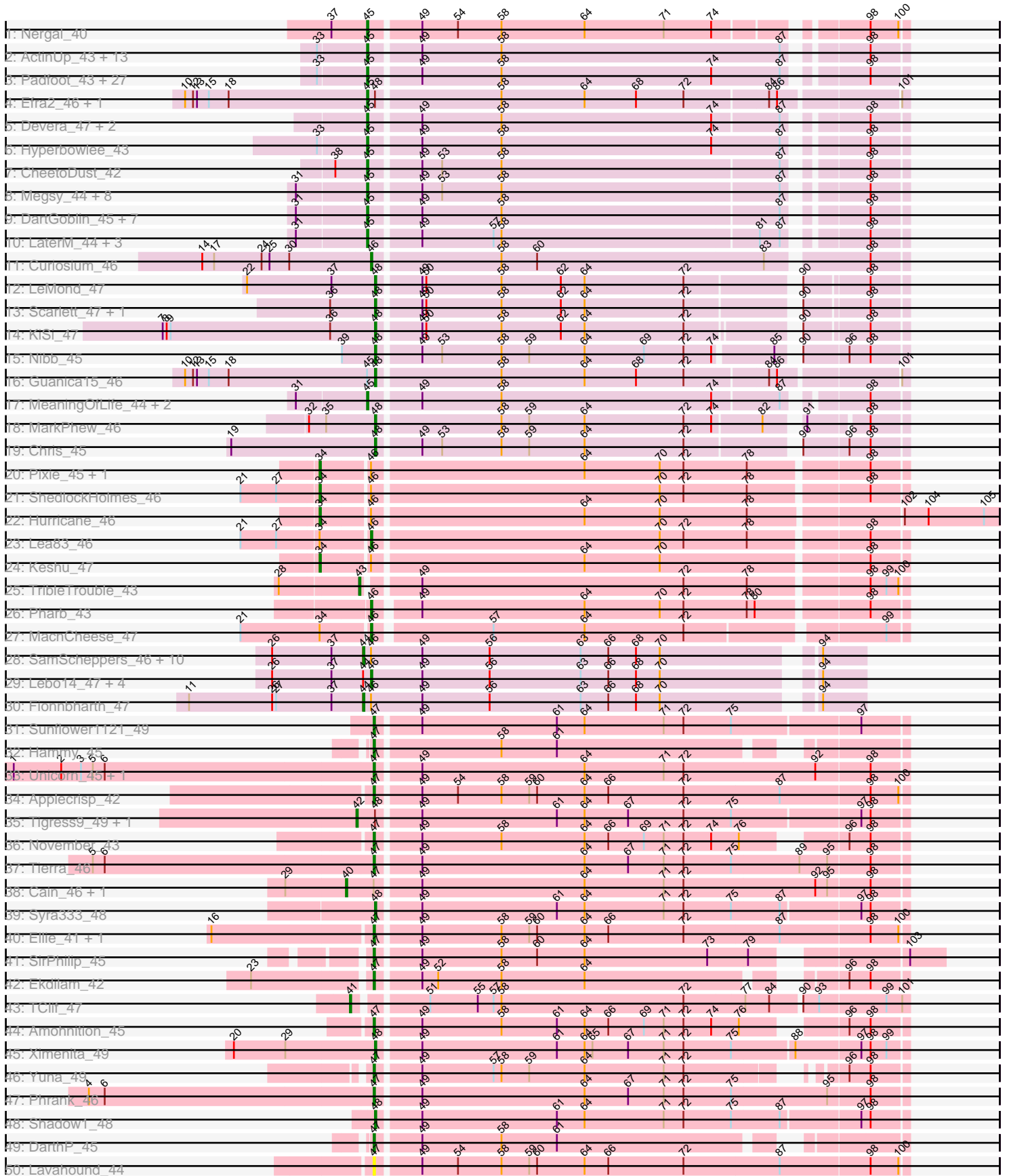


Pham 296343



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 296343 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296343 has 133 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Nergal_40
- Track 2 : ActinUp_43, Jayhawk_44, BarrelRoll_43, Ramen_43, Adephagia_43, Atiba_43, TruffulaTree_43, Slimphazie_43, Veliki_43, Padpat_44, Rapunzel97_43, HedwigODU_43, Tachez_43, Emerson_44
- Track 3 : Padfoot_43, Topper_43, Llorens_43, BGIlluviae_43, Dalmuri_43, CaseJules_44, Jeckyll_43, Rosmarinus_43, CREW_43, Boiiii_43, Joy99_43, Asayake_43, Blizzard_43, Belladonna_43, BEEST_43, Homura_43, Inky_43, Spock_43, JAWS_43, Lunahalos_43, Capricorn_43, Peel_43, ShiaSurprise_44, CallaLilly_43, Durfee_43, Piatt_43, Jarvi_43, Twitch_43
- Track 4 : Efra2_46, Yunkel11_46
- Track 5 : Devera_47, Illumine_46, Dole_46
- Track 6 : Hyperbowlee_43
- Track 7 : CheetoDust_42
- Track 8 : Megsy_44, LindNT_43, Zavala_44, Prithvi_44, Mynx_44, Pisa1_43, TreyKay_44, CrimD_43, TaiwanKao_45
- Track 9 : DartGoblin_45, Bella96_44, Beezoo_45, Urkel_44, SamuelLPlaqson_44, TiniBug_44, Anma_45, DrHayes_44
- Track 10 : LaterM_44, Ageofdapage_45, Stinson_44, Murucutumbu_44
- Track 11 : Curiosium_46
- Track 12 : LeMond_47
- Track 13 : Scarlett_47, Oscar_47
- Track 14 : KiSi_47
- Track 15 : Nibb_45
- Track 16 : Guanica15_46
- Track 17 : MeaningOfLife_44, Ganymede_44, QuincyRose_42
- Track 18 : MarkPhew_46
- Track 19 : Chris_45
- Track 20 : Pixie_45, TBond007_45
- Track 21 : ShedlockHolmes_46
- Track 22 : Hurricane_46
- Track 23 : Lea83_46
- Track 24 : Keshu_47
- Track 25 : TribbleTrouble_43
- Track 26 : Pharb_43
- Track 27 : MacnCheese_47
- Track 28 : SamScheppers_46, Chancellor_47, Juliette_49, YasnayaPolyana_47, Eponine_49, Slarp_47, Wintermute_47, Cheetobro_47, Malthus_48, Mitti_47,

Ruthiejr_48

- Track 29 : Lebo14_47, OmniCritical_46, Taquito_47, Y10_46, Y2_46
- Track 30 : Fionnbharth_47
- Track 31 : Sunflower1121_49
- Track 32 : Hammy_45
- Track 33 : Unicorn_45, PhelpsODU_45
- Track 34 : Applecrisp_42
- Track 35 : Tigress9_49, Krueger_49
- Track 36 : November_43
- Track 37 : Tierra_46
- Track 38 : Cain_46, Bryler_46
- Track 39 : Syra333_48
- Track 40 : Ellie_41, Fefferhead_43
- Track 41 : SirPhilip_45
- Track 42 : Ekdilam_42
- Track 43 : TClif_47
- Track 44 : Amohnition_45
- Track 45 : Ximenita_49
- Track 46 : Yuna_49
- Track 47 : Phrank_46
- Track 48 : Shadow1_48
- Track 49 : DarthP_45
- Track 50 : Lavahound_44

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

The start number called the most often in the published annotations is 45, it was called in 70 of the 127 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_43, Adephegia_43, Ageofdapage_45, Anma_45, Asayake_43, Atiba_43, BEEST_43, BGlluviae_43, BarrelRoll_43, Beezoo_45, Bella96_44, Belladonna_43, Blizzard_43, Boiiii_43, CREW_43, CallaLilly_43, Capricorn_43, CaseJules_44, CheetoDust_42, CrimD_43, Dalmuri_43, DartGoblin_45, Devera_47, Dole_46, DrHayes_44, Durfee_43, Efra2_46, Emerson_44, Ganymede_44, HedwigODU_43, Homura_43, Hyperbowlee_43, Illumine_46, Inky_43, JAWS_43, Jarvi_43, Jayhawk_44, Jeckyll_43, Joy99_43, LaterM_44, LindNT_43, Llorens_43, Lunahalos_43, MeaningOfLife_44, Megsy_44, Murucutumbu_44, Mynx_44, Nergal_40, Padfoot_43, Padpat_44, Peel_43, Piatt_43, Pisa1_43, Prithvi_44, QuincyRose_42, Ramen_43, Rapunzel97_43, Rosmarinus_43, SamuelLPlaqsom_44, ShiaSurprise_44, Slimphazie_43, Spock_43, Stinson_44, Tachez_43, TaiwanKao_45, TiniBug_44, Topper_43, TreyKay_44, TruffulaTree_43, Twitch_43, Urkel_44, Veliki_43, Yunke11_46, Zavala_44,

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

- Guanica15_46,

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

- Amohnition_45, Applecrisp_42, Bryler_46, Cain_46, Chancellor_47, Cheetobro_47, Chris_45, Curiosium_46, DarthP_45, Ekdilam_42, Ellie_41, Eponine_49,

Fefferhead_43, Fionnbharth_47, Hammy_45, Hurricane_46, Juliette_49, Keshu_47, KiSi_47, Krueger_49, Lavahound_44, LeMond_47, Lea83_46, Lebo14_47, MacnCheese_47, Malthus_48, MarkPhew_46, Mitti_47, Nibb_45, November_43, OmniCritical_46, Oscar_47, Pharb_43, PhelpsODU_45, Phrank_46, Pixie_45, Ruthiejr_48, SamScheppers_46, Scarlett_47, Shadow1_48, ShedlockHolmes_46, SirPhilip_45, Slarp_47, Sunflower1121_49, Syra333_48, TBond007_45, TClif_47, Taquito_47, Tierra_46, Tigress9_49, TribbleTrouble_43, Unicorn_45, Wintermute_47, Ximenita_49, Y10_46, Y2_46, YasnayaPolyana_47, Yuna_49,

Summary by start number:

Start 34:

- Found in 7 of 133 (5.3%) of genes in pham
- Manual Annotations of this start: 5 of 127
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Hurricane_46 (K3), Keshu_47 (K3), Pixie_45 (K3), ShedlockHolmes_46 (K3), TBond007_45 (K3),

Start 40:

- Found in 2 of 133 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bryler_46 (K6), Cain_46 (K6),

Start 41:

- Found in 1 of 133 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TClif_47 (K6),

Start 42:

- Found in 2 of 133 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Krueger_49 (K6), Tigress9_49 (K6),

Start 43:

- Found in 1 of 133 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TribbleTrouble_43 (K3),

Start 44:

- Found in 17 of 133 (12.8%) of genes in pham
- Manual Annotations of this start: 12 of 127
- Called 70.6% of time when present
- Phage (with cluster) where this start called: Chancellor_47 (K4), Cheetobro_47 (K4), Eponine_49 (K4), Fionnbharth_47 (K4), Juliette_49 (K4), Malthus_48 (K4), Mitti_47 (K4), Ruthiejr_48 (K4), SamScheppers_46 (K4), Slarp_47 (K4), Wintermute_47 (K4), YasnayaPolyana_47 (K4),

Start 45:

- Found in 75 of 133 (56.4%) of genes in pham

- Manual Annotations of this start: 70 of 127
- Called 98.7% of time when present
- Phage (with cluster) where this start called: ActinUp_43 (K1), Adephagia_43 (K1), Ageofdapage_45 (K1), Anma_45 (K1), Asayake_43 (K1), Atiba_43 (K1), BEEEST_43 (K1), BGlluviae_43 (K1), BarrelRoll_43 (K1), Beezoo_45 (K1), Bella96_44 (K1), Belladonna_43 (K1), Blizzard_43 (K1), Boiiii_43 (K1), CREW_43 (K1), CallaLilly_43 (K1), Capricorn_43 (K1), CaseJules_44 (K1), CheetoDust_42 (K1), CrimD_43 (K1), Dalmuri_43 (K1), DartGoblin_45 (K1), Devera_47 (K1), Dole_46 (K1), DrHayes_44 (K1), Durfee_43 (K1), Efra2_46 (K1), Emerson_44 (K1), Ganymede_44 (K1), HedwigODU_43 (K1), Homura_43 (K1), Hyperbowlee_43 (K1), Illumine_46 (K1), Inky_43 (K1), JAWS_43 (K1), Jarvi_43 (K1), Jayhawk_44 (K1), Jeckyll_43 (K1), Joy99_43 (K1), LaterM_44 (K1), LindNT_43 (K1), Llorens_43 (K1), Lunahalos_43 (K1), MeaningOfLife_44 (K1), Megsy_44 (K1), Murucutumbu_44 (K1), Mynx_44 (K1), Nergal_40 (AG), Padfoot_43 (K1), Padpat_44 (K1), Peel_43 (K1), Piatt_43 (K1), Pisa1_43 (K1), Prithvi_44 (K1), QuincyRose_42 (K1), Ramen_43 (K1), Rapunzel97_43 (K1), Rosmarinus_43 (K1), SamuelLPlaqson_44 (K1), ShiaSurprise_44 (K1), Slimphazie_43 (K1), Spock_43 (K1), Stinson_44 (K1), Tachez_43 (K1), TaiwanKao_45 (K1), TiniBug_44 (K1), Topper_43 (K1), TreyKay_44 (K1), TruffulaTree_43 (K1), Twitch_43 (K1), Urkel_44 (K1), Veliki_43 (K1), Yunkel11_46 (K1), Zavala_44 (K1),

Start 46:

- Found in 26 of 133 (19.5%) of genes in pham
- Manual Annotations of this start: 9 of 127
- Called 34.6% of time when present
- Phage (with cluster) where this start called: Curiosium_46 (K1), Lea83_46 (K3), Lebo14_47 (K4), MacnCheese_47 (K3), OmniCritical_46 (K4), Pharb_43 (K3), Taquito_47 (K4), Y10_46 (K4), Y2_46 (K4),

Start 47:

- Found in 18 of 133 (13.5%) of genes in pham
- Manual Annotations of this start: 15 of 127
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Amohnition_45 (K6), Applecrisp_42 (K6), DarthP_45 (K6), Ekdilam_42 (K6), Ellie_41 (K6), Fefferhead_43 (K6), Hammy_45 (K6), Lavahound_44 (K6), November_43 (K6), PhelpsODU_45 (K6), Phrank_46 (K6), SirPhilip_45 (K6), Sunflower1121_49 (K6), Tierra_46 (K6), Unicorn_45 (K6), Yuna_49 (K6),

Start 48:

- Found in 15 of 133 (11.3%) of genes in pham
- Manual Annotations of this start: 11 of 127
- Called 73.3% of time when present
- Phage (with cluster) where this start called: Chris_45 (K1), Guanica15_46 (K1), KiSi_47 (K1), LeMond_47 (K1), MarkPhew_46 (K1), Nibb_45 (K1), Oscar_47 (K1), Scarlett_47 (K1), Shadow1_48 (K6), Syra333_48 (K6), Ximenita_49 (K6),

Summary by clusters:

There are 5 clusters represented in this pham: K3, K1, K6, AG, K4,

Info for manual annotations of cluster AG:

- Start number 45 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster K1:

- Start number 45 was manually annotated 69 times for cluster K1.
- Start number 46 was manually annotated 1 time for cluster K1.
- Start number 48 was manually annotated 8 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 34 was manually annotated 5 times for cluster K3.
- Start number 43 was manually annotated 1 time for cluster K3.
- Start number 46 was manually annotated 3 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 44 was manually annotated 12 times for cluster K4.
- Start number 46 was manually annotated 5 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 40 was manually annotated 2 times for cluster K6.
- Start number 41 was manually annotated 1 time for cluster K6.
- Start number 42 was manually annotated 1 time for cluster K6.
- Start number 47 was manually annotated 15 times for cluster K6.
- Start number 48 was manually annotated 3 times for cluster K6.

Gene Information:

Gene: ActinUp_43 Start: 34981, Stop: 34601, Start Num: 45

Candidate Starts for ActinUp_43:

(33, 35017), (Start: 45 @34981 has 70 MA's), (49, 34945), (58, 34885), (87, 34675), (98, 34627),

Gene: Adephagia_43 Start: 34978, Stop: 34598, Start Num: 45

Candidate Starts for Adephagia_43:

(33, 35014), (Start: 45 @34978 has 70 MA's), (49, 34942), (58, 34882), (87, 34672), (98, 34624),

Gene: Ageofdapage_45 Start: 35950, Stop: 35573, Start Num: 45

Candidate Starts for Ageofdapage_45:

(31, 36001), (Start: 45 @35950 has 70 MA's), (49, 35914), (57, 35860), (58, 35854), (81, 35662), (87, 35647), (98, 35599),

Gene: Amohnition_45 Start: 36010, Stop: 35639, Start Num: 47

Candidate Starts for Amohnition_45:

(Start: 47 @36010 has 15 MA's), (49, 35980), (58, 35920), (61, 35878), (64, 35857), (66, 35839), (69, 35812), (71, 35797), (72, 35782), (74, 35761), (76, 35740), (96, 35680), (98, 35665),

Gene: Anma_45 Start: 35877, Stop: 35500, Start Num: 45

Candidate Starts for Anma_45:

(31, 35928), (Start: 45 @35877 has 70 MA's), (49, 35841), (58, 35781), (87, 35574), (98, 35526),

Gene: Applecrisp_42 Start: 35470, Stop: 35078, Start Num: 47

Candidate Starts for Applecrisp_42:

(Start: 47 @35470 has 15 MA's), (49, 35440), (54, 35413), (58, 35380), (59, 35359), (60, 35353), (64, 35317), (66, 35299), (72, 35242), (87, 35170), (98, 35104), (100, 35083),

Gene: Asayake_43 Start: 35293, Stop: 34913, Start Num: 45
Candidate Starts for Asayake_43:
(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: Atiba_43 Start: 34941, Stop: 34561, Start Num: 45
Candidate Starts for Atiba_43:
(33, 34977), (Start: 45 @34941 has 70 MA's), (49, 34905), (58, 34845), (87, 34635), (98, 34587),

Gene: BEEST_43 Start: 35293, Stop: 34913, Start Num: 45
Candidate Starts for BEEST_43:
(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: BGIlluviae_43 Start: 35096, Stop: 34716, Start Num: 45
Candidate Starts for BGIlluviae_43:
(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: BarrelRoll_43 Start: 34964, Stop: 34584, Start Num: 45
Candidate Starts for BarrelRoll_43:
(33, 35000), (Start: 45 @34964 has 70 MA's), (49, 34928), (58, 34868), (87, 34658), (98, 34610),

Gene: Beezoo_45 Start: 35940, Stop: 35563, Start Num: 45
Candidate Starts for Beezoo_45:
(31, 35991), (Start: 45 @35940 has 70 MA's), (49, 35904), (58, 35844), (87, 35637), (98, 35589),

Gene: Bella96_44 Start: 35832, Stop: 35455, Start Num: 45
Candidate Starts for Bella96_44:
(31, 35883), (Start: 45 @35832 has 70 MA's), (49, 35796), (58, 35736), (87, 35529), (98, 35481),

Gene: Belladonna_43 Start: 35096, Stop: 34716, Start Num: 45
Candidate Starts for Belladonna_43:
(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: Blizzard_43 Start: 35293, Stop: 34913, Start Num: 45
Candidate Starts for Blizzard_43:
(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: Boiiii_43 Start: 35295, Stop: 34915, Start Num: 45
Candidate Starts for Boiiii_43:
(33, 35331), (Start: 45 @35295 has 70 MA's), (49, 35259), (58, 35199), (74, 35040), (87, 34989), (98, 34941),

Gene: Bryler_46 Start: 34876, Stop: 34463, Start Num: 40
Candidate Starts for Bryler_46:
(29, 34921), (Start: 40 @34876 has 2 MA's), (Start: 47 @34855 has 15 MA's), (49, 34825), (64, 34702), (71, 34642), (72, 34627), (92, 34528), (95, 34519), (98, 34489),

Gene: CREW_43 Start: 35096, Stop: 34716, Start Num: 45
Candidate Starts for CREW_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: Cain_46 Start: 34864, Stop: 34451, Start Num: 40

Candidate Starts for Cain_46:

(29, 34909), (Start: 40 @34864 has 2 MA's), (Start: 47 @34843 has 15 MA's), (49, 34813), (64, 34690), (71, 34630), (72, 34615), (92, 34516), (95, 34507), (98, 34477),

Gene: CallaLilly_43 Start: 35019, Stop: 34639, Start Num: 45

Candidate Starts for CallaLilly_43:

(33, 35055), (Start: 45 @35019 has 70 MA's), (49, 34983), (58, 34923), (74, 34764), (87, 34713), (98, 34665),

Gene: Capricorn_43 Start: 35096, Stop: 34716, Start Num: 45

Candidate Starts for Capricorn_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: CaseJules_44 Start: 35293, Stop: 34913, Start Num: 45

Candidate Starts for CaseJules_44:

(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: Chancellor_47 Start: 36038, Stop: 35679, Start Num: 44

Candidate Starts for Chancellor_47:

(26, 36107), (37, 36062), (Start: 44 @36038 has 12 MA's), (Start: 46 @36032 has 9 MA's), (49, 35993), (56, 35942), (63, 35873), (66, 35852), (68, 35831), (70, 35813), (94, 35711),

Gene: CheetoDust_42 Start: 34466, Stop: 34089, Start Num: 45

Candidate Starts for CheetoDust_42:

(38, 34490), (Start: 45 @34466 has 70 MA's), (49, 34430), (53, 34415), (58, 34370), (87, 34163), (98, 34115),

Gene: Cheetobro_47 Start: 36035, Stop: 35676, Start Num: 44

Candidate Starts for Cheetobro_47:

(26, 36104), (37, 36059), (Start: 44 @36035 has 12 MA's), (Start: 46 @36029 has 9 MA's), (49, 35990), (56, 35939), (63, 35870), (66, 35849), (68, 35828), (70, 35810), (94, 35708),

Gene: Chris_45 Start: 35677, Stop: 35300, Start Num: 48

Candidate Starts for Chris_45:

(19, 35785), (Start: 48 @35677 has 11 MA's), (49, 35647), (53, 35632), (58, 35587), (59, 35566), (64, 35524), (72, 35449), (90, 35374), (96, 35341), (98, 35326),

Gene: CrimD_43 Start: 35221, Stop: 34844, Start Num: 45

Candidate Starts for CrimD_43:

(31, 35272), (Start: 45 @35221 has 70 MA's), (49, 35185), (53, 35170), (58, 35125), (87, 34918), (98, 34870),

Gene: Curiosium_46 Start: 34128, Stop: 33742, Start Num: 46

Candidate Starts for Curiosium_46:

(14, 34254), (17, 34245), (24, 34209), (25, 34203), (30, 34188), (Start: 46 @34128 has 9 MA's), (58, 34035), (60, 34008), (83, 33837), (98, 33768),

Gene: Dalmuri_43 Start: 35096, Stop: 34716, Start Num: 45
Candidate Starts for Dalmuri_43:
(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: DartGoblin_45 Start: 35826, Stop: 35449, Start Num: 45
Candidate Starts for DartGoblin_45:
(31, 35877), (Start: 45 @35826 has 70 MA's), (49, 35790), (58, 35730), (87, 35523), (98, 35475),

Gene: DarthP_45 Start: 35904, Stop: 35545, Start Num: 47
Candidate Starts for DarthP_45:
(Start: 47 @35904 has 15 MA's), (49, 35874), (58, 35814), (61, 35772),

Gene: Devera_47 Start: 35759, Stop: 35382, Start Num: 45
Candidate Starts for Devera_47:
(Start: 45 @35759 has 70 MA's), (49, 35723), (58, 35663), (74, 35504), (87, 35456), (98, 35408),

Gene: Dole_46 Start: 35761, Stop: 35384, Start Num: 45
Candidate Starts for Dole_46:
(Start: 45 @35761 has 70 MA's), (49, 35725), (58, 35665), (74, 35506), (87, 35458), (98, 35410),

Gene: DrHayes_44 Start: 35877, Stop: 35500, Start Num: 45
Candidate Starts for DrHayes_44:
(31, 35928), (Start: 45 @35877 has 70 MA's), (49, 35841), (58, 35781), (87, 35574), (98, 35526),

Gene: Durfee_43 Start: 35293, Stop: 34913, Start Num: 45
Candidate Starts for Durfee_43:
(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: Efra2_46 Start: 35018, Stop: 34629, Start Num: 45
Candidate Starts for Efra2_46:
(10, 35156), (12, 35150), (13, 35147), (15, 35138), (18, 35123), (Start: 45 @35018 has 70 MA's),
(Start: 48 @35012 has 11 MA's), (58, 34922), (64, 34859), (68, 34820), (72, 34784), (84, 34724), (86, 34718), (101, 34634),

Gene: Ekdilam_42 Start: 35465, Stop: 35106, Start Num: 47
Candidate Starts for Ekdilam_42:
(23, 35549), (Start: 47 @35465 has 15 MA's), (49, 35435), (52, 35423), (58, 35375), (64, 35312), (96, 35147), (98, 35132),

Gene: Ellie_41 Start: 35161, Stop: 34769, Start Num: 47
Candidate Starts for Ellie_41:
(16, 35278), (Start: 47 @35161 has 15 MA's), (49, 35131), (58, 35071), (59, 35050), (60, 35044), (64, 35008), (66, 34990), (72, 34933), (87, 34861), (98, 34795), (100, 34774),

Gene: Emerson_44 Start: 34972, Stop: 34592, Start Num: 45
Candidate Starts for Emerson_44:
(33, 35008), (Start: 45 @34972 has 70 MA's), (49, 34936), (58, 34876), (87, 34666), (98, 34618),

Gene: Eponine_49 Start: 36791, Stop: 36432, Start Num: 44
Candidate Starts for Eponine_49:

(26, 36860), (37, 36815), (Start: 44 @36791 has 12 MA's), (Start: 46 @36785 has 9 MA's), (49, 36746), (56, 36695), (63, 36626), (66, 36605), (68, 36584), (70, 36566), (94, 36464),

Gene: Fefferhead_43 Start: 35112, Stop: 34720, Start Num: 47

Candidate Starts for Fefferhead_43:

(16, 35229), (Start: 47 @35112 has 15 MA's), (49, 35082), (58, 35022), (59, 35001), (60, 34995), (64, 34959), (66, 34941), (72, 34884), (87, 34812), (98, 34746), (100, 34725),

Gene: Fionnbharth_47 Start: 36189, Stop: 35830, Start Num: 44

Candidate Starts for Fionnbharth_47:

(11, 36321), (26, 36258), (27, 36255), (37, 36213), (Start: 44 @36189 has 12 MA's), (Start: 46 @36183 has 9 MA's), (49, 36144), (56, 36093), (63, 36024), (66, 36003), (68, 35982), (70, 35964), (94, 35862),

Gene: Ganymede_44 Start: 35413, Stop: 35036, Start Num: 45

Candidate Starts for Ganymede_44:

(31, 35464), (Start: 45 @35413 has 70 MA's), (49, 35377), (58, 35317), (74, 35158), (87, 35110), (98, 35062),

Gene: Guanica15_46 Start: 34969, Stop: 34586, Start Num: 48

Candidate Starts for Guanica15_46:

(10, 35113), (12, 35107), (13, 35104), (15, 35095), (18, 35080), (Start: 45 @34975 has 70 MA's), (Start: 48 @34969 has 11 MA's), (58, 34879), (64, 34816), (68, 34777), (72, 34741), (84, 34681), (86, 34675), (101, 34591),

Gene: Hammy_45 Start: 35892, Stop: 35533, Start Num: 47

Candidate Starts for Hammy_45:

(Start: 47 @35892 has 15 MA's), (58, 35802), (61, 35760),

Gene: HedwigODU_43 Start: 34981, Stop: 34601, Start Num: 45

Candidate Starts for HedwigODU_43:

(33, 35017), (Start: 45 @34981 has 70 MA's), (49, 34945), (58, 34885), (87, 34675), (98, 34627),

Gene: Homura_43 Start: 35096, Stop: 34716, Start Num: 45

Candidate Starts for Homura_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: Hurricane_46 Start: 35646, Stop: 35155, Start Num: 34

Candidate Starts for Hurricane_46:

(Start: 34 @35646 has 5 MA's), (Start: 46 @35613 has 9 MA's), (64, 35457), (70, 35400), (78, 35334), (102, 35226), (104, 35208), (105, 35166),

Gene: Hyperbowlee_43 Start: 35293, Stop: 34913, Start Num: 45

Candidate Starts for Hyperbowlee_43:

(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: Illumine_46 Start: 35761, Stop: 35384, Start Num: 45

Candidate Starts for Illumine_46:

(Start: 45 @35761 has 70 MA's), (49, 35725), (58, 35665), (74, 35506), (87, 35458), (98, 35410),

Gene: Inky_43 Start: 35096, Stop: 34716, Start Num: 45

Candidate Starts for Inky_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: JAWS_43 Start: 34970, Stop: 34590, Start Num: 45

Candidate Starts for JAWS_43:

(33, 35006), (Start: 45 @34970 has 70 MA's), (49, 34934), (58, 34874), (74, 34715), (87, 34664), (98, 34616),

Gene: Jarvi_43 Start: 35096, Stop: 34716, Start Num: 45

Candidate Starts for Jarvi_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: Jayhawk_44 Start: 34979, Stop: 34599, Start Num: 45

Candidate Starts for Jayhawk_44:

(33, 35015), (Start: 45 @34979 has 70 MA's), (49, 34943), (58, 34883), (87, 34673), (98, 34625),

Gene: Jeckyll_43 Start: 35096, Stop: 34716, Start Num: 45

Candidate Starts for Jeckyll_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: Joy99_43 Start: 35025, Stop: 34645, Start Num: 45

Candidate Starts for Joy99_43:

(33, 35061), (Start: 45 @35025 has 70 MA's), (49, 34989), (58, 34929), (74, 34770), (87, 34719), (98, 34671),

Gene: Juliette_49 Start: 36262, Stop: 35903, Start Num: 44

Candidate Starts for Juliette_49:

(26, 36331), (37, 36286), (Start: 44 @36262 has 12 MA's), (Start: 46 @36256 has 9 MA's), (49, 36217), (56, 36166), (63, 36097), (66, 36076), (68, 36055), (70, 36037), (94, 35935),

Gene: Keshu_47 Start: 35704, Stop: 35282, Start Num: 34

Candidate Starts for Keshu_47:

(Start: 34 @35704 has 5 MA's), (Start: 46 @35671 has 9 MA's), (64, 35515), (70, 35458), (98, 35308),

Gene: KiSi_47 Start: 36100, Stop: 35729, Start Num: 48

Candidate Starts for KiSi_47:

(7, 36259), (8, 36256), (9, 36253), (36, 36133), (Start: 48 @36100 has 11 MA's), (49, 36070), (50, 36067), (58, 36010), (62, 35965), (64, 35947), (72, 35872), (90, 35800), (98, 35755),

Gene: Krueger_49 Start: 35862, Stop: 35461, Start Num: 42

Candidate Starts for Krueger_49:

(Start: 42 @35862 has 1 MA's), (Start: 48 @35850 has 11 MA's), (49, 35820), (61, 35718), (64, 35697), (67, 35664), (72, 35622), (75, 35586), (97, 35493), (98, 35487),

Gene: LaterM_44 Start: 35874, Stop: 35497, Start Num: 45

Candidate Starts for LaterM_44:

(31, 35925), (Start: 45 @35874 has 70 MA's), (49, 35838), (57, 35784), (58, 35778), (81, 35586), (87, 35571), (98, 35523),

Gene: Lavahound_44 Start: 36094, Stop: 35702, Start Num: 47

Candidate Starts for Lavahound_44:

(Start: 47 @36094 has 15 MA's), (49, 36064), (54, 36037), (58, 36004), (59, 35983), (60, 35977), (64, 35941), (66, 35923), (72, 35866), (87, 35794), (98, 35728), (100, 35707),

Gene: LeMond_47 Start: 36084, Stop: 35710, Start Num: 48

Candidate Starts for LeMond_47:

(22, 36180), (37, 36117), (Start: 48 @36084 has 11 MA's), (49, 36054), (50, 36051), (58, 35994), (62, 35949), (64, 35931), (72, 35856), (90, 35781), (98, 35736),

Gene: Lea83_46 Start: 35646, Stop: 35257, Start Num: 46

Candidate Starts for Lea83_46:

(21, 35736), (27, 35709), (Start: 34 @35679 has 5 MA's), (Start: 46 @35646 has 9 MA's), (70, 35433), (72, 35415), (78, 35367), (98, 35283),

Gene: Lebo14_47 Start: 36210, Stop: 35857, Start Num: 46

Candidate Starts for Lebo14_47:

(26, 36285), (37, 36240), (Start: 44 @36216 has 12 MA's), (Start: 46 @36210 has 9 MA's), (49, 36171), (56, 36120), (63, 36051), (66, 36030), (68, 36009), (70, 35991), (94, 35889),

Gene: LindNT_43 Start: 35164, Stop: 34787, Start Num: 45

Candidate Starts for LindNT_43:

(31, 35215), (Start: 45 @35164 has 70 MA's), (49, 35128), (53, 35113), (58, 35068), (87, 34861), (98, 34813),

Gene: Llorens_43 Start: 35096, Stop: 34716, Start Num: 45

Candidate Starts for Llorens_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: Lunahalos_43 Start: 35096, Stop: 34716, Start Num: 45

Candidate Starts for Lunahalos_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: MacnCheese_47 Start: 36557, Stop: 36177, Start Num: 46

Candidate Starts for MacnCheese_47:

(21, 36650), (Start: 34 @36590 has 5 MA's), (Start: 46 @36557 has 9 MA's), (57, 36473), (64, 36404), (72, 36329), (99, 36191),

Gene: Malthus_48 Start: 35950, Stop: 35591, Start Num: 44

Candidate Starts for Malthus_48:

(26, 36019), (37, 35974), (Start: 44 @35950 has 12 MA's), (Start: 46 @35944 has 9 MA's), (49, 35905), (56, 35854), (63, 35785), (66, 35764), (68, 35743), (70, 35725), (94, 35623),

Gene: MarkPhew_46 Start: 35518, Stop: 35147, Start Num: 48

Candidate Starts for MarkPhew_46:

(32, 35566), (35, 35554), (Start: 48 @35518 has 11 MA's), (58, 35428), (59, 35407), (64, 35365), (72, 35290), (74, 35269), (82, 35233), (91, 35212), (98, 35173),

Gene: MeaningOfLife_44 Start: 35907, Stop: 35530, Start Num: 45

Candidate Starts for MeaningOfLife_44:

(31, 35958), (Start: 45 @35907 has 70 MA's), (49, 35871), (58, 35811), (74, 35652), (87, 35604), (98, 35556),

Gene: Megsy_44 Start: 35223, Stop: 34846, Start Num: 45

Candidate Starts for Megsy_44:

(31, 35274), (Start: 45 @35223 has 70 MA's), (49, 35187), (53, 35172), (58, 35127), (87, 34920), (98, 34872),

Gene: Mitti_47 Start: 36126, Stop: 35767, Start Num: 44

Candidate Starts for Mitti_47:

(26, 36195), (37, 36150), (Start: 44 @36126 has 12 MA's), (Start: 46 @36120 has 9 MA's), (49, 36081), (56, 36030), (63, 35961), (66, 35940), (68, 35919), (70, 35901), (94, 35799),

Gene: Murucutumbu_44 Start: 35967, Stop: 35590, Start Num: 45

Candidate Starts for Murucutumbu_44:

(31, 36018), (Start: 45 @35967 has 70 MA's), (49, 35931), (57, 35877), (58, 35871), (81, 35679), (87, 35664), (98, 35616),

Gene: Mynx_44 Start: 35298, Stop: 34921, Start Num: 45

Candidate Starts for Mynx_44:

(31, 35349), (Start: 45 @35298 has 70 MA's), (49, 35262), (53, 35247), (58, 35202), (87, 34995), (98, 34947),

Gene: Nergal_40 Start: 33595, Stop: 33221, Start Num: 45

Candidate Starts for Nergal_40:

(37, 33622), (Start: 45 @33595 has 70 MA's), (49, 33559), (54, 33532), (58, 33499), (64, 33436), (71, 33376), (74, 33340), (98, 33247), (100, 33226),

Gene: Nibb_45 Start: 35241, Stop: 34867, Start Num: 48

Candidate Starts for Nibb_45:

(39, 35265), (Start: 48 @35241 has 11 MA's), (49, 35211), (53, 35196), (58, 35151), (59, 35130), (64, 35088), (69, 35043), (72, 35013), (74, 34992), (85, 34950), (90, 34941), (96, 34908), (98, 34893),

Gene: November_43 Start: 35619, Stop: 35248, Start Num: 47

Candidate Starts for November_43:

(Start: 47 @35619 has 15 MA's), (49, 35589), (58, 35529), (64, 35466), (66, 35448), (69, 35421), (71, 35406), (72, 35391), (74, 35370), (76, 35349), (96, 35289), (98, 35274),

Gene: OmniCritical_46 Start: 35929, Stop: 35576, Start Num: 46

Candidate Starts for OmniCritical_46:

(26, 36004), (37, 35959), (Start: 44 @35935 has 12 MA's), (Start: 46 @35929 has 9 MA's), (49, 35890), (56, 35839), (63, 35770), (66, 35749), (68, 35728), (70, 35710), (94, 35608),

Gene: Oscar_47 Start: 35987, Stop: 35613, Start Num: 48

Candidate Starts for Oscar_47:

(36, 36020), (Start: 48 @35987 has 11 MA's), (49, 35957), (50, 35954), (58, 35897), (62, 35852), (64, 35834), (72, 35759), (90, 35684), (98, 35639),

Gene: Padfoot_43 Start: 35293, Stop: 34913, Start Num: 45

Candidate Starts for Padfoot_43:

(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: Padpat_44 Start: 34972, Stop: 34592, Start Num: 45

Candidate Starts for Padpat_44:

(33, 35008), (Start: 45 @34972 has 70 MA's), (49, 34936), (58, 34876), (87, 34666), (98, 34618),

Gene: Peel_43 Start: 35098, Stop: 34718, Start Num: 45

Candidate Starts for Peel_43:

(33, 35134), (Start: 45 @35098 has 70 MA's), (49, 35062), (58, 35002), (74, 34843), (87, 34792), (98, 34744),

Gene: Pharb_43 Start: 34363, Stop: 33977, Start Num: 46

Candidate Starts for Pharb_43:

(Start: 46 @34363 has 9 MA's), (49, 34333), (64, 34210), (70, 34153), (72, 34135), (78, 34087), (80, 34081), (98, 34003),

Gene: PhelpsODU_45 Start: 34877, Stop: 34485, Start Num: 47

Candidate Starts for PhelpsODU_45:

(1, 35147), (2, 35111), (3, 35096), (5, 35087), (6, 35078), (Start: 47 @34877 has 15 MA's), (49, 34847), (64, 34724), (71, 34664), (72, 34649), (92, 34550), (98, 34511),

Gene: Phrank_46 Start: 34834, Stop: 34442, Start Num: 47

Candidate Starts for Phrank_46:

(4, 35047), (6, 35035), (Start: 47 @34834 has 15 MA's), (49, 34804), (64, 34681), (67, 34648), (71, 34621), (72, 34606), (75, 34570), (95, 34498), (98, 34468),

Gene: Piatt_43 Start: 35293, Stop: 34913, Start Num: 45

Candidate Starts for Piatt_43:

(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: Pisa1_43 Start: 36268, Stop: 35891, Start Num: 45

Candidate Starts for Pisa1_43:

(31, 36319), (Start: 45 @36268 has 70 MA's), (49, 36232), (53, 36217), (58, 36172), (87, 35965), (98, 35917),

Gene: Pixie_45 Start: 35157, Stop: 34735, Start Num: 34

Candidate Starts for Pixie_45:

(Start: 34 @35157 has 5 MA's), (Start: 46 @35124 has 9 MA's), (64, 34968), (70, 34911), (72, 34893), (78, 34845), (98, 34761),

Gene: Prithvi_44 Start: 35164, Stop: 34787, Start Num: 45

Candidate Starts for Prithvi_44:

(31, 35215), (Start: 45 @35164 has 70 MA's), (49, 35128), (53, 35113), (58, 35068), (87, 34861), (98, 34813),

Gene: QuincyRose_42 Start: 35413, Stop: 35036, Start Num: 45

Candidate Starts for QuincyRose_42:

(31, 35464), (Start: 45 @35413 has 70 MA's), (49, 35377), (58, 35317), (74, 35158), (87, 35110), (98, 35062),

Gene: Ramen_43 Start: 34983, Stop: 34603, Start Num: 45

Candidate Starts for Ramen_43:

(33, 35019), (Start: 45 @34983 has 70 MA's), (49, 34947), (58, 34887), (87, 34677), (98, 34629),

Gene: Rapunzel97_43 Start: 34979, Stop: 34599, Start Num: 45

Candidate Starts for Rapunzel97_43:

(33, 35015), (Start: 45 @34979 has 70 MA's), (49, 34943), (58, 34883), (87, 34673), (98, 34625),

Gene: Rosmarinus_43 Start: 35084, Stop: 34704, Start Num: 45

Candidate Starts for Rosmarinus_43:

(33, 35120), (Start: 45 @35084 has 70 MA's), (49, 35048), (58, 34988), (74, 34829), (87, 34778), (98, 34730),

Gene: Ruthiejr_48 Start: 36000, Stop: 35641, Start Num: 44

Candidate Starts for Ruthiejr_48:

(26, 36069), (37, 36024), (Start: 44 @36000 has 12 MA's), (Start: 46 @35994 has 9 MA's), (49, 35955), (56, 35904), (63, 35835), (66, 35814), (68, 35793), (70, 35775), (94, 35673),

Gene: SamScheppers_46 Start: 36429, Stop: 36070, Start Num: 44

Candidate Starts for SamScheppers_46:

(26, 36498), (37, 36453), (Start: 44 @36429 has 12 MA's), (Start: 46 @36423 has 9 MA's), (49, 36384), (56, 36333), (63, 36264), (66, 36243), (68, 36222), (70, 36204), (94, 36102),

Gene: SamuelLPlaqson_44 Start: 35877, Stop: 35500, Start Num: 45

Candidate Starts for SamuelLPlaqson_44:

(31, 35928), (Start: 45 @35877 has 70 MA's), (49, 35841), (58, 35781), (87, 35574), (98, 35526),

Gene: Scarlett_47 Start: 35979, Stop: 35605, Start Num: 48

Candidate Starts for Scarlett_47:

(36, 36012), (Start: 48 @35979 has 11 MA's), (49, 35949), (50, 35946), (58, 35889), (62, 35844), (64, 35826), (72, 35751), (90, 35676), (98, 35631),

Gene: Shadow1_48 Start: 35996, Stop: 35607, Start Num: 48

Candidate Starts for Shadow1_48:

(Start: 48 @35996 has 11 MA's), (49, 35966), (61, 35864), (64, 35843), (71, 35783), (72, 35768), (75, 35732), (87, 35696), (97, 35639), (98, 35633),

Gene: ShedlockHolmes_46 Start: 35683, Stop: 35261, Start Num: 34

Candidate Starts for ShedlockHolmes_46:

(21, 35740), (27, 35713), (Start: 34 @35683 has 5 MA's), (Start: 46 @35650 has 9 MA's), (70, 35437), (72, 35419), (78, 35371), (98, 35287),

Gene: ShiaSurprise_44 Start: 35293, Stop: 34913, Start Num: 45

Candidate Starts for ShiaSurprise_44:

(33, 35329), (Start: 45 @35293 has 70 MA's), (49, 35257), (58, 35197), (74, 35038), (87, 34987), (98, 34939),

Gene: SirPhilip_45 Start: 36219, Stop: 35824, Start Num: 47

Candidate Starts for SirPhilip_45:

(Start: 47 @36219 has 15 MA's), (49, 36189), (58, 36129), (60, 36102), (64, 36066), (73, 35973), (79, 35943), (103, 35850),

Gene: Slarp_47 Start: 36038, Stop: 35679, Start Num: 44

Candidate Starts for Slarp_47:

(26, 36107), (37, 36062), (Start: 44 @36038 has 12 MA's), (Start: 46 @36032 has 9 MA's), (49, 35993), (56, 35942), (63, 35873), (66, 35852), (68, 35831), (70, 35813), (94, 35711),

Gene: Slimphazie_43 Start: 34979, Stop: 34599, Start Num: 45

Candidate Starts for Slimphazie_43:

(33, 35015), (Start: 45 @34979 has 70 MA's), (49, 34943), (58, 34883), (87, 34673), (98, 34625),

Gene: Spock_43 Start: 35097, Stop: 34717, Start Num: 45

Candidate Starts for Spock_43:

(33, 35133), (Start: 45 @35097 has 70 MA's), (49, 35061), (58, 35001), (74, 34842), (87, 34791), (98, 34743),

Gene: Stinson_44 Start: 35487, Stop: 35110, Start Num: 45

Candidate Starts for Stinson_44:

(31, 35538), (Start: 45 @35487 has 70 MA's), (49, 35451), (57, 35397), (58, 35391), (81, 35199), (87, 35184), (98, 35136),

Gene: Sunflower1121_49 Start: 36097, Stop: 35708, Start Num: 47

Candidate Starts for Sunflower1121_49:

(Start: 47 @36097 has 15 MA's), (49, 36067), (61, 35965), (64, 35944), (71, 35884), (72, 35869), (75, 35833), (97, 35740),

Gene: Syra333_48 Start: 35764, Stop: 35375, Start Num: 48

Candidate Starts for Syra333_48:

(Start: 48 @35764 has 11 MA's), (49, 35734), (61, 35632), (64, 35611), (71, 35551), (72, 35536), (75, 35500), (87, 35464), (97, 35407), (98, 35401),

Gene: TBond007_45 Start: 35156, Stop: 34734, Start Num: 34

Candidate Starts for TBond007_45:

(Start: 34 @35156 has 5 MA's), (Start: 46 @35123 has 9 MA's), (64, 34967), (70, 34910), (72, 34892), (78, 34844), (98, 34760),

Gene: TClif_47 Start: 36099, Stop: 35698, Start Num: 41

Candidate Starts for TClif_47:

(Start: 41 @36099 has 1 MA's), (51, 36051), (55, 36015), (57, 36003), (58, 35997), (72, 35859), (77, 35814), (84, 35796), (90, 35775), (93, 35763), (99, 35715), (101, 35703),

Gene: Tachez_43 Start: 34941, Stop: 34561, Start Num: 45

Candidate Starts for Tachez_43:

(33, 34977), (Start: 45 @34941 has 70 MA's), (49, 34905), (58, 34845), (87, 34635), (98, 34587),

Gene: TaiwanKao_45 Start: 35220, Stop: 34843, Start Num: 45

Candidate Starts for TaiwanKao_45:

(31, 35271), (Start: 45 @35220 has 70 MA's), (49, 35184), (53, 35169), (58, 35124), (87, 34917), (98, 34869),

Gene: Taquito_47 Start: 36279, Stop: 35926, Start Num: 46

Candidate Starts for Taquito_47:

(26, 36354), (37, 36309), (Start: 44 @36285 has 12 MA's), (Start: 46 @36279 has 9 MA's), (49, 36240), (56, 36189), (63, 36120), (66, 36099), (68, 36078), (70, 36060), (94, 35958),

Gene: Tierra_46 Start: 35645, Stop: 35253, Start Num: 47

Candidate Starts for Tierra_46:

(5, 35855), (6, 35846), (Start: 47 @35645 has 15 MA's), (49, 35615), (64, 35492), (67, 35459), (71, 35432), (72, 35417), (75, 35381), (89, 35330), (95, 35309), (98, 35279),

Gene: Tigress9_49 Start: 35862, Stop: 35461, Start Num: 42

Candidate Starts for Tigress9_49:

(Start: 42 @35862 has 1 MA's), (Start: 48 @35850 has 11 MA's), (49, 35820), (61, 35718), (64, 35697), (67, 35664), (72, 35622), (75, 35586), (97, 35493), (98, 35487),

Gene: TiniBug_44 Start: 35873, Stop: 35496, Start Num: 45

Candidate Starts for TiniBug_44:

(31, 35924), (Start: 45 @35873 has 70 MA's), (49, 35837), (58, 35777), (87, 35570), (98, 35522),

Gene: Topper_43 Start: 35096, Stop: 34716, Start Num: 45

Candidate Starts for Topper_43:

(33, 35132), (Start: 45 @35096 has 70 MA's), (49, 35060), (58, 35000), (74, 34841), (87, 34790), (98, 34742),

Gene: TreyKay_44 Start: 35164, Stop: 34787, Start Num: 45

Candidate Starts for TreyKay_44:

(31, 35215), (Start: 45 @35164 has 70 MA's), (49, 35128), (53, 35113), (58, 35068), (87, 34861), (98, 34813),

Gene: TribbleTrouble_43 Start: 35018, Stop: 34626, Start Num: 43

Candidate Starts for TribbleTrouble_43:

(28, 35075), (Start: 43 @35018 has 1 MA's), (49, 34982), (72, 34784), (78, 34736), (98, 34652), (99, 34640), (100, 34631),

Gene: TruffulaTree_43 Start: 34975, Stop: 34595, Start Num: 45

Candidate Starts for TruffulaTree_43:

(33, 35011), (Start: 45 @34975 has 70 MA's), (49, 34939), (58, 34879), (87, 34669), (98, 34621),

Gene: Twitch_43 Start: 35098, Stop: 34718, Start Num: 45

Candidate Starts for Twitch_43:

(33, 35134), (Start: 45 @35098 has 70 MA's), (49, 35062), (58, 35002), (74, 34843), (87, 34792), (98, 34744),

Gene: Unicorn_45 Start: 34877, Stop: 34485, Start Num: 47

Candidate Starts for Unicorn_45:

(1, 35147), (2, 35111), (3, 35096), (5, 35087), (6, 35078), (Start: 47 @34877 has 15 MA's), (49, 34847), (64, 34724), (71, 34664), (72, 34649), (92, 34550), (98, 34511),

Gene: Urkel_44 Start: 35877, Stop: 35500, Start Num: 45

Candidate Starts for Urkel_44:

(31, 35928), (Start: 45 @35877 has 70 MA's), (49, 35841), (58, 35781), (87, 35574), (98, 35526),

Gene: Veliki_43 Start: 35015, Stop: 34635, Start Num: 45

Candidate Starts for Veliki_43:

(33, 35051), (Start: 45 @35015 has 70 MA's), (49, 34979), (58, 34919), (87, 34709), (98, 34661),

Gene: Wintermute_47 Start: 36187, Stop: 35828, Start Num: 44

Candidate Starts for Wintermute_47:

(26, 36256), (37, 36211), (Start: 44 @36187 has 12 MA's), (Start: 46 @36181 has 9 MA's), (49, 36142), (56, 36091), (63, 36022), (66, 36001), (68, 35980), (70, 35962), (94, 35860),

Gene: Ximenita_49 Start: 35950, Stop: 35561, Start Num: 48

Candidate Starts for Ximenita_49:

(20, 36055), (29, 36016), (Start: 48 @35950 has 11 MA's), (49, 35920), (61, 35818), (64, 35797), (65, 35791), (67, 35764), (71, 35737), (72, 35722), (75, 35686), (88, 35641), (97, 35593), (98, 35587), (99,

35575),

Gene: Y10_46 Start: 36100, Stop: 35747, Start Num: 46

Candidate Starts for Y10_46:

(26, 36175), (37, 36130), (Start: 44 @36106 has 12 MA's), (Start: 46 @36100 has 9 MA's), (49, 36061), (56, 36010), (63, 35941), (66, 35920), (68, 35899), (70, 35881), (94, 35779),

Gene: Y2_46 Start: 36100, Stop: 35747, Start Num: 46

Candidate Starts for Y2_46:

(26, 36175), (37, 36130), (Start: 44 @36106 has 12 MA's), (Start: 46 @36100 has 9 MA's), (49, 36061), (56, 36010), (63, 35941), (66, 35920), (68, 35899), (70, 35881), (94, 35779),

Gene: YasnayaPolyana_47 Start: 36037, Stop: 35678, Start Num: 44

Candidate Starts for YasnayaPolyana_47:

(26, 36106), (37, 36061), (Start: 44 @36037 has 12 MA's), (Start: 46 @36031 has 9 MA's), (49, 35992), (56, 35941), (63, 35872), (66, 35851), (68, 35830), (70, 35812), (94, 35710),

Gene: Yuna_49 Start: 36719, Stop: 36363, Start Num: 47

Candidate Starts for Yuna_49:

(Start: 47 @36719 has 15 MA's), (49, 36689), (57, 36635), (58, 36629), (59, 36608), (64, 36566), (71, 36506), (72, 36491), (96, 36404), (98, 36389),

Gene: Yunkel11_46 Start: 34974, Stop: 34585, Start Num: 45

Candidate Starts for Yunkel11_46:

(10, 35112), (12, 35106), (13, 35103), (15, 35094), (18, 35079), (Start: 45 @34974 has 70 MA's), (Start: 48 @34968 has 11 MA's), (58, 34878), (64, 34815), (68, 34776), (72, 34740), (84, 34680), (86, 34674), (101, 34590),

Gene: Zavala_44 Start: 35258, Stop: 34881, Start Num: 45

Candidate Starts for Zavala_44:

(31, 35309), (Start: 45 @35258 has 70 MA's), (49, 35222), (53, 35207), (58, 35162), (87, 34955), (98, 34907),