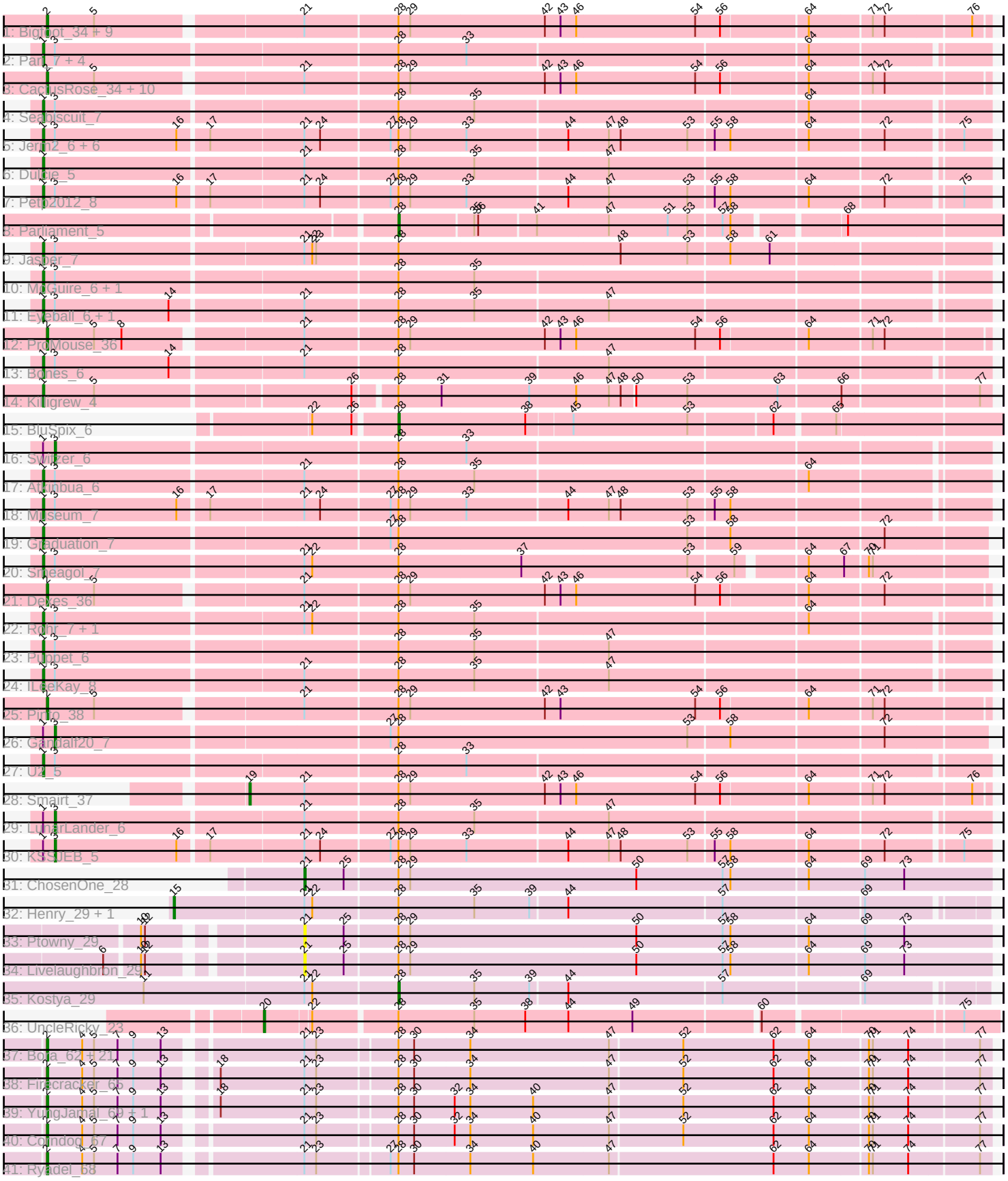
Pham 347470


1: Bigfoot_34 + 9
2: Par_7 + 4
3: CactusRose_34 + 10
4: Seabiscuit_7
5: Jerm2_6 + 6
6: Dudie_5
7: Petp2012_8
8: Parliament_5
9: Jasper_7
10: McGuire_6 + 1
11: Eyeball_6 + 1
12: ProMouse_36
13: Bones_6
14: Kingrew_4
15: BluSpix_6
16: Swizer_6
17: Atlabua_6
18: Museum_7
19: Graduation_7
20: Sheagol_7
21: Deres_36
22: Rohr_7 + 1
23: Puppet_6
24: IGeKay_8
25: Pinto_38
26: Gandalf20_7
27: U2_5
28: Smairt_37
29: LunarLander_6
30: KSSNEB_5
31: ChosenOne_28
32: Henry_29 + 1
33: Ptowny_29
34: Livelaughbrbn_29
35: Kostya_29
36: UncleRicky_23
37: Bota_62 + 21
38: Firecracker_66
39: YungJamal_69 + 1
40: Corndog_67
41: Ryadel_68

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 347470 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347470 has 96 members, 9 are drafts.

Phages represented in each track:
• Track 1 : Bigfoot_34, Kykar_35, Inyanga_34, PowerRanger_37, A6_33, Phlippers_34, BK1_33, JC27_37, Iqorha_34, Fascinus_35
• Track 2 : Pari_7, Briton15_7, DreamCatcher_7, Hope4ever_6, HermioneGrange_7
• Track 3 : CactusRose_34, GageAP_37, IgnatiusPatJac_35, LilBib_36, HanShotFirst_35, Froghopper_36, Wilkins_35, Topgun_35, Blackflame_35, Pelly_36, HarryOW_36
• Track 4 : Seabiscuit_7
• Track 5 : Jerm2_6, Bob3_5, Burton_6, Fenn_6, PinkPlastic_4, Naira_6, BigMau_7
• Track 6 : Dulcie_5
• Track 7 : Petp2012_8
• Track 8 : Parliament_5
• Track 9 : Jasper_7
• Track 10 : McGuire_6, Dynamix_6
• Track 11 : Eyeball_6, Chanagan_5
• Track 12 : ProMouse_36
• Track 13 : Bones_6
• Track 14 : Killigrew_4
• Track 15 : BluSpix_6
• Track 16 : Switzer_6
• Track 17 : Atkinbua_6
• Track 18 : Museum_7
• Track 19 : Graduation_7
• Track 20 : Smeagol_7
• Track 21 : Dexes_36
• Track 22 : Rohr_7, BeesKnees_6
• Track 23 : Puppet_6
• Track 24 : ILeeKay_8
• Track 25 : Pinto_38
• Track 26 : Gandalf20_7
• Track 27 : U2_5
• Track 28 : Smairt_37
• Track 29 : LunarLander_6
• Track 30 : KSSJEB_5
• Track 31 : ChosenOne_28
• Track 32 : Henry_29, Daikon_27
• Track 33 : Ptowny_29
• Track 34 : Livelaughbron_29

• Track 35 : Kostya_29
• Track 36 : UncleRicky_23
• Track 37 : Bora_62, KingPhillip3_64, Imara_64, Winget_65, SchoolBus_64, Idergollasper_64, Vagabond_64, Murai_65, Schuy_65, Wogge42_63, Blessica_65, JangDynasty_64, TelAviv_61, Shida_64, Catdawg_64, YoyoKar_62, Vorrps_64, Familton_65, Mori_64, MadKillah_65, Zebo_64, Alkhayr_64
• Track 38 : Firecracker_65
• Track 39 : YungJamal_69, Smooch_67
• Track 40 : Corndog_67
• Track 41 : Ryadel_68

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 45 of the 87 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• A6_33, Alkhayr_64, BK1_33, Bigfoot_34, Blackflame_35, Blessica_65, Bora_62, CactusRose_34, Catdawg_64, Corndog_67, Dexes_36, Familton_65, Fascinus_35, Firecracker_65, Froghopper_36, GageAP_37, HanShotFirst_35, HarryOW_36, Idergollasper_64, IgnatiusPatJac_35, Imara_64, Inyanga_34, Iqorha_34, JC27_37, JangDynasty_64, KingPhillip3_64, Kykar_35, LilBib_36, MadKillah_65, Mori_64, Murai_65, Pelly_36, Phlippers_34, Pinto_38, PowerRanger_37, ProMouse_36, Ryadel_68, SchoolBus_64, Schuy_65, Shida_64, Smooch_67, TelAviv_61, Topgun_35, Vagabond_64, Vorrps_64, Wilkins_35, Winget_65, Wogge42_63, YoyoKar_62, YungJamal_69, Zebo_64,

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

Genes that do not have the "Most Annotated" start:
• Atkinbua_6, BeesKnees_6, BigMau_7, BluSpix_6, Bob3_5, Bones_6, Briton15_7, Burton_6, Chanagan_5, ChosenOne_28, Daikon_27, DreamCatcher_7, Dulcie_5, Dynamix_6, Eyeball_6, Fenn_6, Gandalf20_7, Graduation_7, Henry_29, HermioneGrange_7, Hope4ever_6, ILeeKay_8, Jasper_7, Jerm2_6, KSSJEB_5, Killigrew_4, Kostya_29, Livelaughbron_29, LunarLander_6, McGuire_6, Museum_7, Naira_6, Pari_7, Parliament_5, Petp2012_8, PinkPlastic_4, Ptowny_29, Puppet_6, Rohr_7, Seabiscuit_7, Smairt_37, Smeagol_7, Switzer_6, U2_5, UncleRicky_23,

Summary by start number:

Start 1:
• Found in 35 of 96 (36.5%) of genes in pham
• Manual Annotations of this start: 31 of 87
• Called 88.6% of time when present
• Phage (with cluster) where this start called: Atkinbua_6 (A1), BeesKnees_6 (A1), BigMau_7 (A1), Bob3_5 (A1), Bones_6 (A1), Briton15_7 (A1), Burton_6 (A1), Chanagan_5 (A1), DreamCatcher_7 (A1), Dulcie_5 (A1), Dynamix_6 (A1), Eyeball_6 (A1), Fenn_6 (A1), Graduation_7 (A1), HermioneGrange_7 (A1), Hope4ever_6 (A1), ILeeKay_8 (A1), Jasper_7 (A1), Jerm2_6 (A1), Killigrew_4 (A1), McGuire_6 (A1),

Museum_7 (A1), Naira_6 (A1), Pari_7 (A1), Petp2012_8 (A1), PinkPlastic_4 (A1), Puppet_6 (A1), Rohr_7 (A1), Seabiscuit_7 (A1), Smeagol_7 (A1), U2_5 (A1),

Start 2:
• Found in 51 of 96 (53.1%) of genes in pham
• Manual Annotations of this start: 45 of 87
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A6_33 (A1), Alkhayr_64 (O), BK1_33 (A1), Bigfoot_34 (A1), Blackflame_35 (A1), Blessica_65 (O), Bora_62 (O), CactusRose_34 (A1), Catdawg_64 (O), Corndog_67 (O), Dexes_36 (A1), Familton_65 (O), Fascinus_35 (A1), Firecracker_65 (O), Froghopper_36 (A1), GageAP_37 (A1), HanShotFirst_35 (A1), HarryOW_36 (A1), Idergollasper_64 (O), IgnatiusPatJac_35 (A1), Imara_64 (O), Inyanga_34 (A1), Iqorha_34 (A1), JC27_37 (A1), JangDynasty_64 (O), KingPhillip3_64 (O), Kykar_35 (A1), LilBib_36 (A1), MadKillah_65 (O), Mori_64 (O), Murai_65 (O), Pelly_36 (A1), Phlippers_34 (A1), Pinto_38 (A1), PowerRanger_37 (A1), ProMouse_36 (A1), Ryadel_68 (O), SchoolBus_64 (O), Schuy_65 (O), Shida_64 (O), Smooch_67 (O), TelAviv_61 (O), Topgun_35 (A1), Vagabond_64 (O), Vorrps_64 (O), Wilkins_35 (A1), Winget_65 (O), Wogge42_63 (O), YoyoKar_62 (O), YungJamal_69 (O), Zebo_64 (O),

Start 3:
• Found in 32 of 96 (33.3%) of genes in pham
• Manual Annotations of this start: 4 of 87
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Gandalf20_7 (A1), KSSJEB_5 (A1), LunarLander_6 (A1), Switzer_6 (A1),

Start 15:
• Found in 2 of 96 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 87
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Daikon_27 (E), Henry_29 (E),

Start 19:
• Found in 1 of 96 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 87
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Smairt_37 (A1),

Start 20:
• Found in 1 of 96 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 87
• Called 100.0% of time when present
• Phage (with cluster) where this start called: UncleRicky_23 (F1),

Start 21:
• Found in 79 of 96 (82.3%) of genes in pham
• Manual Annotations of this start: 1 of 87
• Called 3.8% of time when present
• Phage (with cluster) where this start called: ChosenOne_28 (E), Livelaughbron_29 (E), Ptowny_29 (E),

Start 28:

• Found in 96 of 96 (100.0%) of genes in pham
• Manual Annotations of this start: 3 of 87
• Called 3.1% of time when present
• Phage (with cluster) where this start called: BluSpix_6 (A1), Kostya_29 (E), Parliament_5 (A1),

Summary by clusters:

There are 4 clusters represented in this pham: A1, F1, E, O,

Info for manual annotations of cluster A1:
•Start number 1 was manually annotated 31 times for cluster A1.
•Start number 2 was manually annotated 20 times for cluster A1.
•Start number 3 was manually annotated 4 times for cluster A1.
•Start number 19 was manually annotated 1 time for cluster A1.
•Start number 28 was manually annotated 2 times for cluster A1.

Info for manual annotations of cluster E:
•Start number 15 was manually annotated 1 time for cluster E.
•Start number 21 was manually annotated 1 time for cluster E.
•Start number 28 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster F1:
•Start number 20 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster O:
•Start number 2 was manually annotated 25 times for cluster O.

Gene Information:

Gene: A6_33 Start: 27619, Stop: 28305, Start Num: 2
Candidate Starts for A6_33:
(Start: 2 @27619 has 45 MA's), (5, 27655), (Start: 21 @27802 has 1 MA's), (Start: 28 @27871 has 3 MA's), (29, 27880), (42, 27982), (43, 27994), (46, 28006), (54, 28096), (56, 28114), (64, 28177), (71, 28222), (72, 28231), (76, 28294),

Gene: Alkhayr_64 Start: 41056, Stop: 41742, Start Num: 2
Candidate Starts for Alkhayr_64:
(Start: 2 @41056 has 45 MA's), (4, 41083), (5, 41092), (7, 41110), (9, 41122), (13, 41143), (Start: 21 @41236 has 1 MA's), (23, 41245), (Start: 28 @41302 has 3 MA's), (30, 41314), (34, 41356), (47, 41461), (52, 41515), (62, 41584), (64, 41611), (70, 41653), (71, 41656), (74, 41683), (77, 41734),

Gene: Atkinbua_6 Start: 3001, Stop: 3690, Start Num: 1
Candidate Starts for Atkinbua_6:
(Start: 1 @3001 has 31 MA's), (Start: 3 @3010 has 4 MA's), (Start: 21 @3193 has 1 MA's), (Start: 28 @3262 has 3 MA's), (35, 3319), (64, 3565),

Gene: BK1_33 Start: 27619, Stop: 28305, Start Num: 2
Candidate Starts for BK1_33:
(Start: 2 @27619 has 45 MA's), (5, 27655), (Start: 21 @27802 has 1 MA's), (Start: 28 @27871 has 3 MA's), (29, 27880), (42, 27982), (43, 27994), (46, 28006), (54, 28096), (56, 28114), (64, 28177), (71,

28222), (72, 28231), (76, 28294),

Gene: BeesKnees_6 Start: 3082, Stop: 3771, Start Num: 1
Candidate Starts for BeesKnees_6:
(Start: 1 @3082 has 31 MA's), (Start: 3 @3091 has 4 MA's), (Start: 21 @3274 has 1 MA's), (22, 3280), (Start: 28 @3343 has 3 MA's), (35, 3400), (64, 3646),

Gene: BigMau_7 Start: 3086, Stop: 3775, Start Num: 1
Candidate Starts for BigMau_7:
(Start: 1 @3086 has 31 MA's), (Start: 3 @3095 has 4 MA's), (16, 3188), (17, 3209), (Start: 21 @3278 has 1 MA's), (24, 3290), (27, 3341), (Start: 28 @3347 has 3 MA's), (29, 3356), (33, 3398), (44, 3473), (47, 3503), (48, 3512), (53, 3563), (55, 3581), (58, 3593), (64, 3650), (72, 3704), (75, 3755),

Gene: Bigfoot_34 Start: 27850, Stop: 28536, Start Num: 2
Candidate Starts for Bigfoot_34:
(Start: 2 @27850 has 45 MA's), (5, 27886), (Start: 21 @28033 has 1 MA's), (Start: 28 @28102 has 3 MA's), (29, 28111), (42, 28213), (43, 28225), (46, 28237), (54, 28327), (56, 28345), (64, 28408), (71, 28453), (72, 28462), (76, 28525),

Gene: Blackflame_35 Start: 28070, Stop: 28756, Start Num: 2
Candidate Starts for Blackflame_35:
(Start: 2 @28070 has 45 MA's), (5, 28106), (Start: 21 @28253 has 1 MA's), (Start: 28 @28322 has 3 MA's), (29, 28331), (42, 28433), (43, 28445), (46, 28457), (54, 28547), (56, 28565), (64, 28628), (71, 28673), (72, 28682),

Gene: Blessica_65 Start: 41655, Stop: 42341, Start Num: 2
Candidate Starts for Blessica_65:
(Start: 2 @41655 has 45 MA's), (4, 41682), (5, 41691), (7, 41709), (9, 41721), (13, 41742), (Start: 21 @41835 has 1 MA's), (23, 41844), (Start: 28 @41901 has 3 MA's), (30, 41913), (34, 41955), (47, 42060), (52, 42114), (62, 42183), (64, 42210), (70, 42252), (71, 42255), (74, 42282), (77, 42333),

Gene: BluSpix_6 Start: 3625, Stop: 4062, Start Num: 28
Candidate Starts for BluSpix_6:
(22, 3565), (26, 3595), (Start: 28 @3625 has 3 MA's), (38, 3721), (45, 3754), (53, 3841), (62, 3901), (65, 3943),

Gene: Bob3_5 Start: 2926, Stop: 3615, Start Num: 1
Candidate Starts for Bob3_5:
(Start: 1 @2926 has 31 MA's), (Start: 3 @2935 has 4 MA's), (16, 3028), (17, 3049), (Start: 21 @3118 has 1 MA's), (24, 3130), (27, 3181), (Start: 28 @3187 has 3 MA's), (29, 3196), (33, 3238), (44, 3313), (47, 3343), (48, 3352), (53, 3403), (55, 3421), (58, 3433), (64, 3490), (72, 3544), (75, 3595),

Gene: Bones_6 Start: 3119, Stop: 3808, Start Num: 1
Candidate Starts for Bones_6:
(Start: 1 @3119 has 31 MA's), (Start: 3 @3128 has 4 MA's), (14, 3215), (Start: 21 @3311 has 1 MA's), (Start: 28 @3380 has 3 MA's), (47, 3536),

Gene: Bora_62 Start: 41012, Stop: 41698, Start Num: 2
Candidate Starts for Bora_62:
(Start: 2 @41012 has 45 MA's), (4, 41039), (5, 41048), (7, 41066), (9, 41078), (13, 41099), (Start: 21 @41192 has 1 MA's), (23, 41201), (Start: 28 @41258 has 3 MA's), (30, 41270), (34, 41312), (47, 41417), (52, 41471), (62, 41540), (64, 41567), (70, 41609), (71, 41612), (74, 41639), (77, 41690),

Gene: Briton15_7 Start: 3137, Stop: 3826, Start Num: 1
Candidate Starts for Briton15_7:
(Start: 1 @3137 has 31 MA's), (Start: 3 @3146 has 4 MA's), (Start: 28 @3398 has 3 MA's), (33, 3449), (64, 3701),

Gene: Burton_6 Start: 2987, Stop: 3676, Start Num: 1
Candidate Starts for Burton_6:
(Start: 1 @2987 has 31 MA's), (Start: 3 @2996 has 4 MA's), (16, 3089), (17, 3110), (Start: 21 @3179 has 1 MA's), (24, 3191), (27, 3242), (Start: 28 @3248 has 3 MA's), (29, 3257), (33, 3299), (44, 3374), (47, 3404), (48, 3413), (53, 3464), (55, 3482), (58, 3494), (64, 3551), (72, 3605), (75, 3656),

Gene: CactusRose_34 Start: 27944, Stop: 28630, Start Num: 2
Candidate Starts for CactusRose_34:
(Start: 2 @27944 has 45 MA's), (5, 27980), (Start: 21 @28127 has 1 MA's), (Start: 28 @28196 has 3 MA's), (29, 28205), (42, 28307), (43, 28319), (46, 28331), (54, 28421), (56, 28439), (64, 28502), (71, 28547), (72, 28556),

Gene: Catdawg_64 Start: 41391, Stop: 42077, Start Num: 2
Candidate Starts for Catdawg_64:
(Start: 2 @41391 has 45 MA's), (4, 41418), (5, 41427), (7, 41445), (9, 41457), (13, 41478), (Start: 21 @41571 has 1 MA's), (23, 41580), (Start: 28 @41637 has 3 MA's), (30, 41649), (34, 41691), (47, 41796), (52, 41850), (62, 41919), (64, 41946), (70, 41988), (71, 41991), (74, 42018), (77, 42069),

Gene: Chanagan_5 Start: 2952, Stop: 3641, Start Num: 1
Candidate Starts for Chanagan_5:
(Start: 1 @2952 has 31 MA's), (Start: 3 @2961 has 4 MA's), (14, 3048), (Start: 21 @3144 has 1 MA's), (Start: 28 @3213 has 3 MA's), (35, 3270), (47, 3369),

Gene: ChosenOne_28 Start: 27173, Stop: 27688, Start Num: 21
Candidate Starts for ChosenOne_28:
(Start: 21 @27173 has 1 MA's), (25, 27203), (Start: 28 @27242 has 3 MA's), (29, 27251), (50, 27422), (57, 27488), (58, 27494), (64, 27551), (69, 27593), (73, 27623),

Gene: Corndog_67 Start: 42385, Stop: 43071, Start Num: 2
Candidate Starts for Corndog_67:
(Start: 2 @42385 has 45 MA's), (4, 42412), (5, 42421), (7, 42439), (9, 42451), (13, 42472), (Start: 21 @42565 has 1 MA's), (23, 42574), (Start: 28 @42631 has 3 MA's), (30, 42643), (32, 42673), (34, 42685), (40, 42733), (47, 42790), (52, 42844), (62, 42913), (64, 42940), (70, 42982), (71, 42985), (74, 43012), (77, 43063),

Gene: Daikon_27 Start: 27616, Stop: 28206, Start Num: 15
Candidate Starts for Daikon_27:
(Start: 15 @27616 has 1 MA's), (Start: 21 @27712 has 1 MA's), (22, 27718), (Start: 28 @27781 has 3 MA's), (35, 27838), (39, 27880), (44, 27907), (57, 28021), (69, 28123),

Gene: Dexes_36 Start: 28737, Stop: 29423, Start Num: 2
Candidate Starts for Dexes_36:
(Start: 2 @28737 has 45 MA's), (5, 28773), (Start: 21 @28920 has 1 MA's), (Start: 28 @28989 has 3 MA's), (29, 28998), (42, 29100), (43, 29112), (46, 29124), (54, 29214), (56, 29232), (64, 29295), (72, 29349),

Gene: DreamCatcher_7 Start: 3730, Stop: 4419, Start Num: 1
Candidate Starts for DreamCatcher_7:

(Start: 1 @3730 has 31 MA's), (Start: 3 @3739 has 4 MA's), (Start: 28 @3991 has 3 MA's), (33, 4042), (64, 4294),

Gene: Dulcie_5 Start: 3031, Stop: 3720, Start Num: 1
Candidate Starts for Dulcie_5:
(Start: 1 @3031 has 31 MA's), (Start: 21 @3223 has 1 MA's), (Start: 28 @3292 has 3 MA's), (35, 3349), (47, 3448),

Gene: Dynamix_6 Start: 3084, Stop: 3773, Start Num: 1
Candidate Starts for Dynamix_6:
(Start: 1 @3084 has 31 MA's), (Start: 3 @3093 has 4 MA's), (Start: 28 @3345 has 3 MA's), (35, 3402),

Gene: Eyeball_6 Start: 3127, Stop: 3816, Start Num: 1
Candidate Starts for Eyeball_6:
(Start: 1 @3127 has 31 MA's), (Start: 3 @3136 has 4 MA's), (14, 3223), (Start: 21 @3319 has 1 MA's), (Start: 28 @3388 has 3 MA's), (35, 3445), (47, 3544),

Gene: Familton_65 Start: 41348, Stop: 42034, Start Num: 2
Candidate Starts for Familton_65:
(Start: 2 @41348 has 45 MA's), (4, 41375), (5, 41384), (7, 41402), (9, 41414), (13, 41435), (Start: 21 @41528 has 1 MA's), (23, 41537), (Start: 28 @41594 has 3 MA's), (30, 41606), (34, 41648), (47, 41753), (52, 41807), (62, 41876), (64, 41903), (70, 41945), (71, 41948), (74, 41975), (77, 42026),

Gene: Fascinus_35 Start: 28001, Stop: 28687, Start Num: 2
Candidate Starts for Fascinus_35:
(Start: 2 @28001 has 45 MA's), (5, 28037), (Start: 21 @28184 has 1 MA's), (Start: 28 @28253 has 3 MA's), (29, 28262), (42, 28364), (43, 28376), (46, 28388), (54, 28478), (56, 28496), (64, 28559), (71, 28604), (72, 28613), (76, 28676),

Gene: Fenn_6 Start: 3315, Stop: 4004, Start Num: 1
Candidate Starts for Fenn_6:
(Start: 1 @3315 has 31 MA's), (Start: 3 @3324 has 4 MA's), (16, 3417), (17, 3438), (Start: 21 @3507 has 1 MA's), (24, 3519), (27, 3570), (Start: 28 @3576 has 3 MA's), (29, 3585), (33, 3627), (44, 3702), (47, 3732), (48, 3741), (53, 3792), (55, 3810), (58, 3822), (64, 3879), (72, 3933), (75, 3984),

Gene: Firecracker_65 Start: 41538, Stop: 42224, Start Num: 2
Candidate Starts for Firecracker_65:
(Start: 2 @41538 has 45 MA's), (4, 41565), (5, 41574), (7, 41592), (9, 41604), (13, 41625), (18, 41655), (Start: 21 @41718 has 1 MA's), (23, 41727), (Start: 28 @41784 has 3 MA's), (30, 41796), (34, 41838), (47, 41943), (52, 41997), (62, 42066), (64, 42093), (70, 42135), (71, 42138), (74, 42165), (77, 42216),

Gene: Froghopper_36 Start: 28015, Stop: 28701, Start Num: 2
Candidate Starts for Froghopper_36:
(Start: 2 @28015 has 45 MA's), (5, 28051), (Start: 21 @28198 has 1 MA's), (Start: 28 @28267 has 3 MA's), (29, 28276), (42, 28378), (43, 28390), (46, 28402), (54, 28492), (56, 28510), (64, 28573), (71, 28618), (72, 28627),

Gene: GageAP_37 Start: 28786, Stop: 29472, Start Num: 2
Candidate Starts for GageAP_37:
(Start: 2 @28786 has 45 MA's), (5, 28822), (Start: 21 @28969 has 1 MA's), (Start: 28 @29038 has 3 MA's), (29, 29047), (42, 29149), (43, 29161), (46, 29173), (54, 29263), (56, 29281), (64, 29344), (71, 29389), (72, 29398),

Gene: Gandalf20_7 Start: 3468, Stop: 4154, Start Num: 3
Candidate Starts for Gandalf20_7:
(Start: 1 @3459 has 31 MA's), (Start: 3 @3468 has 4 MA's), (27, 3714), (Start: 28 @3720 has 3 MA's), (53, 3939), (58, 3969), (72, 4080),

Gene: Graduation_7 Start: 3446, Stop: 4141, Start Num: 1
Candidate Starts for Graduation_7:
(Start: 1 @3446 has 31 MA's), (27, 3701), (Start: 28 @3707 has 3 MA's), (53, 3926), (58, 3956), (72, 4067),

Gene: HanShotFirst_35 Start: 27990, Stop: 28676, Start Num: 2
Candidate Starts for HanShotFirst_35:
(Start: 2 @27990 has 45 MA's), (5, 28026), (Start: 21 @28173 has 1 MA's), (Start: 28 @28242 has 3 MA's), (29, 28251), (42, 28353), (43, 28365), (46, 28377), (54, 28467), (56, 28485), (64, 28548), (71, 28593), (72, 28602),

Gene: HarryOW_36 Start: 28444, Stop: 29130, Start Num: 2
Candidate Starts for HarryOW_36:
(Start: 2 @28444 has 45 MA's), (5, 28480), (Start: 21 @28627 has 1 MA's), (Start: 28 @28696 has 3 MA's), (29, 28705), (42, 28807), (43, 28819), (46, 28831), (54, 28921), (56, 28939), (64, 29002), (71, 29047), (72, 29056),

Gene: Henry_29 Start: 27878, Stop: 28468, Start Num: 15
Candidate Starts for Henry_29:
(Start: 15 @27878 has 1 MA's), (Start: 21 @27974 has 1 MA's), (22, 27980), (Start: 28 @28043 has 3 MA's), (35, 28100), (39, 28142), (44, 28169), (57, 28283), (69, 28385),

Gene: HermioneGrange_7 Start: 3087, Stop: 3776, Start Num: 1
Candidate Starts for HermioneGrange_7:
(Start: 1 @3087 has 31 MA's), (Start: 3 @3096 has 4 MA's), (Start: 28 @3348 has 3 MA's), (33, 3399), (64, 3651),

Gene: Hope4ever_6 Start: 3493, Stop: 4182, Start Num: 1
Candidate Starts for Hope4ever_6:
(Start: 1 @3493 has 31 MA's), (Start: 3 @3502 has 4 MA's), (Start: 28 @3754 has 3 MA's), (33, 3805), (64, 4057),

Gene: ILeeKay_8 Start: 3564, Stop: 4253, Start Num: 1
Candidate Starts for ILeeKay_8:
(Start: 1 @3564 has 31 MA's), (Start: 3 @3573 has 4 MA's), (Start: 21 @3756 has 1 MA's), (Start: 28 @3825 has 3 MA's), (35, 3882), (47, 3981),

Gene: Idergollasper_64 Start: 41342, Stop: 42028, Start Num: 2
Candidate Starts for Idergollasper_64:
(Start: 2 @41342 has 45 MA's), (4, 41369), (5, 41378), (7, 41396), (9, 41408), (13, 41429), (Start: 21 @41522 has 1 MA's), (23, 41531), (Start: 28 @41588 has 3 MA's), (30, 41600), (34, 41642), (47, 41747), (52, 41801), (62, 41870), (64, 41897), (70, 41939), (71, 41942), (74, 41969), (77, 42020),

Gene: IgnatiusPatJac_35 Start: 28305, Stop: 28991, Start Num: 2
Candidate Starts for IgnatiusPatJac_35:
(Start: 2 @28305 has 45 MA's), (5, 28341), (Start: 21 @28488 has 1 MA's), (Start: 28 @28557 has 3 MA's), (29, 28566), (42, 28668), (43, 28680), (46, 28692), (54, 28782), (56, 28800), (64, 28863), (71, 28908), (72, 28917),

Gene: Imara_64 Start: 41142, Stop: 41828, Start Num: 2
Candidate Starts for Imara_64:
(Start: 2 @41142 has 45 MA's), (4, 41169), (5, 41178), (7, 41196), (9, 41208), (13, 41229), (Start: 21 @41322 has 1 MA's), (23, 41331), (Start: 28 @41388 has 3 MA's), (30, 41400), (34, 41442), (47, 41547), (52, 41601), (62, 41670), (64, 41697), (70, 41739), (71, 41742), (74, 41769), (77, 41820),

Gene: Inyanga_34 Start: 27827, Stop: 28513, Start Num: 2
Candidate Starts for Inyanga_34:
(Start: 2 @27827 has 45 MA's), (5, 27863), (Start: 21 @28010 has 1 MA's), (Start: 28 @28079 has 3 MA's), (29, 28088), (42, 28190), (43, 28202), (46, 28214), (54, 28304), (56, 28322), (64, 28385), (71, 28430), (72, 28439), (76, 28502),

Gene: Iqorha_34 Start: 27826, Stop: 28512, Start Num: 2
Candidate Starts for Iqorha_34:
(Start: 2 @27826 has 45 MA's), (5, 27862), (Start: 21 @28009 has 1 MA's), (Start: 28 @28078 has 3 MA's), (29, 28087), (42, 28189), (43, 28201), (46, 28213), (54, 28303), (56, 28321), (64, 28384), (71, 28429), (72, 28438), (76, 28501),

Gene: JC27_37 Start: 28962, Stop: 29648, Start Num: 2
Candidate Starts for JC27_37:
(Start: 2 @28962 has 45 MA's), (5, 28998), (Start: 21 @29145 has 1 MA's), (Start: 28 @29214 has 3 MA's), (29, 29223), (42, 29325), (43, 29337), (46, 29349), (54, 29439), (56, 29457), (64, 29520), (71, 29565), (72, 29574), (76, 29637),

Gene: JangDynasty_64 Start: 41428, Stop: 42114, Start Num: 2
Candidate Starts for JangDynasty_64:
(Start: 2 @41428 has 45 MA's), (4, 41455), (5, 41464), (7, 41482), (9, 41494), (13, 41515), (Start: 21 @41608 has 1 MA's), (23, 41617), (Start: 28 @41674 has 3 MA's), (30, 41686), (34, 41728), (47, 41833), (52, 41887), (62, 41956), (64, 41983), (70, 42025), (71, 42028), (74, 42055), (77, 42106),

Gene: Jasper_7 Start: 3199, Stop: 3897, Start Num: 1
Candidate Starts for Jasper_7:
(Start: 1 @3199 has 31 MA's), (Start: 3 @3208 has 4 MA's), (Start: 21 @3391 has 1 MA's), (22, 3397), (23, 3400), (Start: 28 @3460 has 3 MA's), (48, 3628), (53, 3679), (58, 3709), (61, 3739),

Gene: Jerm2_6 Start: 3086, Stop: 3775, Start Num: 1
Candidate Starts for Jerm2_6:
(Start: 1 @3086 has 31 MA's), (Start: 3 @3095 has 4 MA's), (16, 3188), (17, 3209), (Start: 21 @3278 has 1 MA's), (24, 3290), (27, 3341), (Start: 28 @3347 has 3 MA's), (29, 3356), (33, 3398), (44, 3473), (47, 3503), (48, 3512), (53, 3563), (55, 3581), (58, 3593), (64, 3650), (72, 3704), (75, 3755),

Gene: KSSJEB_5 Start: 2853, Stop: 3533, Start Num: 3
Candidate Starts for KSSJEB_5:
(Start: 1 @2844 has 31 MA's), (Start: 3 @2853 has 4 MA's), (16, 2946), (17, 2967), (Start: 21 @3036 has 1 MA's), (24, 3048), (27, 3099), (Start: 28 @3105 has 3 MA's), (29, 3114), (33, 3156), (44, 3231), (47, 3261), (48, 3270), (53, 3321), (55, 3339), (58, 3351), (64, 3408), (72, 3462), (75, 3513),

Gene: Killigrew_4 Start: 2819, Stop: 3508, Start Num: 1
Candidate Starts for Killigrew_4:
(Start: 1 @2819 has 31 MA's), (5, 2858), (26, 3044), (Start: 28 @3071 has 3 MA's), (31, 3104), (39, 3170), (46, 3206), (47, 3230), (48, 3239), (50, 3248), (53, 3287), (63, 3356), (66, 3401), (77, 3500),

Gene: KingPhillip3_64 Start: 41357, Stop: 42043, Start Num: 2
Candidate Starts for KingPhillip3_64:
(Start: 2 @41357 has 45 MA's), (4, 41384), (5, 41393), (7, 41411), (9, 41423), (13, 41444), (Start: 21 @41537 has 1 MA's), (23, 41546), (Start: 28 @41603 has 3 MA's), (30, 41615), (34, 41657), (47, 41762), (52, 41816), (62, 41885), (64, 41912), (70, 41954), (71, 41957), (74, 41984), (77, 42035),

Gene: Kostya_29 Start: 28044, Stop: 28469, Start Num: 28
Candidate Starts for Kostya_29:
(11, 27855), (Start: 21 @27975 has 1 MA's), (22, 27981), (Start: 28 @28044 has 3 MA's), (35, 28101), (39, 28143), (44, 28170), (57, 28284), (69, 28386),

Gene: Kykar_35 Start: 28019, Stop: 28705, Start Num: 2
Candidate Starts for Kykar_35:
(Start: 2 @28019 has 45 MA's), (5, 28055), (Start: 21 @28202 has 1 MA's), (Start: 28 @28271 has 3 MA's), (29, 28280), (42, 28382), (43, 28394), (46, 28406), (54, 28496), (56, 28514), (64, 28577), (71, 28622), (72, 28631), (76, 28694),

Gene: LilBib_36 Start: 29268, Stop: 29954, Start Num: 2
Candidate Starts for LilBib_36:
(Start: 2 @29268 has 45 MA's), (5, 29304), (Start: 21 @29451 has 1 MA's), (Start: 28 @29520 has 3 MA's), (29, 29529), (42, 29631), (43, 29643), (46, 29655), (54, 29745), (56, 29763), (64, 29826), (71, 29871), (72, 29880),

Gene: Livelaughbron_29 Start: 28079, Stop: 28594, Start Num: 21
Candidate Starts for Livelaughbron_29:
(6, 27953), (10, 27977), (12, 27980), (Start: 21 @28079 has 1 MA's), (25, 28109), (Start: 28 @28148 has 3 MA's), (29, 28157), (50, 28328), (57, 28394), (58, 28400), (64, 28457), (69, 28499), (73, 28529),

Gene: LunarLander_6 Start: 3118, Stop: 3798, Start Num: 3
Candidate Starts for LunarLander_6:
(Start: 1 @3109 has 31 MA's), (Start: 3 @3118 has 4 MA's), (Start: 21 @3301 has 1 MA's), (Start: 28 @3370 has 3 MA's), (35, 3427), (47, 3526),

Gene: MadKillah_65 Start: 41121, Stop: 41807, Start Num: 2
Candidate Starts for MadKillah_65:
(Start: 2 @41121 has 45 MA's), (4, 41148), (5, 41157), (7, 41175), (9, 41187), (13, 41208), (Start: 21 @41301 has 1 MA's), (23, 41310), (Start: 28 @41367 has 3 MA's), (30, 41379), (34, 41421), (47, 41526), (52, 41580), (62, 41649), (64, 41676), (70, 41718), (71, 41721), (74, 41748), (77, 41799),

Gene: McGuire_6 Start: 3080, Stop: 3769, Start Num: 1
Candidate Starts for McGuire_6:
(Start: 1 @3080 has 31 MA's), (Start: 3 @3089 has 4 MA's), (Start: 28 @3341 has 3 MA's), (35, 3398),

Gene: Mori_64 Start: 41383, Stop: 42069, Start Num: 2
Candidate Starts for Mori_64:
(Start: 2 @41383 has 45 MA's), (4, 41410), (5, 41419), (7, 41437), (9, 41449), (13, 41470), (Start: 21 @41563 has 1 MA's), (23, 41572), (Start: 28 @41629 has 3 MA's), (30, 41641), (34, 41683), (47, 41788), (52, 41842), (62, 41911), (64, 41938), (70, 41980), (71, 41983), (74, 42010), (77, 42061),

Gene: Murai_65 Start: 41564, Stop: 42250, Start Num: 2
Candidate Starts for Murai_65:
(Start: 2 @41564 has 45 MA's), (4, 41591), (5, 41600), (7, 41618), (9, 41630), (13, 41651), (Start: 21 @41744 has 1 MA's), (23, 41753), (Start: 28 @41810 has 3 MA's), (30, 41822), (34, 41864), (47,

41969), (52, 42023), (62, 42092), (64, 42119), (70, 42161), (71, 42164), (74, 42191), (77, 42242),

Gene: Museum_7 Start: 2926, Stop: 3615, Start Num: 1
Candidate Starts for Museum_7:
(Start: 1 @2926 has 31 MA's), (Start: 3 @2935 has 4 MA's), (16, 3028), (17, 3049), (Start: 21 @3118 has 1 MA's), (24, 3130), (27, 3181), (Start: 28 @3187 has 3 MA's), (29, 3196), (33, 3238), (44, 3313), (47, 3343), (48, 3352), (53, 3403), (55, 3421), (58, 3433),

Gene: Naira_6 Start: 3315, Stop: 4004, Start Num: 1
Candidate Starts for Naira_6:
(Start: 1 @3315 has 31 MA's), (Start: 3 @3324 has 4 MA's), (16, 3417), (17, 3438), (Start: 21 @3507 has 1 MA's), (24, 3519), (27, 3570), (Start: 28 @3576 has 3 MA's), (29, 3585), (33, 3627), (44, 3702), (47, 3732), (48, 3741), (53, 3792), (55, 3810), (58, 3822), (64, 3879), (72, 3933), (75, 3984),

Gene: Pari_7 Start: 3580, Stop: 4269, Start Num: 1
Candidate Starts for Pari_7:
(Start: 1 @3580 has 31 MA's), (Start: 3 @3589 has 4 MA's), (Start: 28 @3841 has 3 MA's), (33, 3892), (64, 4144),

Gene: Parliament_5 Start: 3442, Stop: 3873, Start Num: 28
Candidate Starts for Parliament_5:
(Start: 28 @3442 has 3 MA's), (35, 3496), (36, 3499), (41, 3541), (47, 3595), (51, 3640), (53, 3655), (57, 3679), (58, 3685), (68, 3760),

Gene: Pelly_36 Start: 28758, Stop: 29444, Start Num: 2
Candidate Starts for Pelly_36:
(Start: 2 @28758 has 45 MA's), (5, 28794), (Start: 21 @28941 has 1 MA's), (Start: 28 @29010 has 3 MA's), (29, 29019), (42, 29121), (43, 29133), (46, 29145), (54, 29235), (56, 29253), (64, 29316), (71, 29361), (72, 29370),

Gene: Petp2012_8 Start: 3288, Stop: 3977, Start Num: 1
Candidate Starts for Petp2012_8:
(Start: 1 @3288 has 31 MA's), (Start: 3 @3297 has 4 MA's), (16, 3390), (17, 3411), (Start: 21 @3480 has 1 MA's), (24, 3492), (27, 3543), (Start: 28 @3549 has 3 MA's), (29, 3558), (33, 3600), (44, 3675), (47, 3705), (53, 3765), (55, 3783), (58, 3795), (64, 3852), (72, 3906), (75, 3957),

Gene: Phlippers_34 Start: 29139, Stop: 29825, Start Num: 2
Candidate Starts for Phlippers_34:
(Start: 2 @29139 has 45 MA's), (5, 29175), (Start: 21 @29322 has 1 MA's), (Start: 28 @29391 has 3 MA's), (29, 29400), (42, 29502), (43, 29514), (46, 29526), (54, 29616), (56, 29634), (64, 29697), (71, 29742), (72, 29751), (76, 29814),

Gene: PinkPlastic_4 Start: 2843, Stop: 3532, Start Num: 1
Candidate Starts for PinkPlastic_4:
(Start: 1 @2843 has 31 MA's), (Start: 3 @2852 has 4 MA's), (16, 2945), (17, 2966), (Start: 21 @3035 has 1 MA's), (24, 3047), (27, 3098), (Start: 28 @3104 has 3 MA's), (29, 3113), (33, 3155), (44, 3230), (47, 3260), (48, 3269), (53, 3320), (55, 3338), (58, 3350), (64, 3407), (72, 3461), (75, 3512),

Gene: Pinto_38 Start: 28671, Stop: 29357, Start Num: 2
Candidate Starts for Pinto_38:
(Start: 2 @28671 has 45 MA's), (5, 28707), (Start: 21 @28854 has 1 MA's), (Start: 28 @28923 has 3 MA's), (29, 28932), (42, 29034), (43, 29046), (54, 29148), (56, 29166), (64, 29229), (71, 29274), (72, 29283),

Gene: PowerRanger_37 Start: 29574, Stop: 30260, Start Num: 2
Candidate Starts for PowerRanger_37:
(Start: 2 @29574 has 45 MA's), (5, 29610), (Start: 21 @29757 has 1 MA's), (Start: 28 @29826 has 3 MA's), (29, 29835), (42, 29937), (43, 29949), (46, 29961), (54, 30051), (56, 30069), (64, 30132), (71, 30177), (72, 30186), (76, 30249),

Gene: ProMouse_36 Start: 28562, Stop: 29248, Start Num: 2
Candidate Starts for ProMouse_36:
(Start: 2 @28562 has 45 MA's), (5, 28598), (8, 28619), (Start: 21 @28745 has 1 MA's), (Start: 28 @28814 has 3 MA's), (29, 28823), (42, 28925), (43, 28937), (46, 28949), (54, 29039), (56, 29057), (64, 29120), (71, 29165), (72, 29174),

Gene: Ptowny_29 Start: 27347, Stop: 27862, Start Num: 21
Candidate Starts for Ptowny_29:
(10, 27245), (12, 27248), (Start: 21 @27347 has 1 MA's), (25, 27377), (Start: 28 @27416 has 3 MA's), (29, 27425), (50, 27596), (57, 27662), (58, 27668), (64, 27725), (69, 27767), (73, 27797),

Gene: Puppet_6 Start: 3446, Stop: 4135, Start Num: 1
Candidate Starts for Puppet_6:
(Start: 1 @3446 has 31 MA's), (Start: 3 @3455 has 4 MA's), (Start: 28 @3707 has 3 MA's), (35, 3764), (47, 3863),

Gene: Rohr_7 Start: 3620, Stop: 4309, Start Num: 1
Candidate Starts for Rohr_7:
(Start: 1 @3620 has 31 MA's), (Start: 3 @3629 has 4 MA's), (Start: 21 @3812 has 1 MA's), (22, 3818), (Start: 28 @3881 has 3 MA's), (35, 3938), (64, 4184),

Gene: Ryadel_68 Start: 42152, Stop: 42838, Start Num: 2
Candidate Starts for Ryadel_68:
(Start: 2 @42152 has 45 MA's), (4, 42179), (5, 42188), (7, 42206), (9, 42218), (13, 42239), (Start: 21 @42332 has 1 MA's), (23, 42341), (27, 42392), (Start: 28 @42398 has 3 MA's), (30, 42410), (34, 42452), (40, 42500), (47, 42557), (62, 42680), (64, 42707), (70, 42749), (71, 42752), (74, 42779), (77, 42830),

Gene: SchoolBus_64 Start: 41336, Stop: 42022, Start Num: 2
Candidate Starts for SchoolBus_64:
(Start: 2 @41336 has 45 MA's), (4, 41363), (5, 41372), (7, 41390), (9, 41402), (13, 41423), (Start: 21 @41516 has 1 MA's), (23, 41525), (Start: 28 @41582 has 3 MA's), (30, 41594), (34, 41636), (47, 41741), (52, 41795), (62, 41864), (64, 41891), (70, 41933), (71, 41936), (74, 41963), (77, 42014),

Gene: Schuy_65 Start: 41127, Stop: 41813, Start Num: 2
Candidate Starts for Schuy_65:
(Start: 2 @41127 has 45 MA's), (4, 41154), (5, 41163), (7, 41181), (9, 41193), (13, 41214), (Start: 21 @41307 has 1 MA's), (23, 41316), (Start: 28 @41373 has 3 MA's), (30, 41385), (34, 41427), (47, 41532), (52, 41586), (62, 41655), (64, 41682), (70, 41724), (71, 41727), (74, 41754), (77, 41805),

Gene: Seabiscuit_7 Start: 3080, Stop: 3769, Start Num: 1
Candidate Starts for Seabiscuit_7:
(Start: 1 @3080 has 31 MA's), (Start: 3 @3089 has 4 MA's), (Start: 28 @3341 has 3 MA's), (35, 3398), (64, 3644),

Gene: Shida_64 Start: 41034, Stop: 41720, Start Num: 2

Candidate Starts for Shida_64:
(Start: 2 @41034 has 45 MA's), (4, 41061), (5, 41070), (7, 41088), (9, 41100), (13, 41121), (Start: 21 @41214 has 1 MA's), (23, 41223), (Start: 28 @41280 has 3 MA's), (30, 41292), (34, 41334), (47, 41439), (52, 41493), (62, 41562), (64, 41589), (70, 41631), (71, 41634), (74, 41661), (77, 41712),

Gene: Smairt_37 Start: 28913, Stop: 29458, Start Num: 19
Candidate Starts for Smairt_37:
(Start: 19 @28913 has 1 MA's), (Start: 21 @28955 has 1 MA's), (Start: 28 @29024 has 3 MA's), (29, 29033), (42, 29135), (43, 29147), (46, 29159), (54, 29249), (56, 29267), (64, 29330), (71, 29375), (72, 29384), (76, 29447),

Gene: Smeagol_7 Start: 4108, Stop: 4797, Start Num: 1
Candidate Starts for Smeagol_7:
(Start: 1 @4108 has 31 MA's), (Start: 3 @4117 has 4 MA's), (Start: 21 @4300 has 1 MA's), (22, 4306), (Start: 28 @4372 has 3 MA's), (37, 4465), (53, 4591), (59, 4624), (64, 4669), (67, 4696), (70, 4711), (71, 4714),

Gene: Smooch_67 Start: 43056, Stop: 43742, Start Num: 2
Candidate Starts for Smooch_67:
(Start: 2 @43056 has 45 MA's), (4, 43083), (5, 43092), (7, 43110), (9, 43122), (13, 43143), (18, 43173), (Start: 21 @43236 has 1 MA's), (23, 43245), (Start: 28 @43302 has 3 MA's), (30, 43314), (32, 43344), (34, 43356), (40, 43404), (47, 43461), (52, 43515), (62, 43584), (64, 43611), (70, 43653), (71, 43656), (74, 43683), (77, 43734),

Gene: Switzer_6 Start: 2969, Stop: 3649, Start Num: 3
Candidate Starts for Switzer_6:
(Start: 1 @2960 has 31 MA's), (Start: 3 @2969 has 4 MA's), (Start: 28 @3221 has 3 MA's), (33, 3272),

Gene: TelAviv_61 Start: 41309, Stop: 41995, Start Num: 2
Candidate Starts for TelAviv_61:
(Start: 2 @41309 has 45 MA's), (4, 41336), (5, 41345), (7, 41363), (9, 41375), (13, 41396), (Start: 21 @41489 has 1 MA's), (23, 41498), (Start: 28 @41555 has 3 MA's), (30, 41567), (34, 41609), (47, 41714), (52, 41768), (62, 41837), (64, 41864), (70, 41906), (71, 41909), (74, 41936), (77, 41987),

Gene: Topgun_35 Start: 27931, Stop: 28617, Start Num: 2
Candidate Starts for Topgun_35:
(Start: 2 @27931 has 45 MA's), (5, 27967), (Start: 21 @28114 has 1 MA's), (Start: 28 @28183 has 3 MA's), (29, 28192), (42, 28294), (43, 28306), (46, 28318), (54, 28408), (56, 28426), (64, 28489), (71, 28534), (72, 28543),

Gene: U2_5 Start: 2962, Stop: 3651, Start Num: 1
Candidate Starts for U2_5:
(Start: 1 @2962 has 31 MA's), (Start: 3 @2971 has 4 MA's), (Start: 28 @3223 has 3 MA's), (33, 3274),

Gene: UncleRicky_23 Start: 23775, Stop: 24299, Start Num: 20
Candidate Starts for UncleRicky_23:
(Start: 20 @23775 has 1 MA's), (22, 23808), (Start: 28 @23868 has 3 MA's), (35, 23925), (38, 23964), (44, 23997), (49, 24045), (60, 24135), (75, 24273),

Gene: Vagabond_64 Start: 41172, Stop: 41858, Start Num: 2
Candidate Starts for Vagabond_64:
(Start: 2 @41172 has 45 MA's), (4, 41199), (5, 41208), (7, 41226), (9, 41238), (13, 41259), (Start: 21 @41352 has 1 MA's), (23, 41361), (Start: 28 @41418 has 3 MA's), (30, 41430), (34, 41472), (47,

41577), (52, 41631), (62, 41700), (64, 41727), (70, 41769), (71, 41772), (74, 41799), (77, 41850),

Gene: Vorrps_64 Start: 41384, Stop: 42070, Start Num: 2
Candidate Starts for Vorrps_64:
(Start: 2 @41384 has 45 MA's), (4, 41411), (5, 41420), (7, 41438), (9, 41450), (13, 41471), (Start: 21 @41564 has 1 MA's), (23, 41573), (Start: 28 @41630 has 3 MA's), (30, 41642), (34, 41684), (47, 41789), (52, 41843), (62, 41912), (64, 41939), (70, 41981), (71, 41984), (74, 42011), (77, 42062),

Gene: Wilkins_35 Start: 27862, Stop: 28548, Start Num: 2
Candidate Starts for Wilkins_35:
(Start: 2 @27862 has 45 MA's), (5, 27898), (Start: 21 @28045 has 1 MA's), (Start: 28 @28114 has 3 MA's), (29, 28123), (42, 28225), (43, 28237), (46, 28249), (54, 28339), (56, 28357), (64, 28420), (71, 28465), (72, 28474),

Gene: Winget_65 Start: 41602, Stop: 42288, Start Num: 2
Candidate Starts for Winget_65:
(Start: 2 @41602 has 45 MA's), (4, 41629), (5, 41638), (7, 41656), (9, 41668), (13, 41689), (Start: 21 @41782 has 1 MA's), (23, 41791), (Start: 28 @41848 has 3 MA's), (30, 41860), (34, 41902), (47, 42007), (52, 42061), (62, 42130), (64, 42157), (70, 42199), (71, 42202), (74, 42229), (77, 42280),

Gene: Wogge42_63 Start: 41043, Stop: 41729, Start Num: 2
Candidate Starts for Wogge42_63:
(Start: 2 @41043 has 45 MA's), (4, 41070), (5, 41079), (7, 41097), (9, 41109), (13, 41130), (Start: 21 @41223 has 1 MA's), (23, 41232), (Start: 28 @41289 has 3 MA's), (30, 41301), (34, 41343), (47, 41448), (52, 41502), (62, 41571), (64, 41598), (70, 41640), (71, 41643), (74, 41670), (77, 41721),

Gene: YoyoKar_62 Start: 40886, Stop: 41572, Start Num: 2
Candidate Starts for YoyoKar_62:
(Start: 2 @40886 has 45 MA's), (4, 40913), (5, 40922), (7, 40940), (9, 40952), (13, 40973), (Start: 21 @41066 has 1 MA's), (23, 41075), (Start: 28 @41132 has 3 MA's), (30, 41144), (34, 41186), (47, 41291), (52, 41345), (62, 41414), (64, 41441), (70, 41483), (71, 41486), (74, 41513), (77, 41564),

Gene: YungJamal_69 Start: 42794, Stop: 43480, Start Num: 2
Candidate Starts for YungJamal_69:
(Start: 2 @42794 has 45 MA's), (4, 42821), (5, 42830), (7, 42848), (9, 42860), (13, 42881), (18, 42911), (Start: 21 @42974 has 1 MA's), (23, 42983), (Start: 28 @43040 has 3 MA's), (30, 43052), (32, 43082), (34, 43094), (40, 43142), (47, 43199), (52, 43253), (62, 43322), (64, 43349), (70, 43391), (71, 43394), (74, 43421), (77, 43472),

Gene: Zebo_64 Start: 41345, Stop: 42031, Start Num: 2
Candidate Starts for Zebo_64:
(Start: 2 @41345 has 45 MA's), (4, 41372), (5, 41381), (7, 41399), (9, 41411), (13, 41432), (Start: 21 @41525 has 1 MA's), (23, 41534), (Start: 28 @41591 has 3 MA's), (30, 41603), (34, 41645), (47, 41750), (52, 41804), (62, 41873), (64, 41900), (70, 41942), (71, 41945), (74, 41972), (77, 42023),