_23, Casserole\_16, Cassini\_26, Clown\_40, Dolores\_29, E3\_gp84, Footloose\_27, Hum25\_26, Jacko\_52, Lambo\_5, Makai\_21, Oregano\_28, PhriskyACE\_29, Pine5\_21, Ranch\_5, Shocker\_30,

### Summary by start number:

Start 1:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ball\_23 (singleton),

Start 5:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shocker\_30 (singleton),

Start 9:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Oregano\_28 (CZ4),

Start 11:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lambo\_5 (DV),

Start 14:

- Found in 2 of 22 ( 9.1% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AirForce1\_38 (FL),

Start 16:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Julie\_32 (FF),

Start 17:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AllBusiness\_30 (FF),

Start 19:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present

- Phage (with cluster) where this start called: E3\_gp84 (singleton),

Start 29:

- Found in 2 of 22 ( 9.1% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Footloose\_27 (singleton),

Start 32:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jacko\_52 (ED1),

Start 34:

- Found in 3 of 22 ( 13.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Pine5\_21 (singleton),

Start 37:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Casserole\_16 (AV),

Start 39:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ranch\_5 (DV),

Start 41:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Makai\_21 (AU5),

Start 45:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PhriskyACE\_29 (CZ4),

Start 51:

- Found in 2 of 22 ( 9.1% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Hum25\_26 (FQ1),

Start 52:

- Found in 3 of 22 ( 13.6% ) of genes in pham
- Manual Annotations of this start: 2 of 18

- Called 66.7% of time when present
- Phage (with cluster) where this start called: Clark\_29 (CZ4), MoiGyank\_6 (DV),

Start 53:

- Found in 3 of 22 ( 13.6% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Dolores\_29 (CZ4),

Start 56:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belphegor\_23 (DE2),

Start 66:

- Found in 4 of 22 ( 18.2% ) of genes in pham
- Manual Annotations of this start: 1 of 18
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Clown\_40 (DC2),

Start 68:

- Found in 2 of 22 ( 9.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Cassini\_26 (FN),

### **Summary by clusters:**

There are 12 clusters represented in this pham: singleton, FL, DE2, CZ4, ED1, AU5, FF, AV, DV, FQ1, DC2, FN,

Info for manual annotations of cluster AU5:

- Start number 41 was manually annotated 1 time for cluster AU5.

Info for manual annotations of cluster AV:

- Start number 37 was manually annotated 1 time for cluster AV.

Info for manual annotations of cluster CZ4:

- Start number 9 was manually annotated 1 time for cluster CZ4.
- Start number 45 was manually annotated 1 time for cluster CZ4.
- Start number 52 was manually annotated 1 time for cluster CZ4.
- Start number 53 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster DC2:

- Start number 66 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE2:

- Start number 56 was manually annotated 1 time for cluster DE2.

Info for manual annotations of cluster DV:

- Start number 11 was manually annotated 1 time for cluster DV.
- Start number 39 was manually annotated 1 time for cluster DV.

- Start number 52 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster ED1:

- Start number 32 was manually annotated 1 time for cluster ED1.

Info for manual annotations of cluster FF:

- Start number 16 was manually annotated 1 time for cluster FF.
- Start number 17 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster FL:

- Start number 14 was manually annotated 1 time for cluster FL.

Info for manual annotations of cluster FQ1:

- Start number 51 was manually annotated 1 time for cluster FQ1.

### ***Gene Information:***

Gene: AirForce1\_38 Start: 27929, Stop: 29503, Start Num: 14

Candidate Starts for AirForce1\_38:

(Start: 14 @27929 has 1 MA's), (15, 27938), (21, 27977), (25, 28001), (34, 28088), (59, 28172), (68, 28217), (76, 28265), (83, 28298), (96, 28373), (121, 28529), (122, 28535), (138, 28631), (181, 28901), (188, 28937), (210, 29078), (238, 29216), (258, 29300), (269, 29339),

Gene: AllBusiness\_30 Start: 23518, Stop: 24981, Start Num: 17

Candidate Starts for AllBusiness\_30:

(Start: 17 @23518 has 1 MA's), (22, 23557), (24, 23563), (31, 23641), (44, 23686), (Start: 53 @23707 has 1 MA's), (72, 23815), (90, 23914), (98, 23941), (103, 23980), (107, 24004), (112, 24028), (114, 24034), (117, 24046), (118, 24055), (125, 24088), (133, 24148), (134, 24151), (135, 24154), (144, 24199), (153, 24253), (160, 24301), (168, 24361), (193, 24496), (196, 24517), (199, 24535), (205, 24568), (222, 24625), (224, 24652), (247, 24760), (276, 24835), (278, 24838), (280, 24844), (312, 24970),

Gene: Ball\_23 Start: 18846, Stop: 20555, Start Num: 1

Candidate Starts for Ball\_23:

(1, 18846), (3, 18864), (6, 18918), (7, 18930), (8, 18936), (10, 18954), (18, 19086), (35, 19233), (42, 19254), (Start: 66 @19356 has 1 MA's), (81, 19428), (92, 19500), (103, 19566), (127, 19689), (132, 19725), (157, 19857), (167, 19926), (168, 19935), (221, 20226), (236, 20307), (259, 20403), (267, 20430), (291, 20490), (302, 20541),

Gene: Belphegor\_23 Start: 18351, Stop: 19574, Start Num: 56

Candidate Starts for Belphegor\_23:

(49, 18330), (Start: 53 @18339 has 1 MA's), (Start: 56 @18351 has 1 MA's), (71, 18402), (93, 18510), (104, 18582), (107, 18594), (121, 18657), (158, 18858), (173, 18963), (177, 18984), (294, 19458),

Gene: Casserole\_16 Start: 11888, Stop: 13183, Start Num: 37

Candidate Starts for Casserole\_16:

(Start: 37 @11888 has 1 MA's), (40, 11900), (86, 12113), (91, 12134), (97, 12155), (109, 12218), (134, 12359), (136, 12368), (139, 12383), (143, 12404), (146, 12419), (158, 12488), (173, 12575), (178, 12599), (208, 12761), (211, 12782), (214, 12800), (262, 13010), (287, 13067), (297, 13118),

Gene: Cassini\_26 Start: 20711, Stop: 21847, Start Num: 68

Candidate Starts for Cassini\_26:

(68, 20711), (102, 20897), (112, 20948), (115, 20957), (127, 21020), (133, 21059), (148, 21131), (156, 21167), (169, 21239), (172, 21260), (184, 21317), (190, 21353), (194, 21380), (197, 21398), (212, 21467), (227, 21536), (234, 21566), (235, 21572), (252, 21632), (258, 21653), (296, 21761),

Gene: Clark\_29 Start: 23989, Stop: 25173, Start Num: 52

Candidate Starts for Clark\_29:

(Start: 52 @23989 has 2 MA's), (101, 24238), (108, 24271), (113, 24295), (114, 24298), (131, 24388), (152, 24484), (172, 24598), (191, 24694), (194, 24715), (195, 24718), (214, 24808), (216, 24811), (230, 24874), (231, 24877), (245, 24940), (284, 25045), (305, 25126), (308, 25150),

Gene: Clown\_40 Start: 32981, Stop: 34120, Start Num: 66

Candidate Starts for Clown\_40:

(36, 32864), (43, 32885), (Start: 66 @32981 has 1 MA's), (69, 32990), (70, 32999), (79, 33047), (80, 33050), (84, 33089), (95, 33134), (127, 33305), (133, 33344), (164, 33509), (165, 33512), (189, 33650), (230, 33854), (233, 33866), (237, 33881), (247, 33926), (250, 33938), (255, 33950), (264, 33989), (270, 34001), (272, 34004), (284, 34031), (299, 34097), (301, 34103),

Gene: Dolores\_29 Start: 24052, Stop: 25317, Start Num: 53

Candidate Starts for Dolores\_29:

(47, 24037), (Start: 53 @24052 has 1 MA's), (57, 24073), (95, 24247), (114, 24346), (129, 24433), (131, 24454), (138, 24481), (146, 24526), (158, 24592), (179, 24730), (193, 24802), (198, 24838), (201, 24847), (203, 24859), (290, 25195), (297, 25237), (301, 25249),

Gene: E3\_gp84 Start: 44580, Stop: 46055, Start Num: 19

Candidate Starts for E3\_gp84:

(Start: 14 @44547 has 1 MA's), (19, 44580), (30, 44691), (33, 44703), (Start: 51 @44754 has 1 MA's), (65, 44820), (67, 44835), (95, 44988), (100, 45027), (107, 45060), (113, 45087), (125, 45144), (140, 45231), (159, 45342), (168, 45390), (173, 45420), (183, 45471), (197, 45555), (208, 45615), (263, 45873), (286, 45924), (304, 46002),

Gene: Footloose\_27 Start: 18334, Stop: 19683, Start Num: 29

Candidate Starts for Footloose\_27:

(Start: 29 @18334 has 1 MA's), (34, 18355), (60, 18439), (61, 18445), (63, 18454), (82, 18556), (88, 18598), (91, 18610), (110, 18703), (130, 18820), (133, 18847), (141, 18877), (144, 18895), (146, 18907), (168, 19057), (173, 19087), (178, 19111), (192, 19186), (227, 19357), (234, 19387), (241, 19417), (251, 19459), (254, 19465), (261, 19495), (266, 19513), (268, 19519), (271, 19522), (277, 19537), (292, 19579), (293, 19585), (306, 19636), (311, 19669),

Gene: Hum25\_26 Start: 18853, Stop: 20148, Start Num: 51

Candidate Starts for Hum25\_26:

(Start: 51 @18853 has 1 MA's), (75, 18958), (80, 18979), (108, 19132), (110, 19138), (118, 19180), (121, 19192), (153, 19369), (155, 19375), (157, 19393), (168, 19480), (169, 19486), (175, 19522), (182, 19555), (192, 19612), (196, 19636), (201, 19660), (203, 19675), (211, 19726), (230, 19828), (261, 19954), (263, 19963), (295, 20050), (303, 20089), (307, 20098), (310, 20125),

Gene: Jacko\_52 Start: 28573, Stop: 29838, Start Num: 32

Candidate Starts for Jacko\_52:

(20, 28468), (Start: 32 @28573 has 1 MA's), (38, 28600), (54, 28651), (79, 28747), (90, 28816), (98, 28843), (117, 28948), (128, 29008), (156, 29146), (176, 29263), (178, 29272), (185, 29305), (187, 29317), (204, 29422), (239, 29572), (243, 29590), (260, 29656), (263, 29668), (282, 29710), (295, 29752),

Gene: Julie\_32 Start: 23996, Stop: 25537, Start Num: 16

Candidate Starts for Julie\_32:

(Start: 16 @23996 has 1 MA's), (Start: 29 @24128 has 1 MA's), (Start: 52 @24200 has 2 MA's), (55, 24224), (62, 24248), (Start: 66 @24275 has 1 MA's), (81, 24347), (99, 24461), (106, 24509), (115, 24545), (142, 24716), (151, 24773), (158, 24821), (173, 24929), (178, 24953), (190, 25016), (196, 25055), (200, 25082), (204, 25109), (219, 25169), (242, 25298),

Gene: Lambo\_5 Start: 4968, Stop: 6464, Start Num: 11

Candidate Starts for Lambo\_5:

(Start: 11 @4968 has 1 MA's), (23, 5088), (28, 5163), (33, 5181), (35, 5193), (55, 5256), (59, 5265), (Start: 66 @5301 has 1 MA's), (74, 5334), (75, 5337), (89, 5421), (90, 5424), (107, 5514), (111, 5535), (112, 5538), (121, 5586), (127, 5622), (154, 5763), (156, 5769), (174, 5889), (187, 5946), (202, 6030), (206, 6048), (221, 6111), (222, 6114), (223, 6117), (225, 6141), (229, 6165), (231, 6171), (246, 6234), (263, 6294), (295, 6372), (300, 6402), (311, 6450),

Gene: Makai\_21 Start: 16363, Stop: 17601, Start Num: 41

Candidate Starts for Makai\_21:

(Start: 41 @16363 has 1 MA's), (64, 16444), (103, 16657), (108, 16684), (126, 16771), (134, 16822), (170, 17038), (204, 17215), (257, 17452), (298, 17587),

Gene: MoiGyank\_6 Start: 5472, Stop: 6656, Start Num: 52

Candidate Starts for MoiGyank\_6:

(Start: 52 @5472 has 2 MA's), (101, 5721), (113, 5778), (114, 5781), (131, 5871), (145, 5925), (152, 5967), (172, 6081), (191, 6177), (194, 6198), (214, 6291), (216, 6294), (230, 6357), (231, 6360), (240, 6402), (245, 6423), (275, 6513), (284, 6528), (308, 6633),

Gene: Oregano\_28 Start: 23329, Stop: 24969, Start Num: 9

Candidate Starts for Oregano\_28:

(2, 23233), (4, 23257), (Start: 9 @23329 has 1 MA's), (46, 23644), (69, 23737), (78, 23791), (94, 23884), (107, 23962), (115, 23995), (119, 24025), (120, 24028), (122, 24043), (133, 24118), (147, 24190), (150, 24193), (157, 24250), (162, 24280), (166, 24313), (168, 24328), (171, 24352), (173, 24358), (213, 24574), (218, 24583), (221, 24598), (226, 24643), (228, 24652), (244, 24730), (273, 24820), (279, 24838), (281, 24841), (291, 24871), (299, 24913),

Gene: PhriskyACE\_29 Start: 23262, Stop: 24551, Start Num: 45

Candidate Starts for PhriskyACE\_29:

(Start: 45 @23262 has 1 MA's), (48, 23271), (95, 23475), (103, 23523), (105, 23541), (114, 23574), (124, 23628), (129, 23661), (131, 23682), (139, 23718), (146, 23754), (166, 23880), (175, 23937), (178, 23949), (179, 23958), (186, 23988), (193, 24030), (198, 24066), (201, 24075), (215, 24150), (217, 24153), (232, 24234), (234, 24246), (265, 24372), (285, 24414), (288, 24423), (289, 24426), (290, 24429), (299, 24477), (301, 24483),

Gene: Pine5\_21 Start: 16580, Stop: 17845, Start Num: 34

Candidate Starts for Pine5\_21:

(26, 16523), (34, 16580), (59, 16664), (77, 16757), (87, 16811), (89, 16823), (102, 16889), (103, 16892), (123, 16976), (152, 17123), (161, 17177), (163, 17180), (173, 17261), (175, 17273), (180, 17297), (234, 17555), (259, 17657), (263, 17669), (283, 17714),

Gene: Ranch\_5 Start: 3845, Stop: 5074, Start Num: 39

Candidate Starts for Ranch\_5:

(Start: 39 @3845 has 1 MA's), (50, 3866), (58, 3896), (87, 4040), (89, 4052), (95, 4073), (103, 4121), (135, 4268), (136, 4274), (137, 4277), (149, 4334), (152, 4355), (163, 4412), (172, 4490), (173, 4493),

(175, 4505), (176, 4508), (180, 4529), (192, 4592), (207, 4667), (220, 4712), (231, 4772), (248, 4850),  
(249, 4853), (253, 4868), (256, 4883), (264, 4904),

Gene: Shocker\_30 Start: 16907, Stop: 18499, Start Num: 5

Candidate Starts for Shocker\_30:

(Start: 5 @16907 has 1 MA's), (7, 16937), (12, 17045), (13, 17057), (27, 17183), (73, 17384), (85,  
17456), (97, 17504), (99, 17522), (116, 17606), (168, 17882), (209, 18101), (274, 18359), (295,  
18413), (303, 18452), (309, 18485), (311, 18491),