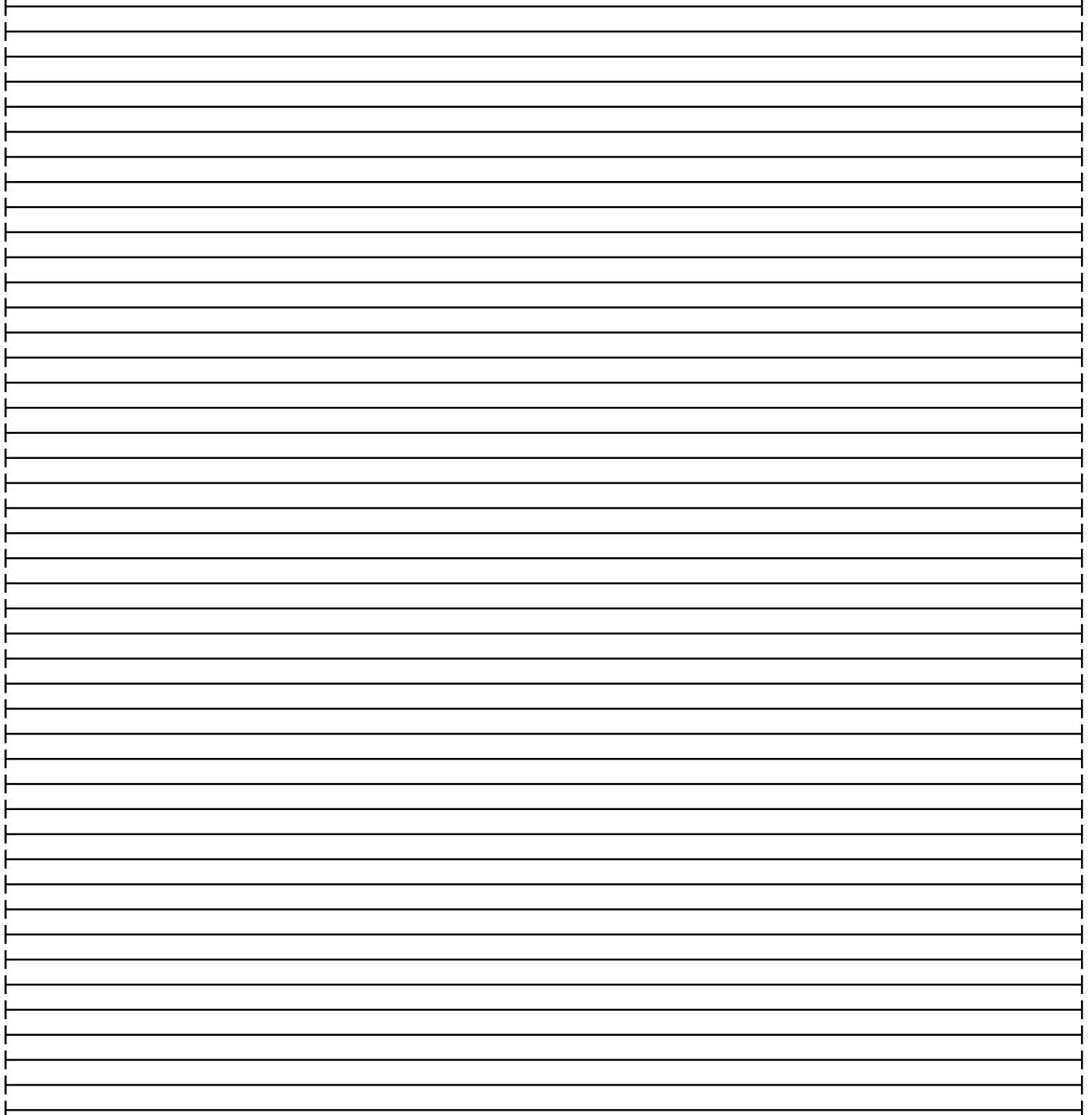
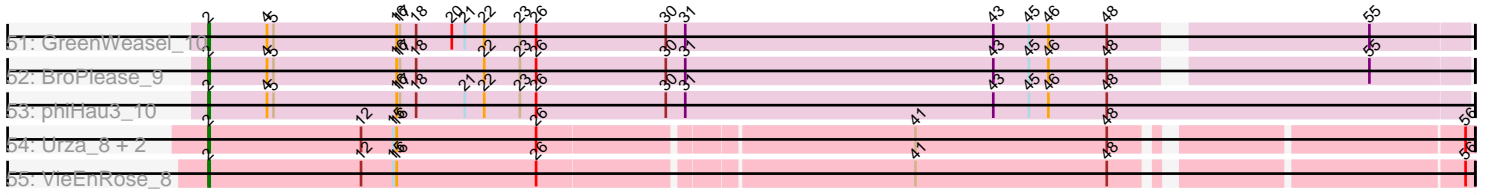


Pham 311386



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 311386 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 311386 has 117 members, 7 are drafts.

Phages represented in each track:

- Track 1 : TuanPN_8, Emaanora_10, Snorlax_8, OzzyJ_9, Asten_8, Dwayne_8, Triste_8, BarryBee_10, Werner_8, Maneekul_8, Ejemplo_8, Hippo_8, TagePhighter_9, Whatever_8, Yasdnil_8
- Track 2 : Nerdos_8, SunsetPointe_8, Leviticus_8, BeardedLady_9, Bovely_8, Hydra_10, Aaronocolus_8, Legacy_8, Unstoppable_8, Ozzie_8, Indigo_8, Esperer_8, Caliburn_8
- Track 3 : Nanodon_10
- Track 4 : Lorelei_8, Zemlya_9, Nabi_8, Celeste_8, Rana_8
- Track 5 : Lannister_9
- Track 6 : SarahRose_8, Chucky_8
- Track 7 : Sujidade_9, Lika_8
- Track 8 : Godpower_9
- Track 9 : Oliyinyk_9, BryanRecycles_9, EnochSoames_9, Izzy_9, Eddasa_9, Jash_9, Rusticus_9
- Track 10 : Katalie_9, South40_9, RedBear_10
- Track 11 : Phettuccine_8
- Track 12 : Dattran_9, Brataylor_9, Goby_8, Toma_8
- Track 13 : Danzina_9
- Track 14 : Jevington_10
- Track 15 : TinaBelcher_8, TrvxScott_7
- Track 16 : Haizum_8
- Track 17 : Triumph_10, Axiom_9
- Track 18 : Marav_11
- Track 19 : Tefunt_8, Nishikigoi_8, Amethyst_8, Diane_8
- Track 20 : Loofah_9, Paedore_8
- Track 21 : BartholomewSD_10, Alvy_10, Bowden_9
- Track 22 : Daudau_8
- Track 23 : Issmi_9
- Track 24 : Caelum_9
- Track 25 : Andris_8
- Track 26 : R4_8, ELB20_07
- Track 27 : Pablito_8
- Track 28 : Zainub_10

- Track 29 : Paolo_10
- Track 30 : Hank144_9
- Track 31 : Puginator_10
- Track 32 : SqueakyClean_9, Janus_9
- Track 33 : Animus_9
- Track 34 : Omar_9
- Track 35 : Superstar_10
- Track 36 : Thestral_9
- Track 37 : GirlDinner_8
- Track 38 : phiCAM_09
- Track 39 : Alsaber_9, Dexers_7, Sudan_8, Kaine_8
- Track 40 : ZamZam_8
- Track 41 : Vanseggelen_11
- Track 42 : Yosif_9
- Track 43 : Verse_8, Amela_8, SunkenRoot_10
- Track 44 : Provolone_9, ElGato_9, Conan_9
- Track 45 : Speedwell_13
- Track 46 : Celery_10
- Track 47 : Saftant_8
- Track 48 : Jhitchelle_7
- Track 49 : Pavo_9
- Track 50 : Verabelle_9
- Track 51 : GreenWeasel_10
- Track 52 : BroPlease_9
- Track 53 : phiHau3_10
- Track 54 : Urza_8, Celia_8, Itza_8
- Track 55 : VieEnRose_8

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

The start number called the most often in the published annotations is 2, it was called in 109 of the 110 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Aaronocolus_8, Alsaber_9, Alvy_10, Amela_8, Amethyst_8, Andris_8, Animus_9, Asten_8, Axiom_9, BarryBee_10, BartholomewSD_10, BeardedLady_9, Bovely_8, Bowden_9, Brataylor_9, BroPlease_9, BryanRecycles_9, Caelum_9, Caliburn_8, Celery_10, Celeste_8, Celia_8, Chucky_8, Conan_9, Danzina_9, Dattran_9, Daudau_8, Dexers_7, Diane_8, Dwayne_8, ELB20_07, Eddasa_9, Ejemplo_8, ElGato_9, Emaanora_10, EnochSoames_9, Esperer_8, GirlDinner_8, Goby_8, Godpower_9, GreenWeasel_10, Haizum_8, Hank144_9, Hippo_8, Hydra_10, Indigo_8, Issmi_9, Itza_8, Izzy_9, Janus_9, Jash_9, Jevington_10, Jhitchelle_7, Kaine_8, Katalie_9, Lannister_9, Legacy_8, Leviticus_8, Lika_8, Loofah_9, Lorelei_8, Maneekul_8, Marav_11, Nabi_8, Nanodon_10, Nerdos_8, Nishikigoi_8, Oliynyk_9, Omar_9, Ozzie_8, OzzyJ_9, Pablito_8, Paedore_8, Paolo_10, Pavo_9, Phettuccine_8, Provolone_9, Puginator_10, R4_8, Rana_8, RedBear_10, Rusticus_9, Saftant_8, SarahRose_8, Snorlax_8, South40_9, SqueakyClean_9, Sudan_8, Sujidade_9, SunkenRoot_10, SunsetPointe_8, Superstar_10, TagePhighter_9, Tefunt_8, Thestral_9, TinaBelcher_8, Toma_8, Triste_8, Triumph_10, TrvxScott_7, TuanPN_8, Unstoppable_8, Urza_8, Vanseggelen_11, Verabelle_9, Verse_8,

VieEnRose_8, Werner_8, Whatever_8, Yasdnil_8, Yosif_9, Zainub_10, ZamZam_8, Zemlya_9, phiHau3_10,

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

-

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

- Speedwell_13, phiCAM_09,

Summary by start number:

Start 2:

- Found in 115 of 117 (98.3%) of genes in pham
- Manual Annotations of this start: 109 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aaronocolus_8 (BD1), Alsaber_9 (BD3), Alvy_10 (BD2), Amela_8 (BD3), Amethyst_8 (BD2), Andris_8 (BD2), Animus_9 (BD2), Asten_8 (BD1), Axiom_9 (BD2), BarryBee_10 (BD1), BartholomewSD_10 (BD2), BeardedLady_9 (BD1), Bovely_8 (BD1), Bowden_9 (BD2), Brataylor_9 (BD1), BroPlease_9 (BD4), BryanRecycles_9 (BD1), Caelum_9 (BD2), Caliburn_8 (BD1), Celery_10 (BD3), Celeste_8 (BD1), Celia_8 (BD6), Chucky_8 (BD1), Conan_9 (BD3), Danzina_9 (BD1), Dattran_9 (BD1), Daudau_8 (BD2), Dexers_7 (BD3), Diane_8 (BD2), Dwayne_8 (BD1), ELB20_07 (BD2), Eddasa_9 (BD1), Ejemplo_8 (BD1), ElGato_9 (BD3), Emaanora_10 (BD1), EnochSoames_9 (BD1), Esperer_8 (BD1), GirlDinner_8 (BD2), Goby_8 (BD1), Godpower_9 (BD1), GreenWeasel_10 (BD4), Haizum_8 (BD2), Hank144_9 (BD2), Hippo_8 (BD1), Hydra_10 (BD1), Indigo_8 (BD1), Issmi_9 (BD2), Itza_8 (BD6), Izzy_9 (BD1), Janus_9 (BD2), Jash_9 (BD1), Jevington_10 (BD2), Jhitchelle_7 (BD3), Kaine_8 (BD3), Katalie_9 (BD1), Lannister_9 (BD1), Legacy_8 (BD1), Leviticus_8 (BD1), Lika_8 (BD1), Loofah_9 (BD2), Lorelei_8 (BD1), Maneekul_8 (BD1), Marav_11 (BD2), Nabi_8 (BD1), Nanodon_10 (BD1), Nerdos_8 (BD1), Nishikigoi_8 (BD2), Oliynk_9 (BD1), Omar_9 (BD2), Ozzie_8 (BD1), OzzyJ_9 (BD1), Pablito_8 (BD2), Paedore_8 (BD2), Paolo_10 (BD2), Pavo_9 (BD3), Phettuccine_8 (BD1), Provolone_9 (BD3), Puginator_10 (BD2), R4_8 (BD2), Rana_8 (BD1), RedBear_10 (BD1), Rusticus_9 (BD1), Saftant_8 (BD3), SarahRose_8 (BD1), Snorlax_8 (BD1), South40_9 (BD1), SqueakyClean_9 (BD2), Sudan_8 (BD3), Sujidade_9 (BD1), SunkenRoot_10 (BD3), SunsetPointe_8 (BD1), Superstar_10 (BD2), TagePhighter_9 (BD1), Tefunt_8 (BD2), Thestral_9 (BD2), TinaBelcher_8 (BD2), Toma_8 (BD1), Triste_8 (BD1), Triumph_10 (BD2), TrvxScott_7 (BD2), TuanPN_8 (BD1), Unstoppable_8 (BD1), Urza_8 (BD6), Vanseggelen_11 (BD3), Verabelle_9 (BD3), Verse_8 (BD3), VieEnRose_8 (BD6), Werner_8 (BD1), Whatever_8 (BD1), Yasdnil_8 (BD1), Yosif_9 (BD3), Zainub_10 (BD2), ZamZam_8 (BD3), Zemlya_9 (BD1), phiHau3_10 (BD4),

Start 15:

- Found in 27 of 117 (23.1%) of genes in pham
- Manual Annotations of this start: 1 of 110
- Called 7.4% of time when present
- Phage (with cluster) where this start called: Speedwell_13 (BD3), phiCAM_09 (BD3),

Summary by clusters:

There are 5 clusters represented in this pham: BD4, BD6, BD1, BD3, BD2,

Info for manual annotations of cluster BD1:

- Start number 2 was manually annotated 55 times for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 2 was manually annotated 33 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 2 was manually annotated 14 times for cluster BD3.
- Start number 15 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BD4:

- Start number 2 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:

- Start number 2 was manually annotated 4 times for cluster BD6.

Gene Information:

Gene: Aaronocolus_8 Start: 5520, Stop: 6632, Start Num: 2

Candidate Starts for Aaronocolus_8:

(Start: 2 @5520 has 109 MA's), (7, 5604), (16, 5694), (17, 5697), (19, 5724), (26, 5823), (41, 6159), (43, 6231), (48, 6336), (49, 6339), (50, 6435), (51, 6468), (54, 6510),

Gene: Alsaber_9 Start: 5622, Stop: 6731, Start Num: 2

Candidate Starts for Alsaber_9:

(Start: 2 @5622 has 109 MA's), (6, 5697), (Start: 15 @5793 has 1 MA's), (16, 5796), (17, 5799), (18, 5814), (23, 5910), (41, 6261), (43, 6333), (48, 6438), (49, 6441), (50, 6537), (54, 6612),

Gene: Alvy_10 Start: 5489, Stop: 6595, Start Num: 2

Candidate Starts for Alvy_10:

(Start: 2 @5489 has 109 MA's), (13, 5642), (Start: 15 @5660 has 1 MA's), (16, 5663), (17, 5666), (22, 5744), (27, 5813), (35, 5978), (38, 6050), (43, 6197), (48, 6302), (50, 6401),

Gene: Amela_8 Start: 5682, Stop: 6791, Start Num: 2

Candidate Starts for Amela_8:

(Start: 2 @5682 has 109 MA's), (6, 5757), (16, 5856), (17, 5859), (18, 5874), (19, 5886), (23, 5970), (41, 6321), (43, 6393), (48, 6498), (49, 6501), (50, 6597), (54, 6672),

Gene: Amethyst_8 Start: 5298, Stop: 6404, Start Num: 2

Candidate Starts for Amethyst_8:

(Start: 2 @5298 has 109 MA's), (13, 5451), (16, 5472), (17, 5475), (23, 5586), (38, 5859), (40, 5904), (43, 6006), (45, 6039), (48, 6111), (50, 6210), (55, 6315),

Gene: Andris_8 Start: 5338, Stop: 6462, Start Num: 2

Candidate Starts for Andris_8:

(Start: 2 @5338 has 109 MA's), (4, 5392), (16, 5512), (17, 5515), (25, 5638), (43, 6064), (48, 6169), (50, 6268),

Gene: Animus_9 Start: 5688, Stop: 6812, Start Num: 2

Candidate Starts for Animus_9:

(Start: 2 @5688 has 109 MA's), (16, 5862), (17, 5865), (22, 5943), (40, 6312), (43, 6414), (48, 6519), (50, 6618), (55, 6723),

Gene: Asten_8 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for Asten_8:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (41, 6127), (42, 6193), (43, 6199), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: Axiom_9 Start: 5347, Stop: 6471, Start Num: 2

Candidate Starts for Axiom_9:

(Start: 2 @5347 has 109 MA's), (4, 5401), (9, 5449), (13, 5500), (16, 5521), (17, 5524), (22, 5602), (24, 5641), (25, 5647), (43, 6073), (48, 6178), (50, 6277), (55, 6382),

Gene: BarryBee_10 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for BarryBee_10:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (41, 6127), (42, 6193), (43, 6199), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: BartholomewSD_10 Start: 5489, Stop: 6595, Start Num: 2

Candidate Starts for BartholomewSD_10:

(Start: 2 @5489 has 109 MA's), (13, 5642), (Start: 15 @5660 has 1 MA's), (16, 5663), (17, 5666), (22, 5744), (27, 5813), (35, 5978), (38, 6050), (43, 6197), (48, 6302), (50, 6401),

Gene: BeardedLady_9 Start: 5767, Stop: 6879, Start Num: 2

Candidate Starts for BeardedLady_9:

(Start: 2 @5767 has 109 MA's), (7, 5851), (16, 5941), (17, 5944), (19, 5971), (26, 6070), (41, 6406), (43, 6478), (48, 6583), (49, 6586), (50, 6682), (51, 6715), (54, 6757),

Gene: Bovely_8 Start: 5526, Stop: 6638, Start Num: 2

Candidate Starts for Bovely_8:

(Start: 2 @5526 has 109 MA's), (7, 5610), (16, 5700), (17, 5703), (19, 5730), (26, 5829), (41, 6165), (43, 6237), (48, 6342), (49, 6345), (50, 6441), (51, 6474), (54, 6516),

Gene: Bowden_9 Start: 5400, Stop: 6506, Start Num: 2

Candidate Starts for Bowden_9:

(Start: 2 @5400 has 109 MA's), (13, 5553), (Start: 15 @5571 has 1 MA's), (16, 5574), (17, 5577), (22, 5655), (27, 5724), (35, 5889), (38, 5961), (43, 6108), (48, 6213), (50, 6312),

Gene: Brataylor_9 Start: 5491, Stop: 6603, Start Num: 2

Candidate Starts for Brataylor_9:

(Start: 2 @5491 has 109 MA's), (7, 5575), (14, 5656), (16, 5665), (17, 5668), (26, 5794), (41, 6130), (42, 6196), (43, 6202), (47, 6271), (48, 6307), (49, 6310), (50, 6406), (54, 6481),

Gene: BroPlease_9 Start: 5577, Stop: 6710, Start Num: 2

Candidate Starts for BroPlease_9:

(Start: 2 @5577 has 109 MA's), (4, 5631), (5, 5637), (16, 5751), (17, 5754), (18, 5769), (22, 5832), (23, 5865), (26, 5880), (30, 6000), (31, 6018), (43, 6303), (45, 6336), (46, 6354), (48, 6408), (55, 6621),

Gene: BryanRecycles_9 Start: 5680, Stop: 6792, Start Num: 2

Candidate Starts for BryanRecycles_9:

(Start: 2 @5680 has 109 MA's), (7, 5764), (16, 5854), (17, 5857), (19, 5884), (26, 5983), (41, 6319), (43, 6391), (48, 6496), (49, 6499), (54, 6670),

Gene: Caelum_9 Start: 5266, Stop: 6372, Start Num: 2

Candidate Starts for Caelum_9:

(Start: 2 @5266 has 109 MA's), (16, 5440), (17, 5443), (22, 5521), (44, 5995), (45, 6007), (48, 6079), (50, 6178), (55, 6283),

Gene: Caliburn_8 Start: 5500, Stop: 6612, Start Num: 2

Candidate Starts for Caliburn_8:

(Start: 2 @5500 has 109 MA's), (7, 5584), (16, 5674), (17, 5677), (19, 5704), (26, 5803), (41, 6139), (43, 6211), (48, 6316), (49, 6319), (50, 6415), (51, 6448), (54, 6490),

Gene: Celery_10 Start: 5593, Stop: 6693, Start Num: 2

Candidate Starts for Celery_10:

(Start: 2 @5593 has 109 MA's), (6, 5668), (11, 5713), (16, 5767), (17, 5770), (18, 5785), (19, 5797), (23, 5881), (29, 5932), (34, 6073), (41, 6223), (43, 6295), (48, 6400), (49, 6403), (50, 6499), (51, 6532), (54, 6574),

Gene: Celeste_8 Start: 5490, Stop: 6602, Start Num: 2

Candidate Starts for Celeste_8:

(Start: 2 @5490 has 109 MA's), (7, 5574), (14, 5655), (16, 5664), (17, 5667), (26, 5793), (41, 6129), (42, 6195), (43, 6201), (47, 6270), (48, 6306), (49, 6309), (50, 6405), (54, 6480),

Gene: Celia_8 Start: 5827, Stop: 6930, Start Num: 2

Candidate Starts for Celia_8:

(Start: 2 @5827 has 109 MA's), (12, 5968), (Start: 15 @5998 has 1 MA's), (16, 6001), (26, 6130), (41, 6457), (48, 6634), (56, 6922),

Gene: Chucky_8 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for Chucky_8:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (36, 5990), (41, 6128), (42, 6194), (43, 6200), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: Conan_9 Start: 5332, Stop: 6441, Start Num: 2

Candidate Starts for Conan_9:

(Start: 2 @5332 has 109 MA's), (6, 5407), (16, 5506), (17, 5509), (18, 5524), (23, 5620), (41, 5971), (43, 6043), (48, 6148), (49, 6151), (50, 6247), (54, 6322),

Gene: Danzina_9 Start: 5688, Stop: 6800, Start Num: 2

Candidate Starts for Danzina_9:

(Start: 2 @5688 has 109 MA's), (4, 5742), (7, 5772), (14, 5853), (16, 5862), (17, 5865), (26, 5991), (41, 6327), (42, 6393), (43, 6399), (47, 6468), (48, 6504), (49, 6507), (50, 6603), (54, 6678),

Gene: Dattran_9 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for Dattran_9:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (41, 6128), (42, 6194), (43, 6200), (47, 6269), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: Daudau_8 Start: 5312, Stop: 6397, Start Num: 2

Candidate Starts for Daudau_8:

(Start: 2 @5312 has 109 MA's), (4, 5366), (8, 5408), (10, 5426), (17, 5489), (25, 5612), (38, 5852), (43, 5999), (45, 6032), (48, 6104), (50, 6203), (55, 6308),

Gene: Dexers_7 Start: 5325, Stop: 6434, Start Num: 2

Candidate Starts for Dexers_7:

(Start: 2 @5325 has 109 MA's), (6, 5400), (Start: 15 @5496 has 1 MA's), (16, 5499), (17, 5502), (18, 5517), (23, 5613), (41, 5964), (43, 6036), (48, 6141), (49, 6144), (50, 6240), (54, 6315),

Gene: Diane_8 Start: 5300, Stop: 6406, Start Num: 2

Candidate Starts for Diane_8:

(Start: 2 @5300 has 109 MA's), (13, 5453), (16, 5474), (17, 5477), (23, 5588), (38, 5861), (40, 5906), (43, 6008), (45, 6041), (48, 6113), (50, 6212), (55, 6317),

Gene: Dwayne_8 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for Dwayne_8:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (41, 6128), (42, 6194), (43, 6200), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: ELB20_07 Start: 5354, Stop: 6463, Start Num: 2

Candidate Starts for ELB20_07:

(Start: 2 @5354 has 109 MA's), (9, 5456), (13, 5507), (Start: 15 @5525 has 1 MA's), (16, 5528), (17, 5531), (18, 5546), (22, 5609), (25, 5654), (30, 5777), (38, 5918), (43, 6065), (48, 6170), (50, 6269),

Gene: Eddasa_9 Start: 5680, Stop: 6792, Start Num: 2

Candidate Starts for Eddasa_9:

(Start: 2 @5680 has 109 MA's), (7, 5764), (16, 5854), (17, 5857), (19, 5884), (26, 5983), (41, 6319), (43, 6391), (48, 6496), (49, 6499), (54, 6670),

Gene: Ejemplo_8 Start: 5492, Stop: 6604, Start Num: 2

Candidate Starts for Ejemplo_8:

(Start: 2 @5492 has 109 MA's), (7, 5576), (14, 5657), (16, 5666), (17, 5669), (26, 5795), (41, 6131), (42, 6197), (43, 6203), (48, 6308), (49, 6311), (50, 6407), (54, 6482),

Gene: ElGato_9 Start: 5335, Stop: 6444, Start Num: 2

Candidate Starts for ElGato_9:

(Start: 2 @5335 has 109 MA's), (6, 5410), (16, 5509), (17, 5512), (18, 5527), (23, 5623), (41, 5974), (43, 6046), (48, 6151), (49, 6154), (50, 6250), (54, 6325),

Gene: Emaanora_10 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for Emaanora_10:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (41, 6127), (42, 6193), (43, 6199), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: EnochSoames_9 Start: 5676, Stop: 6788, Start Num: 2

Candidate Starts for EnochSoames_9:

(Start: 2 @5676 has 109 MA's), (7, 5760), (16, 5850), (17, 5853), (19, 5880), (26, 5979), (41, 6315), (43, 6387), (48, 6492), (49, 6495), (54, 6666),

Gene: Esperer_8 Start: 5520, Stop: 6632, Start Num: 2

Candidate Starts for Esperer_8:

(Start: 2 @5520 has 109 MA's), (7, 5604), (16, 5694), (17, 5697), (19, 5724), (26, 5823), (41, 6159), (43, 6231), (48, 6336), (49, 6339), (50, 6435), (51, 6468), (54, 6510),

Gene: GirlDinner_8 Start: 5351, Stop: 6475, Start Num: 2

Candidate Starts for GirlDinner_8:

(Start: 2 @5351 has 109 MA's), (13, 5504), (16, 5525), (17, 5528), (22, 5606), (25, 5651), (40, 5975), (43, 6077), (48, 6182), (50, 6281), (55, 6386),

Gene: Goby_8 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for Goby_8:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (41, 6128), (42, 6194), (43, 6200), (47, 6269), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: Godpower_9 Start: 5492, Stop: 6604, Start Num: 2

Candidate Starts for Godpower_9:

(Start: 2 @5492 has 109 MA's), (7, 5576), (14, 5657), (16, 5666), (17, 5669), (26, 5795), (34, 5981), (41, 6131), (42, 6197), (43, 6203), (48, 6308), (49, 6311), (50, 6407), (54, 6482),

Gene: GreenWeasel_10 Start: 5586, Stop: 6719, Start Num: 2

Candidate Starts for GreenWeasel_10:

(Start: 2 @5586 has 109 MA's), (4, 5640), (5, 5646), (16, 5760), (17, 5763), (18, 5778), (20, 5811), (21, 5823), (22, 5841), (23, 5874), (26, 5889), (30, 6009), (31, 6027), (43, 6312), (45, 6345), (46, 6363), (48, 6417), (55, 6630),

Gene: Haizum_8 Start: 5329, Stop: 6435, Start Num: 2

Candidate Starts for Haizum_8:

(Start: 2 @5329 has 109 MA's), (16, 5503), (17, 5506), (23, 5617), (40, 5935), (43, 6037), (45, 6070), (48, 6142), (50, 6241), (55, 6346),

Gene: Hank144_9 Start: 5631, Stop: 6749, Start Num: 2

Candidate Starts for Hank144_9:

(Start: 2 @5631 has 109 MA's), (13, 5784), (16, 5805), (17, 5808), (22, 5886), (30, 6054), (42, 6345), (43, 6351), (48, 6456), (50, 6555), (55, 6660),

Gene: Hippo_8 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for Hippo_8:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (41, 6127), (42, 6193), (43, 6199), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: Hydra_10 Start: 6057, Stop: 7169, Start Num: 2

Candidate Starts for Hydra_10:

(Start: 2 @6057 has 109 MA's), (7, 6141), (16, 6231), (17, 6234), (19, 6261), (26, 6360), (41, 6696), (43, 6768), (48, 6873), (49, 6876), (50, 6972), (51, 7005), (54, 7047),

Gene: Indigo_8 Start: 5520, Stop: 6632, Start Num: 2

Candidate Starts for Indigo_8:

(Start: 2 @5520 has 109 MA's), (7, 5604), (16, 5694), (17, 5697), (19, 5724), (26, 5823), (41, 6159), (43, 6231), (48, 6336), (49, 6339), (50, 6435), (51, 6468), (54, 6510),

Gene: Issmi_9 Start: 5611, Stop: 6717, Start Num: 2

Candidate Starts for Issmi_9:

(Start: 2 @5611 has 109 MA's), (8, 5707), (16, 5785), (17, 5788), (22, 5866), (42, 6313), (44, 6340), (45, 6352), (48, 6424), (50, 6523),

Gene: Itza_8 Start: 5750, Stop: 6853, Start Num: 2

Candidate Starts for Itza_8:

(Start: 2 @5750 has 109 MA's), (12, 5891), (Start: 15 @5921 has 1 MA's), (16, 5924), (26, 6053), (41, 6380), (48, 6557), (56, 6845),

Gene: Izzy_9 Start: 5727, Stop: 6839, Start Num: 2

Candidate Starts for Izzy_9:

(Start: 2 @5727 has 109 MA's), (7, 5811), (16, 5901), (17, 5904), (19, 5931), (26, 6030), (41, 6366), (43, 6438), (48, 6543), (49, 6546), (54, 6717),

Gene: Janus_9 Start: 5688, Stop: 6812, Start Num: 2

Candidate Starts for Janus_9:

(Start: 2 @5688 has 109 MA's), (16, 5862), (17, 5865), (22, 5943), (25, 5988), (40, 6312), (43, 6414), (48, 6519), (50, 6618), (55, 6723),

Gene: Jash_9 Start: 5680, Stop: 6792, Start Num: 2

Candidate Starts for Jash_9:

(Start: 2 @5680 has 109 MA's), (7, 5764), (16, 5854), (17, 5857), (19, 5884), (26, 5983), (41, 6319), (43, 6391), (48, 6496), (49, 6499), (54, 6670),

Gene: Jevington_10 Start: 5904, Stop: 7001, Start Num: 2

Candidate Starts for Jevington_10:

(Start: 2 @5904 has 109 MA's), (4, 5958), (13, 6057), (Start: 15 @6075 has 1 MA's), (16, 6078), (17, 6081), (22, 6159), (27, 6228), (38, 6456), (43, 6603), (48, 6708), (50, 6807), (55, 6912),

Gene: Jhitchelle_7 Start: 5251, Stop: 6381, Start Num: 2

Candidate Starts for Jhitchelle_7:

(Start: 2 @5251 has 109 MA's), (6, 5326), (Start: 15 @5422 has 1 MA's), (16, 5425), (17, 5428), (18, 5443), (23, 5539), (34, 5740), (41, 5890), (43, 5962), (48, 6067), (49, 6070), (50, 6187), (54, 6262),

Gene: Kaine_8 Start: 5325, Stop: 6434, Start Num: 2

Candidate Starts for Kaine_8:

(Start: 2 @5325 has 109 MA's), (6, 5400), (Start: 15 @5496 has 1 MA's), (16, 5499), (17, 5502), (18, 5517), (23, 5613), (41, 5964), (43, 6036), (48, 6141), (49, 6144), (50, 6240), (54, 6315),

Gene: Katalie_9 Start: 5760, Stop: 6872, Start Num: 2

Candidate Starts for Katalie_9:

(Start: 2 @5760 has 109 MA's), (7, 5844), (14, 5925), (16, 5934), (17, 5937), (26, 6063), (41, 6399), (43, 6471), (47, 6540), (48, 6576), (49, 6579), (50, 6675), (54, 6750),

Gene: Lannister_9 Start: 5493, Stop: 6605, Start Num: 2

Candidate Starts for Lannister_9:

(Start: 2 @5493 has 109 MA's), (7, 5577), (14, 5658), (16, 5667), (17, 5670), (26, 5796), (41, 6132), (43, 6204), (48, 6309), (49, 6312), (50, 6408), (54, 6483),

Gene: Legacy_8 Start: 5500, Stop: 6612, Start Num: 2

Candidate Starts for Legacy_8:

(Start: 2 @5500 has 109 MA's), (7, 5584), (16, 5674), (17, 5677), (19, 5704), (26, 5803), (41, 6139), (43, 6211), (48, 6316), (49, 6319), (50, 6415), (51, 6448), (54, 6490),

Gene: Leviticus_8 Start: 5520, Stop: 6632, Start Num: 2

Candidate Starts for Leviticus_8:

(Start: 2 @5520 has 109 MA's), (7, 5604), (16, 5694), (17, 5697), (19, 5724), (26, 5823), (41, 6159), (43, 6231), (48, 6336), (49, 6339), (50, 6435), (51, 6468), (54, 6510),

Gene: Lika_8 Start: 5493, Stop: 6605, Start Num: 2

Candidate Starts for Lika_8:

(Start: 2 @5493 has 109 MA's), (7, 5577), (14, 5658), (16, 5667), (17, 5670), (26, 5796), (41, 6132), (42, 6198), (43, 6204), (48, 6309), (49, 6312), (50, 6408), (54, 6483),

Gene: Loofah_9 Start: 5404, Stop: 6513, Start Num: 2

Candidate Starts for Loofah_9:

(Start: 2 @5404 has 109 MA's), (9, 5506), (13, 5557), (Start: 15 @5575 has 1 MA's), (16, 5578), (17, 5581), (18, 5596), (25, 5704), (30, 5827), (33, 5869), (38, 5968), (43, 6115), (48, 6220), (50, 6319),

Gene: Lorelei_8 Start: 5486, Stop: 6598, Start Num: 2

Candidate Starts for Lorelei_8:

(Start: 2 @5486 has 109 MA's), (7, 5570), (14, 5651), (16, 5660), (17, 5663), (26, 5789), (41, 6125), (42, 6191), (43, 6197), (47, 6266), (48, 6302), (49, 6305), (50, 6401), (54, 6476),

Gene: Maneekul_8 Start: 5491, Stop: 6603, Start Num: 2

Candidate Starts for Maneekul_8:

(Start: 2 @5491 has 109 MA's), (7, 5575), (14, 5656), (16, 5665), (17, 5668), (26, 5794), (41, 6130), (42, 6196), (43, 6202), (48, 6307), (49, 6310), (50, 6406), (54, 6481),

Gene: Marav_11 Start: 6254, Stop: 7351, Start Num: 2

Candidate Starts for Marav_11:

(Start: 2 @6254 has 109 MA's), (4, 6308), (16, 6428), (17, 6431), (22, 6509), (23, 6542), (27, 6578), (38, 6806), (43, 6953), (48, 7058), (50, 7157), (55, 7262),

Gene: Nabi_8 Start: 5486, Stop: 6598, Start Num: 2

Candidate Starts for Nabi_8:

(Start: 2 @5486 has 109 MA's), (7, 5570), (14, 5651), (16, 5660), (17, 5663), (26, 5789), (41, 6125), (42, 6191), (43, 6197), (47, 6266), (48, 6302), (49, 6305), (50, 6401), (54, 6476),

Gene: Nanodon_10 Start: 5682, Stop: 6794, Start Num: 2

Candidate Starts for Nanodon_10:

(Start: 2 @5682 has 109 MA's), (7, 5766), (16, 5856), (17, 5859), (26, 5985), (41, 6321), (42, 6387), (43, 6393), (48, 6498), (49, 6501), (54, 6672),

Gene: Nerdos_8 Start: 5520, Stop: 6632, Start Num: 2

Candidate Starts for Nerdos_8:

(Start: 2 @5520 has 109 MA's), (7, 5604), (16, 5694), (17, 5697), (19, 5724), (26, 5823), (41, 6159), (43, 6231), (48, 6336), (49, 6339), (50, 6435), (51, 6468), (54, 6510),

Gene: Nishikigoi_8 Start: 5329, Stop: 6435, Start Num: 2

Candidate Starts for Nishikigoi_8:

(Start: 2 @5329 has 109 MA's), (13, 5482), (16, 5503), (17, 5506), (23, 5617), (38, 5890), (40, 5935), (43, 6037), (45, 6070), (48, 6142), (50, 6241), (55, 6346),

Gene: Oliynyk_9 Start: 5680, Stop: 6792, Start Num: 2

Candidate Starts for Oliynyk_9:

(Start: 2 @5680 has 109 MA's), (7, 5764), (16, 5854), (17, 5857), (19, 5884), (26, 5983), (41, 6319), (43, 6391), (48, 6496), (49, 6499), (54, 6670),

Gene: Omar_9 Start: 5554, Stop: 6660, Start Num: 2

Candidate Starts for Omar_9:

(Start: 2 @5554 has 109 MA's), (3, 5596), (4, 5608), (16, 5728), (17, 5731), (22, 5809), (23, 5842), (28, 5881), (38, 6115), (43, 6262), (44, 6283), (45, 6295), (48, 6367), (50, 6466), (55, 6571),

Gene: Ozzie_8 Start: 5500, Stop: 6612, Start Num: 2

Candidate Starts for Ozzie_8:

(Start: 2 @5500 has 109 MA's), (7, 5584), (16, 5674), (17, 5677), (19, 5704), (26, 5803), (41, 6139), (43, 6211), (48, 6316), (49, 6319), (50, 6415), (51, 6448), (54, 6490),

Gene: OzzyJ_9 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for OzzyJ_9:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (41, 6128), (42, 6194), (43, 6200), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: Pablito_8 Start: 5372, Stop: 6490, Start Num: 2

Candidate Starts for Pablito_8:

(Start: 2 @5372 has 109 MA's), (13, 5525), (Start: 15 @5543 has 1 MA's), (16, 5546), (17, 5549), (22, 5627), (24, 5666), (25, 5672), (30, 5795), (43, 6092), (48, 6197), (50, 6296), (55, 6401),

Gene: Paedore_8 Start: 5404, Stop: 6513, Start Num: 2

Candidate Starts for Paedore_8:

(Start: 2 @5404 has 109 MA's), (9, 5506), (13, 5557), (Start: 15 @5575 has 1 MA's), (16, 5578), (17, 5581), (18, 5596), (25, 5704), (30, 5827), (33, 5869), (38, 5968), (43, 6115), (48, 6220), (50, 6319),

Gene: Paolo_10 Start: 5946, Stop: 7043, Start Num: 2

Candidate Starts for Paolo_10:

(Start: 2 @5946 has 109 MA's), (5, 6006), (13, 6099), (16, 6120), (17, 6123), (21, 6183), (22, 6201), (27, 6270), (30, 6366), (38, 6498), (43, 6645), (48, 6750), (50, 6849), (55, 6954),

Gene: Pavo_9 Start: 5605, Stop: 6714, Start Num: 2

Candidate Starts for Pavo_9:

(Start: 2 @5605 has 109 MA's), (6, 5680), (16, 5779), (17, 5782), (18, 5797), (23, 5893), (37, 6160), (41, 6244), (43, 6316), (48, 6421), (49, 6424), (50, 6520), (54, 6595),

Gene: Phettuccine_8 Start: 5520, Stop: 6632, Start Num: 2

Candidate Starts for Phettuccine_8:

(Start: 2 @5520 has 109 MA's), (7, 5604), (16, 5694), (17, 5697), (26, 5823), (41, 6159), (43, 6231), (48, 6336), (49, 6339), (50, 6435), (51, 6468), (54, 6510),

Gene: Provolone_9 Start: 5335, Stop: 6444, Start Num: 2

Candidate Starts for Provolone_9:

(Start: 2 @5335 has 109 MA's), (6, 5410), (16, 5509), (17, 5512), (18, 5527), (23, 5623), (41, 5974), (43, 6046), (48, 6151), (49, 6154), (50, 6250), (54, 6325),

Gene: Puginator_10 Start: 5892, Stop: 6989, Start Num: 2

Candidate Starts for Puginator_10:

(Start: 2 @5892 has 109 MA's), (16, 6066), (17, 6069), (22, 6147), (27, 6216), (38, 6444), (43, 6591), (48, 6696), (50, 6795), (55, 6900),

Gene: R4_8 Start: 5365, Stop: 6474, Start Num: 2

Candidate Starts for R4_8:

(Start: 2 @5365 has 109 MA's), (9, 5467), (13, 5518), (Start: 15 @5536 has 1 MA's), (16, 5539), (17, 5542), (18, 5557), (22, 5620), (25, 5665), (30, 5788), (38, 5929), (43, 6076), (48, 6181), (50, 6280),

Gene: Rana_8 Start: 5486, Stop: 6598, Start Num: 2

Candidate Starts for Rana_8:

(Start: 2 @5486 has 109 MA's), (7, 5570), (14, 5651), (16, 5660), (17, 5663), (26, 5789), (41, 6125), (42, 6191), (43, 6197), (47, 6266), (48, 6302), (49, 6305), (50, 6401), (54, 6476),

Gene: RedBear_10 Start: 5760, Stop: 6872, Start Num: 2

Candidate Starts for RedBear_10:

(Start: 2 @5760 has 109 MA's), (7, 5844), (14, 5925), (16, 5934), (17, 5937), (26, 6063), (41, 6399), (43, 6471), (47, 6540), (48, 6576), (49, 6579), (50, 6675), (54, 6750),

Gene: Rusticus_9 Start: 5680, Stop: 6792, Start Num: 2

Candidate Starts for Rusticus_9:

(Start: 2 @5680 has 109 MA's), (7, 5764), (16, 5854), (17, 5857), (19, 5884), (26, 5983), (41, 6319), (43, 6391), (48, 6496), (49, 6499), (54, 6670),

Gene: Saftant_8 Start: 5629, Stop: 6723, Start Num: 2

Candidate Starts for Saftant_8:

(Start: 2 @5629 has 109 MA's), (6, 5704), (8, 5725), (Start: 15 @5800 has 1 MA's), (16, 5803), (17, 5806), (18, 5821), (35, 6106), (39, 6184), (41, 6253), (43, 6325), (48, 6430), (49, 6433), (50, 6529), (51, 6562), (53, 6592), (54, 6604),

Gene: SarahRose_8 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for SarahRose_8:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (36, 5989), (41, 6127), (42, 6193), (43, 6199), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: Snorlax_8 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for Snorlax_8:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (41, 6127), (42, 6193), (43, 6199), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: South40_9 Start: 5760, Stop: 6872, Start Num: 2

Candidate Starts for South40_9:

(Start: 2 @5760 has 109 MA's), (7, 5844), (14, 5925), (16, 5934), (17, 5937), (26, 6063), (41, 6399), (43, 6471), (47, 6540), (48, 6576), (49, 6579), (50, 6675), (54, 6750),

Gene: Speedwell_13 Start: 7490, Stop: 8413, Start Num: 15

Candidate Starts for Speedwell_13:

(Start: 15 @7490 has 1 MA's), (16, 7493), (17, 7496), (18, 7511), (23, 7607), (35, 7796), (41, 7943), (43, 8015), (48, 8120), (49, 8123), (50, 8219), (54, 8294),

Gene: SqueakyClean_9 Start: 5614, Stop: 6738, Start Num: 2

Candidate Starts for SqueakyClean_9:

(Start: 2 @5614 has 109 MA's), (16, 5788), (17, 5791), (22, 5869), (25, 5914), (40, 6238), (43, 6340), (48, 6445), (50, 6544), (55, 6649),

Gene: Sudan_8 Start: 5612, Stop: 6721, Start Num: 2

Candidate Starts for Sudan_8:

(Start: 2 @5612 has 109 MA's), (6, 5687), (Start: 15 @5783 has 1 MA's), (16, 5786), (17, 5789), (18, 5804), (23, 5900), (41, 6251), (43, 6323), (48, 6428), (49, 6431), (50, 6527), (54, 6602),

Gene: Sujidade_9 Start: 5784, Stop: 6896, Start Num: 2

Candidate Starts for Sujidade_9:

(Start: 2 @5784 has 109 MA's), (7, 5868), (14, 5949), (16, 5958), (17, 5961), (26, 6087), (41, 6423), (42, 6489), (43, 6495), (48, 6600), (49, 6603), (50, 6699), (54, 6774),

Gene: SunkenRoot_10 Start: 5675, Stop: 6784, Start Num: 2

Candidate Starts for SunkenRoot_10:

(Start: 2 @5675 has 109 MA's), (6, 5750), (16, 5849), (17, 5852), (18, 5867), (19, 5879), (23, 5963), (41, 6314), (43, 6386), (48, 6491), (49, 6494), (50, 6590), (54, 6665),

Gene: SunsetPointe_8 Start: 5519, Stop: 6631, Start Num: 2

Candidate Starts for SunsetPointe_8:

(Start: 2 @5519 has 109 MA's), (7, 5603), (16, 5693), (17, 5696), (19, 5723), (26, 5822), (41, 6158), (43, 6230), (48, 6335), (49, 6338), (50, 6434), (51, 6467), (54, 6509),

Gene: Superstar_10 Start: 6470, Stop: 7576, Start Num: 2

Candidate Starts for Superstar_10:

(1, 6314), (Start: 2 @6470 has 109 MA's), (9, 6572), (13, 6623), (Start: 15 @6641 has 1 MA's), (16, 6644), (17, 6647), (22, 6725), (23, 6758), (27, 6794), (38, 7031), (43, 7178), (45, 7211), (48, 7283), (50, 7382), (55, 7487),

Gene: TagePhighter_9 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for TagePhighter_9:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (41, 6127), (42, 6193), (43, 6199), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: Tefunt_8 Start: 5329, Stop: 6435, Start Num: 2

Candidate Starts for Tefunt_8:

(Start: 2 @5329 has 109 MA's), (13, 5482), (16, 5503), (17, 5506), (23, 5617), (38, 5890), (40, 5935), (43, 6037), (45, 6070), (48, 6142), (50, 6241), (55, 6346),

Gene: Thestral_9 Start: 5406, Stop: 6512, Start Num: 2

Candidate Starts for Thestral_9:

(Start: 2 @5406 has 109 MA's), (16, 5580), (17, 5583), (22, 5661), (27, 5730), (35, 5895), (38, 5967), (43, 6114), (48, 6219), (50, 6318),

Gene: TinaBelcher_8 Start: 5351, Stop: 6457, Start Num: 2

Candidate Starts for TinaBelcher_8:

(Start: 2 @5351 has 109 MA's), (Start: 15 @5522 has 1 MA's), (16, 5525), (17, 5528), (22, 5606), (27, 5675), (35, 5840), (38, 5912), (43, 6059), (48, 6164), (50, 6263),

Gene: Toma_8 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for Toma_8:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (41, 6128), (42, 6194), (43, 6200), (47, 6269), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: Triste_8 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for Triste_8:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (41, 6128), (42, 6194), (43, 6200), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: Triumph_10 Start: 5377, Stop: 6501, Start Num: 2

Candidate Starts for Triumph_10:

(Start: 2 @5377 has 109 MA's), (4, 5431), (9, 5479), (13, 5530), (16, 5551), (17, 5554), (22, 5632), (24, 5671), (25, 5677), (43, 6103), (48, 6208), (50, 6307), (55, 6412),

Gene: TrvxScott_7 Start: 5352, Stop: 6458, Start Num: 2

Candidate Starts for TrvxScott_7:

(Start: 2 @5352 has 109 MA's), (Start: 15 @5523 has 1 MA's), (16, 5526), (17, 5529), (22, 5607), (27, 5676), (35, 5841), (38, 5913), (43, 6060), (48, 6165), (50, 6264),

Gene: TuanPN_8 Start: 5492, Stop: 6604, Start Num: 2

Candidate Starts for TuanPN_8:

(Start: 2 @5492 has 109 MA's), (7, 5576), (14, 5657), (16, 5666), (17, 5669), (26, 5795), (41, 6131), (42, 6197), (43, 6203), (48, 6308), (49, 6311), (50, 6407), (54, 6482),

Gene: Unstoppable_8 Start: 5520, Stop: 6632, Start Num: 2

Candidate Starts for Unstoppable_8:

(Start: 2 @5520 has 109 MA's), (7, 5604), (16, 5694), (17, 5697), (19, 5724), (26, 5823), (41, 6159), (43, 6231), (48, 6336), (49, 6339), (50, 6435), (51, 6468), (54, 6510),

Gene: Urza_8 Start: 5750, Stop: 6853, Start Num: 2

Candidate Starts for Urza_8:

(Start: 2 @5750 has 109 MA's), (12, 5891), (Start: 15 @5921 has 1 MA's), (16, 5924), (26, 6053), (41, 6380), (48, 6557), (56, 6845),

Gene: Vanseggelen_11 Start: 5230, Stop: 6351, Start Num: 2

Candidate Starts for Vanseggelen_11:

(Start: 2 @5230 has 109 MA's), (6, 5305), (Start: 15 @5401 has 1 MA's), (16, 5404), (17, 5407), (19, 5434), (23, 5518), (34, 5710), (41, 5860), (43, 5932), (48, 6037), (49, 6040), (50, 6157), (54, 6232),

Gene: Verabelle_9 Start: 5595, Stop: 6716, Start Num: 2

Candidate Starts for Verabelle_9:

(Start: 2 @5595 has 109 MA's), (6, 5670), (16, 5769), (17, 5772), (18, 5787), (23, 5883), (34, 6075), (41, 6225), (43, 6297), (48, 6402), (49, 6405), (50, 6522), (52, 6564), (54, 6597),

Gene: Verse_8 Start: 5676, Stop: 6785, Start Num: 2

Candidate Starts for Verse_8:

(Start: 2 @5676 has 109 MA's), (6, 5751), (16, 5850), (17, 5853), (18, 5868), (19, 5880), (23, 5964), (41, 6315), (43, 6387), (48, 6492), (49, 6495), (50, 6591), (54, 6666),

Gene: VieEnRose_8 Start: 5824, Stop: 6927, Start Num: 2

Candidate Starts for VieEnRose_8:

(Start: 2 @5824 has 109 MA's), (12, 5965), (Start: 15 @5995 has 1 MA's), (16, 5998), (26, 6127), (41, 6454), (48, 6631), (56, 6919),

Gene: Werner_8 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for Werner_8:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (41, 6128), (42, 6194), (43, 6200), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: Whatever_8 Start: 5489, Stop: 6601, Start Num: 2

Candidate Starts for Whatever_8:

(Start: 2 @5489 has 109 MA's), (7, 5573), (14, 5654), (16, 5663), (17, 5666), (26, 5792), (41, 6128), (42, 6194), (43, 6200), (48, 6305), (49, 6308), (50, 6404), (54, 6479),

Gene: Yasdniil_8 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for Yasdniil_8:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (41, 6127), (42, 6193), (43, 6199), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: Yosif_9 Start: 5953, Stop: 7089, Start Num: 2

Candidate Starts for Yosif_9:

(Start: 2 @5953 has 109 MA's), (7, 6034), (8, 6046), (13, 6103), (Start: 15 @6121 has 1 MA's), (16, 6124), (17, 6127), (18, 6142), (22, 6205), (30, 6370), (32, 6406), (36, 6460), (43, 6670), (48, 6775), (49, 6778), (50, 6895), (54, 6970),

Gene: Zainub_10 Start: 5892, Stop: 6989, Start Num: 2

Candidate Starts for Zainub_10:

(Start: 2 @5892 has 109 MA's), (5, 5952), (16, 6066), (17, 6069), (22, 6147), (27, 6216), (30, 6312), (38, 6444), (43, 6591), (48, 6696), (50, 6795), (55, 6900),

Gene: ZamZam_8 Start: 5599, Stop: 6693, Start Num: 2

Candidate Starts for ZamZam_8:

(Start: 2 @5599 has 109 MA's), (6, 5674), (8, 5695), (11, 5719), (Start: 15 @5770 has 1 MA's), (16, 5773), (17, 5776), (18, 5791), (19, 5803), (35, 6076), (39, 6154), (41, 6223), (43, 6295), (48, 6400), (49, 6403), (50, 6499), (54, 6574),

Gene: Zemlya_9 Start: 5488, Stop: 6600, Start Num: 2

Candidate Starts for Zemlya_9:

(Start: 2 @5488 has 109 MA's), (7, 5572), (14, 5653), (16, 5662), (17, 5665), (26, 5791), (41, 6127), (42, 6193), (43, 6199), (47, 6268), (48, 6304), (49, 6307), (50, 6403), (54, 6478),

Gene: phiCAM_09 Start: 7527, Stop: 8456, Start Num: 15

Candidate Starts for phiCAM_09:

(6, 7431), (Start: 15 @7527 has 1 MA's), (16, 7530), (17, 7533), (18, 7548), (19, 7560), (23, 7644), (34, 7836), (41, 7986), (43, 8058), (48, 8163), (49, 8166), (50, 8262), (52, 8304), (54, 8337),

Gene: phiHau3_10 Start: 5512, Stop: 6675, Start Num: 2

Candidate Starts for phiHau3_10:

(Start: 2 @5512 has 109 MA's), (4, 5566), (5, 5572), (16, 5686), (17, 5689), (18, 5704), (21, 5749), (22, 5767), (23, 5800), (26, 5815), (30, 5935), (31, 5953), (43, 6238), (45, 6271), (46, 6289), (48, 6343),