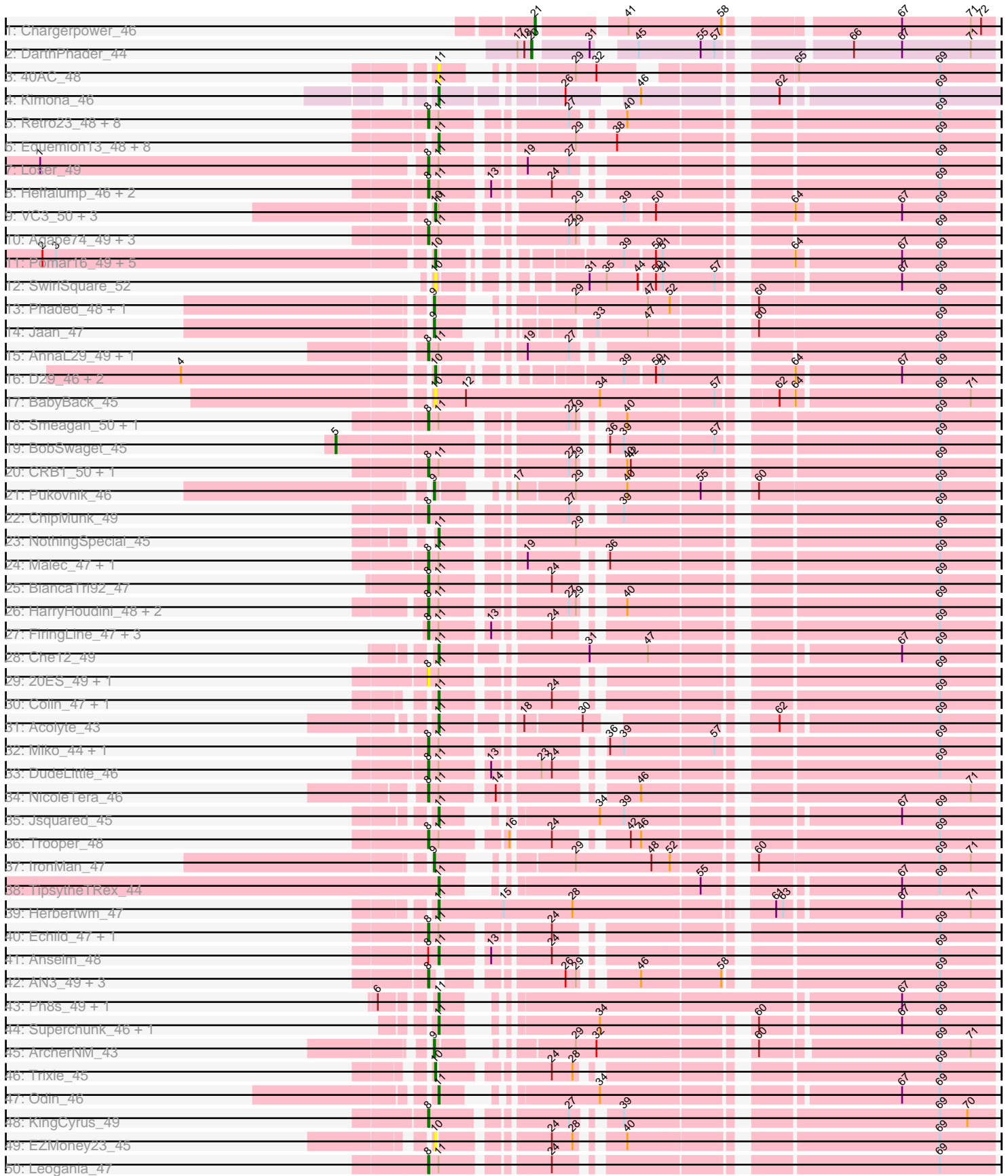


Pham 157643



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 157643 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157643 has 158 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_46
- Track 2 : DarthPhader_44
- Track 3 : 40AC_48
- Track 4 : Kimona_46
- Track 5 : Retro23_48, Georgie2_48, Crucio_47, Dignity_49, SemperFi_48, SweetiePie_47, Dalmatian_48, Turbido_48, Jerm_49
- Track 6 : Equemioh13_48, Buggy_49, MiculUcigas_47, Baehexic_46, Updawg_48, Centaur_48, WideWale_48, NaSiaTalie_47, Flare16_47
- Track 7 : Loser_49
- Track 8 : Heffalump_46, QueenB2_46, Fameo_47
- Track 9 : VC3_50, C3_45, AN18_50, AN9_50
- Track 10 : Agape74_49, AbbyPaige_49, Whabigail7_48, LilTurb_48
- Track 11 : Pomar16_49, DBQu4n_49, Tomathan_49, Kerberos_49, Duplo_49, StarStuff_49
- Track 12 : SwirlSquare_52
- Track 13 : Phaded_48, Bactobuster_46
- Track 14 : Jaan_47
- Track 15 : AnnaL29_49, RedRock_49
- Track 16 : D29_46, D32_49, Naji_49
- Track 17 : BabyBack_45
- Track 18 : Smeagan_50, Leviathan_49
- Track 19 : BobSwaget_45
- Track 20 : CRB1_50, JoshKayV_49
- Track 21 : Pukovnik_46
- Track 22 : ChipMunk_49
- Track 23 : NothingSpecial_45
- Track 24 : Malec_47, Larenn_46
- Track 25 : BiancaTri92_47
- Track 26 : HarryHoudini_48, Piro94_47, Drake55_49
- Track 27 : FiringLine_47, Power_46, SnapTap_47, QueenBeesly_47
- Track 28 : Che12_49
- Track 29 : 20ES_49, First_0048
- Track 30 : Colin_47, Kalpine_45
- Track 31 : Acolyte_43
- Track 32 : Miko_44, Rachaly_46
- Track 33 : DudeLittle_46
- Track 34 : NicoleTera_46

- Track 35 : Jsquared_45
- Track 36 : Trooper_48
- Track 37 : IronMan_47
- Track 38 : TipsytheTRex_44
- Track 39 : Herbertwm_47
- Track 40 : Echild_47, Benvolio_44
- Track 41 : Anselm_48
- Track 42 : AN3_49, VA6_47, Deloris_47, BengiVuitton_48
- Track 43 : Ph8s_49, Adzzy_49
- Track 44 : Superchunk_46, Caraxes_47
- Track 45 : ArcherNM_43
- Track 46 : Trixie_45
- Track 47 : Odin_46
- Track 48 : KingCyrus_49
- Track 49 : EZMoney23_45
- Track 50 : Leogania_47
- Track 51 : Koduck_47, L5_46
- Track 52 : EvilGenius_49
- Track 53 : WeiHuaDA_49
- Track 54 : Lökk_46
- Track 55 : Serenity_47
- Track 56 : LadyBird_51
- Track 57 : GaugeLDP_45
- Track 58 : Landor_47
- Track 59 : Changeling_46
- Track 60 : Iwokeuplikedis_50
- Track 61 : TarsusIV_45
- Track 62 : Artemis2UCLA_49, SmellyB_49, Isiphiwo_47, SuperAwesome_49, DaVinci_48, Candra_49, GreedyLawyer_49, Kipper29_49, EricB_49, Dorothea_48, Gladiator_47, SuperCallie99_48, VohminGhazi_49, Newrala_49, Cookiedough_49, Kazan_50, McFly_49, Roksolana_50, Chartreuse_48, Neeharika16_48, Pmask_49, CloudWang3_49
- Track 63 : ToneTone_46, Tucker_49, Hammer_50, Blue7_51, Wiks_48, Zaka_49, Indra_52, Zulu_49, WunderPhul_49, Rifter_50, Jeffabunny_49, Gruunaga_49
- Track 64 : Koko_50
- Track 65 : Garak_51, Helmet_51, Yokurt_49, Hexamo_49
- Track 66 : Priamo_50, Jordennis_48
- Track 67 : Blinn1_51
- Track 68 : SheaKeira_46
- Track 69 : Arissanae_46
- Track 70 : Charm_46
- Track 71 : DreamTeam1_46

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

The start number called the most often in the published annotations is 11, it was called in 59 of the 140 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC_48, Acolyte_43, Adzzy_49, Anselm_48, Artemis2UCLA_49, Baehexic_46, Blue7_51, Bugsy_49, Candra_49, Caraxes_47, Centaur_48, Changeling_46, Chartreuse_48, Che12_49, CloudWang3_49, Colin_47, Cookiedough_49, DaVinci_48, Dorothea_48, Equemioh13_48, EricB_49, Flare16_47, Gladiator_47, GreedyLawyer_49, Gruunaga_49, Hammer_50, Herbertwm_47, Indra_52, Isiphiwo_47, Iwokeuplikedis_50, Jeffabunny_49, Jordennis_48, Jsquared_45, Kalpine_45, Kazan_50, Kimona_46, Kipper29_49, Koduck_47, Koko_50, L5_46, McFly_49, MiculUcigas_47, NaSiaTalie_47, Neeharika16_48, Newrala_49, NothingSpecial_45, Odin_46, Ph8s_49, Pmask_49, Priamo_50, Rifter_50, Roksolana_50, Serenity_47, SmellyB_49, SuperAwesome_49, SuperCallie99_48, Superchunk_46, TopsytheTRex_44, ToneTone_46, Tucker_49, Updawg_48, VohminGhazi_49, WeiHuaDA_49, WideWale_48, Wiks_48, WunderPhul_49, Zaka_49, Zulu_49,

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

- 20ES_49, AN9_50, AN18_50, AbbyPaige_49, Agape74_49, AnnaL29_49, Benvolio_44, BiancaTri92_47, Blinn1_51, C3_45, CRB1_50, Crucio_47, Dalmatian_48, Dignity_49, Drake55_49, DudeLittle_46, Echild_47, EvilGenius_49, Fameo_47, FiringLine_47, First_0048, Garak_51, Georgie2_48, HarryHoudini_48, Heffalump_46, Helmet_51, Hexamo_49, Jerm_49, JoshKayV_49, LadyBird_51, Larenn_46, Leogania_47, Leviathan_49, LilTurb_48, Loser_49, Malec_47, Miko_44, NicoleTera_46, Piro94_47, Power_46, QueenB2_46, QueenBeesly_47, Rachaly_46, RedRock_49, Retro23_48, SemperFi_48, Smeagan_50, SnapTap_47, SweetiePie_47, Trooper_48, Turbido_48, VC3_50, Whabigail7_48, Yokurt_49,

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

- AN3_49, ArcherNM_43, Arissanae_46, BabyBack_45, Bactobuster_46, BengiVuitton_48, BobSwaget_45, Chargerpower_46, Charm_46, ChipMunk_49, D29_46, D32_49, DBQu4n_49, DarthPhader_44, Deloris_47, DreamTeam1_46, Duplo_49, EZMoney23_45, GaugeLDP_45, IronMan_47, Jaan_47, Kerberos_49, KingCyrus_49, Landor_47, Lokk_46, Najj_49, Phaded_48, Pomar16_49, Pukovnik_46, SheaKeira_46, StarStuff_49, SwirlSquare_52, TarsusIV_45, Tomathan_49, Trixie_45, VA6_47,

Summary by start number:

Start 5:

- Found in 2 of 158 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 140
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BobSwaget_45 (A2), Lokk_46 (A2),

Start 7:

- Found in 43 of 158 (27.2%) of genes in pham
- Manual Annotations of this start: 3 of 140
- Called 11.6% of time when present
- Phage (with cluster) where this start called: Blinn1_51 (A6), Garak_51 (A6), Helmet_51 (A6), Hexamo_49 (A6), Yokurt_49 (A6),

Start 8:

- Found in 53 of 158 (33.5%) of genes in pham
- Manual Annotations of this start: 49 of 140
- Called 98.1% of time when present

- Phage (with cluster) where this start called: 20ES_49 (A2), AN3_49 (A2), AbbyPaige_49 (A2), Agape74_49 (A2), AnnaL29_49 (A2), BengiVuitton_48 (A2), Benvolio_44 (A2), BiancaTri92_47 (A2), CRB1_50 (A2), ChipMunk_49 (A2), Crucio_47 (A2), Dalmatian_48 (A2), Deloris_47 (A2), Dignity_49 (A2), Drake55_49 (A2), DudeLittle_46 (A2), Echid_47 (A2), EvilGenius_49 (A2), Fameo_47 (A2), FiringLine_47 (A2), First_0048 (A2), Georgie2_48 (A2), HarryHoudini_48 (A2), Heffalump_46 (A2), Jerm_49 (A2), JoshKayV_49 (A2), KingCyrus_49 (A2), LadyBird_51 (A2), Larenn_46 (A2), Leogania_47 (A2), Leviathan_49 (A2), LilTurb_48 (A2), Loser_49 (A2), Malec_47 (A2), Miko_44 (A2), NicoleTera_46 (A2), Piro94_47 (A2), Power_46 (A2), QueenB2_46 (A2), QueenBeesly_47 (A2), Rachaly_46 (A2), RedRock_49 (A2), Retro23_48 (A2), SemperFi_48 (A2), Smeagan_50 (A2), SnapTap_47 (A2), SweetiePie_47 (A2), TarsusIV_45 (A2), Trooper_48 (A2), Turbido_48 (A2), VA6_47 (A2), Whabigail7_48 (A2),

Start 9:

- Found in 7 of 158 (4.4%) of genes in pham
- Manual Annotations of this start: 6 of 140
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArcherNM_43 (A2), Bactobuster_46 (A2), IronMan_47 (A2), Jaan_47 (A2), Landor_47 (A2), Phaded_48 (A2), Pukovnik_46 (A2),

Start 10:

- Found in 18 of 158 (11.4%) of genes in pham
- Manual Annotations of this start: 15 of 140
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AN9_50 (A2), ANI8_50 (A2), BabyBack_45 (A2), C3_45 (A2), D29_46 (A2), D32_49 (A2), DBQu4n_49 (A2), Duplo_49 (A2), EZMoney23_45 (A2), GaugeLDP_45 (A2), Kerberos_49 (A2), Naji_49 (A2), Pomar16_49 (A2), StarStuff_49 (A2), SwirlSquare_52 (A2), Tomathan_49 (A2), Trixie_45 (A2), VC3_50 (A2),

Start 11:

- Found in 122 of 158 (77.2%) of genes in pham
- Manual Annotations of this start: 59 of 140
- Called 55.7% of time when present
- Phage (with cluster) where this start called: 40AC_48 (A17), Acolyte_43 (A2), Adzzy_49 (A2), Anselm_48 (A2), Artemis2UCLA_49 (A6), Baehexic_46 (A2), Blue7_51 (A6), Buggy_49 (A2), Candra_49 (A6), Caraxes_47 (A2), Centaur_48 (A2), Changeling_46 (A2), Chartreuse_48 (A6), Che12_49 (A2), CloudWang3_49 (A6), Colin_47 (A2), Cookiedough_49 (A6), DaVinci_48 (A6), Dorothea_48 (A6), Equemioh13_48 (A2), EricB_49 (A6), Flare16_47 (A2), Gladiator_47 (A6), GreedyLawyer_49 (A6), Gruunaga_49 (A6), Hammer_50 (A6), Herbertwm_47 (A2), Indra_52 (A6), Isiphiwo_47 (A6), Iwokeuplikedis_50 (A2), Jeffabunny_49 (A6), Jordennis_48 (A6), Jsquared_45 (A2), Kalpine_45 (A2), Kazan_50 (A6), Kimona_46 (A19), Kipper29_49 (A6), Koduck_47 (A2), Koko_50 (A6), L5_46 (A2), McFly_49 (A6), MiculUcigas_47 (A2), NaSiaTalie_47 (A2), Neeharika16_48 (A6), Newrala_49 (A6), NothingSpecial_45 (A2), Odin_46 (A2), Ph8s_49 (A2), Pmask_49 (A6), Priamo_50 (A6), Rifter_50 (A6), Roksolana_50 (A6), Serenity_47 (A2), SmellyB_49 (A6), SuperAwesome_49 (A6), SuperCallie99_48 (A6), Superchunk_46 (A2), TopsytheTRex_44 (A2), ToneTone_46 (A6), Tucker_49 (A6), Updawg_48 (A2), VohminGhazi_49 (A6), WeiHuaDA_49 (A2), WideWale_48 (A2), Wiks_48 (A6), WunderPhul_49 (A6), Zaka_49 (A6), Zulu_49 (A6),

Start 18:

- Found in 5 of 158 (3.2%) of genes in pham
- Manual Annotations of this start: 1 of 140
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Arissanae_46 (A9),

Start 20:

- Found in 1 of 158 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 140
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DARTHPhader_44 (A12),

Start 21:

- Found in 1 of 158 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 140
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chargerpower_46 (A),

Start 22:

- Found in 2 of 158 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 140
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Charm_46 (A9), DreamTeam1_46 (A9),

Start 23:

- Found in 2 of 158 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 140
- Called 50.0% of time when present
- Phage (with cluster) where this start called: SheaKeira_46 (A9),

Summary by clusters:

There are 7 clusters represented in this pham: A, A17, A12, A19, A2, A6, A9,

Info for manual annotations of cluster A:

- Start number 21 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A12:

- Start number 20 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A19:

- Start number 11 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 5 was manually annotated 2 times for cluster A2.
- Start number 8 was manually annotated 49 times for cluster A2.
- Start number 9 was manually annotated 6 times for cluster A2.
- Start number 10 was manually annotated 15 times for cluster A2.
- Start number 11 was manually annotated 25 times for cluster A2.

Info for manual annotations of cluster A6:

- Start number 7 was manually annotated 3 times for cluster A6.
- Start number 11 was manually annotated 33 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 18 was manually annotated 1 time for cluster A9.
- Start number 22 was manually annotated 2 times for cluster A9.
- Start number 23 was manually annotated 1 time for cluster A9.

Gene Information:

Gene: 20ES_49 Start: 32435, Stop: 32013, Start Num: 8

Candidate Starts for 20ES_49:

(Start: 8 @32435 has 49 MA's), (Start: 11 @32426 has 59 MA's), (69, 32060),

Gene: 40AC_48 Start: 33450, Stop: 33055, Start Num: 11

Candidate Starts for 40AC_48:

(Start: 11 @33450 has 59 MA's), (29, 33372), (32, 33354), (65, 33225), (69, 33102),

Gene: AN3_49 Start: 32806, Stop: 32393, Start Num: 8

Candidate Starts for AN3_49:

(Start: 8 @32806 has 49 MA's), (26, 32716), (29, 32707), (46, 32671), (58, 32605), (69, 32440),

Gene: AN9_50 Start: 32346, Stop: 31912, Start Num: 10

Candidate Starts for AN9_50:

(Start: 10 @32346 has 15 MA's), (Start: 11 @32343 has 59 MA's), (29, 32244), (39, 32202), (50, 32178), (64, 32079), (67, 31992), (69, 31959),

Gene: ANI8_50 Start: 32346, Stop: 31912, Start Num: 10

Candidate Starts for ANI8_50:

(Start: 10 @32346 has 15 MA's), (Start: 11 @32343 has 59 MA's), (29, 32244), (39, 32202), (50, 32178), (64, 32079), (67, 31992), (69, 31959),

Gene: AbbyPaige_49 Start: 32616, Stop: 32194, Start Num: 8

Candidate Starts for AbbyPaige_49:

(Start: 8 @32616 has 49 MA's), (Start: 11 @32607 has 59 MA's), (27, 32514), (29, 32508), (69, 32241),

Gene: Acolyte_43 Start: 31589, Stop: 31182, Start Num: 11

Candidate Starts for Acolyte_43:

(Start: 11 @31589 has 59 MA's), (Start: 18 @31532 has 1 MA's), (30, 31484), (62, 31358), (69, 31229),

Gene: Adzzy_49 Start: 31071, Stop: 30643, Start Num: 11

Candidate Starts for Adzzy_49:

(6, 31107), (Start: 11 @31071 has 59 MA's), (67, 30723), (69, 30690),

Gene: Agape74_49 Start: 32601, Stop: 32179, Start Num: 8

Candidate Starts for Agape74_49:

(Start: 8 @32601 has 49 MA's), (Start: 11 @32592 has 59 MA's), (27, 32499), (29, 32493), (69, 32226),

Gene: AnnaL29_49 Start: 33146, Stop: 32724, Start Num: 8
Candidate Starts for AnnaL29_49:
(Start: 8 @33146 has 49 MA's), (Start: 11 @33137 has 59 MA's), (19, 33080), (27, 33044), (69, 32771),

Gene: Anselm_48 Start: 32523, Stop: 32110, Start Num: 11
Candidate Starts for Anselm_48:
(Start: 8 @32532 has 49 MA's), (Start: 11 @32523 has 59 MA's), (13, 32487), (24, 32445), (69, 32157),

Gene: ArcherNM_43 Start: 32185, Stop: 31778, Start Num: 9
Candidate Starts for ArcherNM_43:
(Start: 9 @32185 has 6 MA's), (29, 32107), (32, 32089), (60, 31972), (69, 31825), (71, 31798),

Gene: Arissanae_46 Start: 32694, Stop: 32350, Start Num: 18
Candidate Starts for Arissanae_46:
(Start: 18 @32694 has 1 MA's), (25, 32679), (41, 32631), (49, 32610), (57, 32556), (66, 32472), (71, 32370),

Gene: Artemis2UCLA_49 Start: 30834, Stop: 30406, Start Num: 11
Candidate Starts for Artemis2UCLA_49:
(Start: 7 @30861 has 3 MA's), (Start: 11 @30834 has 59 MA's), (28, 30738), (37, 30702), (59, 30612), (61, 30585), (62, 30582), (71, 30426),

Gene: BabyBack_45 Start: 32865, Stop: 32410, Start Num: 10
Candidate Starts for BabyBack_45:
(Start: 10 @32865 has 15 MA's), (12, 32838), (34, 32721), (57, 32625), (62, 32589), (64, 32577), (69, 32457), (71, 32430),

Gene: Bactobuster_46 Start: 33096, Stop: 32677, Start Num: 9
Candidate Starts for Bactobuster_46:
(Start: 9 @33096 has 6 MA's), (29, 33015), (47, 32952), (52, 32934), (60, 32880), (69, 32724),

Gene: Baehexic_46 Start: 32303, Stop: 31869, Start Num: 11
Candidate Starts for Baehexic_46:
(Start: 11 @32303 has 59 MA's), (29, 32204), (38, 32168), (69, 31916),

Gene: BengiVuitton_48 Start: 32388, Stop: 31975, Start Num: 8
Candidate Starts for BengiVuitton_48:
(Start: 8 @32388 has 49 MA's), (26, 32298), (29, 32289), (46, 32253), (58, 32187), (69, 32022),

Gene: Benvolio_44 Start: 31563, Stop: 31141, Start Num: 8
Candidate Starts for Benvolio_44:
(Start: 8 @31563 has 49 MA's), (Start: 11 @31554 has 59 MA's), (24, 31476), (69, 31188),

Gene: BiancaTri92_47 Start: 32931, Stop: 32509, Start Num: 8
Candidate Starts for BiancaTri92_47:
(Start: 8 @32931 has 49 MA's), (Start: 11 @32922 has 59 MA's), (24, 32844), (69, 32556),

Gene: Blinn1_51 Start: 31121, Stop: 30666, Start Num: 7
Candidate Starts for Blinn1_51:
(Start: 7 @31121 has 3 MA's), (Start: 11 @31094 has 59 MA's), (28, 30998), (37, 30962), (61, 30845), (69, 30713),

Gene: Blue7_51 Start: 30930, Stop: 30502, Start Num: 11

Candidate Starts for Blue7_51:

(Start: 7 @30957 has 3 MA's), (Start: 11 @30930 has 59 MA's), (28, 30834), (56, 30720), (62, 30678), (71, 30522),

Gene: BobSwaget_45 Start: 31896, Stop: 31399, Start Num: 5

Candidate Starts for BobSwaget_45:

(Start: 5 @31896 has 2 MA's), (36, 31704), (39, 31692), (57, 31617), (69, 31446),

Gene: Buggy_49 Start: 32673, Stop: 32239, Start Num: 11

Candidate Starts for Buggy_49:

(Start: 11 @32673 has 59 MA's), (29, 32574), (38, 32538), (69, 32286),

Gene: C3_45 Start: 32346, Stop: 31912, Start Num: 10

Candidate Starts for C3_45:

(Start: 10 @32346 has 15 MA's), (Start: 11 @32343 has 59 MA's), (29, 32244), (39, 32202), (50, 32178), (64, 32079), (67, 31992), (69, 31959),

Gene: CRB1_50 Start: 32781, Stop: 32359, Start Num: 8

Candidate Starts for CRB1_50:

(Start: 8 @32781 has 49 MA's), (Start: 11 @32772 has 59 MA's), (27, 32679), (29, 32673), (40, 32649), (42, 32646), (69, 32406),

Gene: Candra_49 Start: 31173, Stop: 30745, Start Num: 11

Candidate Starts for Candra_49:

(Start: 7 @31200 has 3 MA's), (Start: 11 @31173 has 59 MA's), (28, 31077), (37, 31041), (59, 30951), (61, 30924), (62, 30921), (71, 30765),

Gene: Caraxes_47 Start: 30723, Stop: 30316, Start Num: 11

Candidate Starts for Caraxes_47:

(Start: 11 @30723 has 59 MA's), (34, 30624), (60, 30510), (67, 30396), (69, 30363),

Gene: Centaur_48 Start: 32520, Stop: 32086, Start Num: 11

Candidate Starts for Centaur_48:

(Start: 11 @32520 has 59 MA's), (29, 32421), (38, 32385), (69, 32133),

Gene: Changeling_46 Start: 32725, Stop: 32312, Start Num: 11

Candidate Starts for Changeling_46:

(Start: 11 @32725 has 59 MA's), (24, 32647), (40, 32602), (68, 32371), (69, 32359), (71, 32332),

Gene: Chargerpower_46 Start: 31054, Stop: 30704, Start Num: 21

Candidate Starts for Chargerpower_46:

(Start: 21 @31054 has 1 MA's), (41, 30991), (58, 30910), (67, 30784), (71, 30724), (72, 30715),

Gene: Charm_46 Start: 31899, Stop: 31555, Start Num: 22

Candidate Starts for Charm_46:

(Start: 22 @31899 has 2 MA's), (25, 31884), (26, 31878), (41, 31836), (54, 31794), (57, 31761), (71, 31575), (72, 31566),

Gene: Chartreuse_48 Start: 30533, Stop: 30105, Start Num: 11

Candidate Starts for Chartreuse_48:

(Start: 7 @30560 has 3 MA's), (Start: 11 @30533 has 59 MA's), (28, 30437), (37, 30401), (59, 30311), (61, 30284), (62, 30281), (71, 30125),

Gene: Che12_49 Start: 31155, Stop: 30727, Start Num: 11

Candidate Starts for Che12_49:

(Start: 11 @31155 has 59 MA's), (31, 31044), (47, 30993), (67, 30807), (69, 30774),

Gene: ChipMunk_49 Start: 33873, Stop: 33451, Start Num: 8

Candidate Starts for ChipMunk_49:

(Start: 8 @33873 has 49 MA's), (27, 33771), (39, 33744), (69, 33498),

Gene: CloudWang3_49 Start: 30934, Stop: 30506, Start Num: 11

Candidate Starts for CloudWang3_49:

(Start: 7 @30961 has 3 MA's), (Start: 11 @30934 has 59 MA's), (28, 30838), (37, 30802), (59, 30712), (61, 30685), (62, 30682), (71, 30526),

Gene: Colin_47 Start: 32497, Stop: 32084, Start Num: 11

Candidate Starts for Colin_47:

(Start: 11 @32497 has 59 MA's), (24, 32419), (69, 32131),

Gene: Cookiedough_49 Start: 31149, Stop: 30721, Start Num: 11

Candidate Starts for Cookiedough_49:

(Start: 7 @31176 has 3 MA's), (Start: 11 @31149 has 59 MA's), (28, 31053), (37, 31017), (59, 30927), (61, 30900), (62, 30897), (71, 30741),

Gene: Crucio_47 Start: 32116, Stop: 31694, Start Num: 8

Candidate Starts for Crucio_47:

(Start: 8 @32116 has 49 MA's), (Start: 11 @32107 has 59 MA's), (27, 32014), (40, 31984), (69, 31741),

Gene: D29_46 Start: 31906, Stop: 31496, Start Num: 10

Candidate Starts for D29_46:

(4, 32113), (Start: 10 @31906 has 15 MA's), (39, 31786), (50, 31762), (51, 31756), (64, 31663), (67, 31576), (69, 31543),

Gene: D32_49 Start: 31906, Stop: 31496, Start Num: 10

Candidate Starts for D32_49:

(4, 32113), (Start: 10 @31906 has 15 MA's), (39, 31786), (50, 31762), (51, 31756), (64, 31663), (67, 31576), (69, 31543),

Gene: DBQu4n_49 Start: 31906, Stop: 31496, Start Num: 10

Candidate Starts for DBQu4n_49:

(2, 32233), (3, 32221), (Start: 10 @31906 has 15 MA's), (39, 31786), (50, 31762), (51, 31756), (64, 31663), (67, 31576), (69, 31543),

Gene: DaVinci_48 Start: 30587, Stop: 30159, Start Num: 11

Candidate Starts for DaVinci_48:

(Start: 7 @30614 has 3 MA's), (Start: 11 @30587 has 59 MA's), (28, 30491), (37, 30455), (59, 30365), (61, 30338), (62, 30335), (71, 30179),

Gene: Dalmatian_48 Start: 32508, Stop: 32086, Start Num: 8

Candidate Starts for Dalmatian_48:

(Start: 8 @32508 has 49 MA's), (Start: 11 @32499 has 59 MA's), (27, 32406), (40, 32376), (69, 32133),

Gene: DARTHPhader_44 Start: 32954, Stop: 32610, Start Num: 20

Candidate Starts for DARTHPhader_44:

(17, 32966), (Start: 18 @32960 has 1 MA's), (Start: 20 @32954 has 1 MA's), (31, 32912), (45, 32891), (55, 32837), (57, 32825), (66, 32732), (67, 32690), (71, 32630),

Gene: Deloris_47 Start: 32057, Stop: 31644, Start Num: 8

Candidate Starts for Deloris_47:

(Start: 8 @32057 has 49 MA's), (26, 31967), (29, 31958), (46, 31922), (58, 31856), (69, 31691),

Gene: Dignity_49 Start: 32681, Stop: 32259, Start Num: 8

Candidate Starts for Dignity_49:

(Start: 8 @32681 has 49 MA's), (Start: 11 @32672 has 59 MA's), (27, 32579), (40, 32549), (69, 32306),

Gene: Dorothea_48 Start: 31156, Stop: 30728, Start Num: 11

Candidate Starts for Dorothea_48:

(Start: 7 @31183 has 3 MA's), (Start: 11 @31156 has 59 MA's), (28, 31060), (37, 31024), (59, 30934), (61, 30907), (62, 30904), (71, 30748),

Gene: Drake55_49 Start: 32605, Stop: 32183, Start Num: 8

Candidate Starts for Drake55_49:

(Start: 8 @32605 has 49 MA's), (Start: 11 @32596 has 59 MA's), (27, 32503), (29, 32497), (40, 32473), (69, 32230),

Gene: DreamTeam1_46 Start: 31773, Stop: 31429, Start Num: 22

Candidate Starts for DreamTeam1_46:

(Start: 22 @31773 has 2 MA's), (25, 31758), (26, 31752), (41, 31710), (43, 31707), (54, 31668), (57, 31635), (71, 31449), (72, 31440),

Gene: DudeLittle_46 Start: 32250, Stop: 31828, Start Num: 8

Candidate Starts for DudeLittle_46:

(Start: 8 @32250 has 49 MA's), (Start: 11 @32241 has 59 MA's), (13, 32205), (Start: 23 @32172 has 1 MA's), (24, 32163), (69, 31875),

Gene: Duplo_49 Start: 31944, Stop: 31534, Start Num: 10

Candidate Starts for Duplo_49:

(2, 32271), (3, 32259), (Start: 10 @31944 has 15 MA's), (39, 31824), (50, 31800), (51, 31794), (64, 31701), (67, 31614), (69, 31581),

Gene: EZMoney23_45 Start: 32055, Stop: 31642, Start Num: 10

Candidate Starts for EZMoney23_45:

(Start: 10 @32055 has 15 MA's), (24, 31977), (28, 31959), (40, 31932), (69, 31689),

Gene: Echild_47 Start: 31587, Stop: 31165, Start Num: 8

Candidate Starts for Echild_47:

(Start: 8 @31587 has 49 MA's), (Start: 11 @31578 has 59 MA's), (24, 31500), (69, 31212),

Gene: Equemioh13_48 Start: 32422, Stop: 31988, Start Num: 11

Candidate Starts for Equemioh13_48:

(Start: 11 @32422 has 59 MA's), (29, 32323), (38, 32287), (69, 32035),

Gene: EricB_49 Start: 31130, Stop: 30702, Start Num: 11

Candidate Starts for EricB_49:

(Start: 7 @31157 has 3 MA's), (Start: 11 @31130 has 59 MA's), (28, 31034), (37, 30998), (59, 30908), (61, 30881), (62, 30878), (71, 30722),

Gene: EvilGenius_49 Start: 33877, Stop: 33455, Start Num: 8

Candidate Starts for EvilGenius_49:

(Start: 8 @33877 has 49 MA's), (Start: 11 @33868 has 59 MA's), (27, 33775), (39, 33748), (69, 33502),

Gene: Fameo_47 Start: 32426, Stop: 32004, Start Num: 8

Candidate Starts for Fameo_47:

(Start: 8 @32426 has 49 MA's), (Start: 11 @32417 has 59 MA's), (13, 32381), (24, 32339), (69, 32051),

Gene: FiringLine_47 Start: 32097, Stop: 31675, Start Num: 8

Candidate Starts for FiringLine_47:

(Start: 8 @32097 has 49 MA's), (Start: 11 @32088 has 59 MA's), (13, 32052), (24, 32010), (69, 31722),

Gene: First_0048 Start: 32311, Stop: 31889, Start Num: 8

Candidate Starts for First_0048:

(Start: 8 @32311 has 49 MA's), (Start: 11 @32302 has 59 MA's), (69, 31936),

Gene: Flare16_47 Start: 32181, Stop: 31747, Start Num: 11

Candidate Starts for Flare16_47:

(Start: 11 @32181 has 59 MA's), (29, 32082), (38, 32046), (69, 31794),

Gene: Garak_51 Start: 31328, Stop: 30873, Start Num: 7

Candidate Starts for Garak_51:

(Start: 7 @31328 has 3 MA's), (Start: 11 @31301 has 59 MA's), (28, 31205), (56, 31091), (62, 31049), (71, 30893),

Gene: GaugeLDP_45 Start: 32488, Stop: 32036, Start Num: 10

Candidate Starts for GaugeLDP_45:

(Start: 7 @32512 has 3 MA's), (Start: 10 @32488 has 15 MA's), (15, 32428), (34, 32344), (69, 32083),

Gene: Georgie2_48 Start: 32142, Stop: 31720, Start Num: 8

Candidate Starts for Georgie2_48:

(Start: 8 @32142 has 49 MA's), (Start: 11 @32133 has 59 MA's), (27, 32040), (40, 32010), (69, 31767),

Gene: Gladiator_47 Start: 30461, Stop: 30033, Start Num: 11

Candidate Starts for Gladiator_47:

(Start: 7 @30488 has 3 MA's), (Start: 11 @30461 has 59 MA's), (28, 30365), (37, 30329), (59, 30239), (61, 30212), (62, 30209), (71, 30053),

Gene: GreedyLawyer_49 Start: 31137, Stop: 30709, Start Num: 11

Candidate Starts for GreedyLawyer_49:

(Start: 7 @31164 has 3 MA's), (Start: 11 @31137 has 59 MA's), (28, 31041), (37, 31005), (59, 30915), (61, 30888), (62, 30885), (71, 30729),

Gene: Gruunaga_49 Start: 31137, Stop: 30709, Start Num: 11

Candidate Starts for Gruunaga_49:

(Start: 7 @31164 has 3 MA's), (Start: 11 @31137 has 59 MA's), (28, 31041), (56, 30927), (62, 30885), (71, 30729),

Gene: Hammer_50 Start: 30740, Stop: 30312, Start Num: 11

Candidate Starts for Hammer_50:

(Start: 7 @30767 has 3 MA's), (Start: 11 @30740 has 59 MA's), (28, 30644), (56, 30530), (62, 30488), (71, 30332),

Gene: HarryHoudini_48 Start: 32614, Stop: 32192, Start Num: 8

Candidate Starts for HarryHoudini_48:

(Start: 8 @32614 has 49 MA's), (Start: 11 @32605 has 59 MA's), (27, 32512), (29, 32506), (40, 32482), (69, 32239),

Gene: Heffalump_46 Start: 32894, Stop: 32472, Start Num: 8

Candidate Starts for Heffalump_46:

(Start: 8 @32894 has 49 MA's), (Start: 11 @32885 has 59 MA's), (13, 32849), (24, 32807), (69, 32519),

Gene: Helmet_51 Start: 31328, Stop: 30873, Start Num: 7

Candidate Starts for Helmet_51:

(Start: 7 @31328 has 3 MA's), (Start: 11 @31301 has 59 MA's), (28, 31205), (56, 31091), (62, 31049), (71, 30893),

Gene: Herbertwm_47 Start: 31973, Stop: 31524, Start Num: 11

Candidate Starts for Herbertwm_47:

(Start: 11 @31973 has 59 MA's), (15, 31916), (28, 31856), (61, 31703), (63, 31697), (67, 31604), (71, 31544),

Gene: Hexamo_49 Start: 30949, Stop: 30494, Start Num: 7

Candidate Starts for Hexamo_49:

(Start: 7 @30949 has 3 MA's), (Start: 11 @30922 has 59 MA's), (28, 30826), (56, 30712), (62, 30670), (71, 30514),

Gene: Indra_52 Start: 31302, Stop: 30874, Start Num: 11

Candidate Starts for Indra_52:

(Start: 7 @31329 has 3 MA's), (Start: 11 @31302 has 59 MA's), (28, 31206), (56, 31092), (62, 31050), (71, 30894),

Gene: IronMan_47 Start: 33279, Stop: 32860, Start Num: 9

Candidate Starts for IronMan_47:

(Start: 9 @33279 has 6 MA's), (29, 33198), (48, 33132), (52, 33117), (60, 33063), (69, 32907), (71, 32880),

Gene: Isiphiwo_47 Start: 30674, Stop: 30246, Start Num: 11

Candidate Starts for Isiphiwo_47:

(Start: 7 @30701 has 3 MA's), (Start: 11 @30674 has 59 MA's), (28, 30578), (37, 30542), (59, 30452), (61, 30425), (62, 30422), (71, 30266),

Gene: Iwokeuplikedis_50 Start: 32216, Stop: 31788, Start Num: 11

Candidate Starts for Iwokeuplikedis_50:

(Start: 11 @32216 has 59 MA's), (61, 31967), (69, 31835),

Gene: Jaan_47 Start: 33445, Stop: 33047, Start Num: 9

Candidate Starts for Jaan_47:

(Start: 9 @33445 has 6 MA's), (33, 33364), (47, 33322), (60, 33250), (69, 33094),

Gene: Jeffabunny_49 Start: 30958, Stop: 30530, Start Num: 11

Candidate Starts for Jeffabunny_49:

(Start: 7 @30985 has 3 MA's), (Start: 11 @30958 has 59 MA's), (28, 30862), (56, 30748), (62, 30706), (71, 30550),

Gene: Jerm_49 Start: 32674, Stop: 32252, Start Num: 8

Candidate Starts for Jerm_49:

(Start: 8 @32674 has 49 MA's), (Start: 11 @32665 has 59 MA's), (27, 32572), (40, 32542), (69, 32299),

Gene: Jordennis_48 Start: 30594, Stop: 30166, Start Num: 11

Candidate Starts for Jordennis_48:

(Start: 7 @30621 has 3 MA's), (Start: 11 @30594 has 59 MA's), (28, 30498), (37, 30462), (59, 30372), (61, 30345), (62, 30342),

Gene: JoshKayV_49 Start: 32755, Stop: 32333, Start Num: 8

Candidate Starts for JoshKayV_49:

(Start: 8 @32755 has 49 MA's), (Start: 11 @32746 has 59 MA's), (27, 32653), (29, 32647), (40, 32623), (42, 32620), (69, 32380),

Gene: Jsquared_45 Start: 31025, Stop: 30618, Start Num: 11

Candidate Starts for Jsquared_45:

(Start: 11 @31025 has 59 MA's), (34, 30926), (39, 30905), (67, 30698), (69, 30665),

Gene: Kalpine_45 Start: 32395, Stop: 31982, Start Num: 11

Candidate Starts for Kalpine_45:

(Start: 11 @32395 has 59 MA's), (24, 32317), (69, 32029),

Gene: Kazan_50 Start: 31143, Stop: 30715, Start Num: 11

Candidate Starts for Kazan_50:

(Start: 7 @31170 has 3 MA's), (Start: 11 @31143 has 59 MA's), (28, 31047), (37, 31011), (59, 30921), (61, 30894), (62, 30891), (71, 30735),

Gene: Kerberos_49 Start: 31906, Stop: 31496, Start Num: 10

Candidate Starts for Kerberos_49:

(2, 32233), (3, 32221), (Start: 10 @31906 has 15 MA's), (39, 31786), (50, 31762), (51, 31756), (64, 31663), (67, 31576), (69, 31543),

Gene: Kimona_46 Start: 30459, Stop: 30046, Start Num: 11

Candidate Starts for Kimona_46:

(Start: 11 @30459 has 59 MA's), (26, 30369), (46, 30324), (62, 30228), (69, 30099),

Gene: KingCyrus_49 Start: 33872, Stop: 33450, Start Num: 8

Candidate Starts for KingCyrus_49:

(Start: 8 @33872 has 49 MA's), (27, 33770), (39, 33743), (69, 33497), (70, 33473),

Gene: Kipper29_49 Start: 31156, Stop: 30728, Start Num: 11

Candidate Starts for Kipper29_49:

(Start: 7 @31183 has 3 MA's), (Start: 11 @31156 has 59 MA's), (28, 31060), (37, 31024), (59, 30934), (61, 30907), (62, 30904), (71, 30748),

Gene: Koduck_47 Start: 31317, Stop: 30889, Start Num: 11
Candidate Starts for Koduck_47:

(Start: 11 @31317 has 59 MA's), (Start: 18 @31263 has 1 MA's), (24, 31239), (34, 31197), (39, 31176), (47, 31155), (53, 31134), (67, 30969), (69, 30936),

Gene: Koko_50 Start: 31279, Stop: 30851, Start Num: 11
Candidate Starts for Koko_50:

(Start: 7 @31306 has 3 MA's), (Start: 11 @31279 has 59 MA's), (28, 31183), (62, 31027), (71, 30871),

Gene: L5_46 Start: 31389, Stop: 30961, Start Num: 11
Candidate Starts for L5_46:

(Start: 11 @31389 has 59 MA's), (Start: 18 @31335 has 1 MA's), (24, 31311), (34, 31269), (39, 31248), (47, 31227), (53, 31206), (67, 31041), (69, 31008),

Gene: LadyBird_51 Start: 32746, Stop: 32324, Start Num: 8
Candidate Starts for LadyBird_51:

(Start: 8 @32746 has 49 MA's), (Start: 11 @32737 has 59 MA's), (24, 32659), (28, 32641), (69, 32371),

Gene: Landor_47 Start: 33357, Stop: 32938, Start Num: 9
Candidate Starts for Landor_47:

(Start: 9 @33357 has 6 MA's), (29, 33276), (47, 33213), (60, 33141), (69, 32985),

Gene: Larenn_46 Start: 32287, Stop: 31865, Start Num: 8
Candidate Starts for Larenn_46:

(Start: 8 @32287 has 49 MA's), (Start: 11 @32278 has 59 MA's), (19, 32221), (36, 32170), (69, 31912),

Gene: Leogania_47 Start: 33298, Stop: 32876, Start Num: 8
Candidate Starts for Leogania_47:

(Start: 8 @33298 has 49 MA's), (Start: 11 @33289 has 59 MA's), (24, 33211), (69, 32923),

Gene: Leviathan_49 Start: 32730, Stop: 32308, Start Num: 8
Candidate Starts for Leviathan_49:

(Start: 8 @32730 has 49 MA's), (Start: 11 @32721 has 59 MA's), (27, 32628), (29, 32622), (40, 32598), (69, 32355),

Gene: LilTurb_48 Start: 32563, Stop: 32141, Start Num: 8
Candidate Starts for LilTurb_48:

(Start: 8 @32563 has 49 MA's), (Start: 11 @32554 has 59 MA's), (27, 32461), (29, 32455), (69, 32188),

Gene: Lokk_46 Start: 32421, Stop: 31924, Start Num: 5
Candidate Starts for Lokk_46:

(Start: 5 @32421 has 2 MA's), (36, 32229), (39, 32217), (55, 32154), (57, 32142), (69, 31971),

Gene: Loser_49 Start: 33095, Stop: 32673, Start Num: 8
Candidate Starts for Loser_49:

(1, 33422), (Start: 8 @33095 has 49 MA's), (Start: 11 @33086 has 59 MA's), (19, 33029), (27, 32993), (69, 32720),

Gene: Malec_47 Start: 32851, Stop: 32429, Start Num: 8

Candidate Starts for Malec_47:

(Start: 8 @32851 has 49 MA's), (Start: 11 @32842 has 59 MA's), (19, 32785), (36, 32734), (69, 32476),

Gene: McFly_49 Start: 31137, Stop: 30709, Start Num: 11

Candidate Starts for McFly_49:

(Start: 7 @31164 has 3 MA's), (Start: 11 @31137 has 59 MA's), (28, 31041), (37, 31005), (59, 30915), (61, 30888), (62, 30885), (71, 30729),

Gene: MiculUcigas_47 Start: 32081, Stop: 31647, Start Num: 11

Candidate Starts for MiculUcigas_47:

(Start: 11 @32081 has 59 MA's), (29, 31982), (38, 31946), (69, 31694),

Gene: Miko_44 Start: 32243, Stop: 31821, Start Num: 8

Candidate Starts for Miko_44:

(Start: 8 @32243 has 49 MA's), (Start: 11 @32234 has 59 MA's), (36, 32126), (39, 32114), (57, 32039), (69, 31868),

Gene: NaSiaTalie_47 Start: 32178, Stop: 31744, Start Num: 11

Candidate Starts for NaSiaTalie_47:

(Start: 11 @32178 has 59 MA's), (29, 32079), (38, 32043), (69, 31791),

Gene: Naji_49 Start: 31906, Stop: 31496, Start Num: 10

Candidate Starts for Naji_49:

(4, 32113), (Start: 10 @31906 has 15 MA's), (39, 31786), (50, 31762), (51, 31756), (64, 31663), (67, 31576), (69, 31543),

Gene: Neeharika16_48 Start: 30597, Stop: 30169, Start Num: 11

Candidate Starts for Neeharika16_48:

(Start: 7 @30624 has 3 MA's), (Start: 11 @30597 has 59 MA's), (28, 30501), (37, 30465), (59, 30375), (61, 30348), (62, 30345), (71, 30189),

Gene: Newrala_49 Start: 31148, Stop: 30720, Start Num: 11

Candidate Starts for Newrala_49:

(Start: 7 @31175 has 3 MA's), (Start: 11 @31148 has 59 MA's), (28, 31052), (37, 31016), (59, 30926), (61, 30899), (62, 30896), (71, 30740),

Gene: NicoleTera_46 Start: 32449, Stop: 32027, Start Num: 8

Candidate Starts for NicoleTera_46:

(Start: 8 @32449 has 49 MA's), (Start: 11 @32440 has 59 MA's), (14, 32401), (46, 32305), (71, 32047),

Gene: NothingSpecial_45 Start: 32705, Stop: 32271, Start Num: 11

Candidate Starts for NothingSpecial_45:

(Start: 11 @32705 has 59 MA's), (29, 32606), (69, 32318),

Gene: Odin_46 Start: 30872, Stop: 30465, Start Num: 11

Candidate Starts for Odin_46:

(Start: 11 @30872 has 59 MA's), (34, 30773), (67, 30545), (69, 30512),

Gene: Ph8s_49 Start: 31506, Stop: 31078, Start Num: 11

Candidate Starts for Ph8s_49:

(6, 31542), (Start: 11 @31506 has 59 MA's), (67, 31158), (69, 31125),

Gene: Phaded_48 Start: 33339, Stop: 32920, Start Num: 9

Candidate Starts for Phaded_48:

(Start: 9 @33339 has 6 MA's), (29, 33258), (47, 33195), (52, 33177), (60, 33123), (69, 32967),

Gene: Piro94_47 Start: 32531, Stop: 32109, Start Num: 8

Candidate Starts for Piro94_47:

(Start: 8 @32531 has 49 MA's), (Start: 11 @32522 has 59 MA's), (27, 32429), (29, 32423), (40, 32399), (69, 32156),

Gene: Pmask_49 Start: 31149, Stop: 30721, Start Num: 11

Candidate Starts for Pmask_49:

(Start: 7 @31176 has 3 MA's), (Start: 11 @31149 has 59 MA's), (28, 31053), (37, 31017), (59, 30927), (61, 30900), (62, 30897), (71, 30741),

Gene: Pomar16_49 Start: 31947, Stop: 31537, Start Num: 10

Candidate Starts for Pomar16_49:

(2, 32274), (3, 32262), (Start: 10 @31947 has 15 MA's), (39, 31827), (50, 31803), (51, 31797), (64, 31704), (67, 31617), (69, 31584),

Gene: Power_46 Start: 32150, Stop: 31728, Start Num: 8

Candidate Starts for Power_46:

(Start: 8 @32150 has 49 MA's), (Start: 11 @32141 has 59 MA's), (13, 32105), (24, 32063), (69, 31775),

Gene: Priamo_50 Start: 30766, Stop: 30338, Start Num: 11

Candidate Starts for Priamo_50:

(Start: 7 @30793 has 3 MA's), (Start: 11 @30766 has 59 MA's), (28, 30670), (37, 30634), (59, 30544), (61, 30517), (62, 30514),

Gene: Pukovnik_46 Start: 32944, Stop: 32528, Start Num: 9

Candidate Starts for Pukovnik_46:

(Start: 9 @32944 has 6 MA's), (17, 32914), (29, 32866), (40, 32821), (55, 32761), (60, 32731), (69, 32575),

Gene: QueenB2_46 Start: 32110, Stop: 31688, Start Num: 8

Candidate Starts for QueenB2_46:

(Start: 8 @32110 has 49 MA's), (Start: 11 @32101 has 59 MA's), (13, 32065), (24, 32023), (69, 31735),

Gene: QueenBeesly_47 Start: 32097, Stop: 31675, Start Num: 8

Candidate Starts for QueenBeesly_47:

(Start: 8 @32097 has 49 MA's), (Start: 11 @32088 has 59 MA's), (13, 32052), (24, 32010), (69, 31722),

Gene: Rachaly_46 Start: 32420, Stop: 31998, Start Num: 8

Candidate Starts for Rachaly_46:

(Start: 8 @32420 has 49 MA's), (Start: 11 @32411 has 59 MA's), (36, 32303), (39, 32291), (57, 32216), (69, 32045),

Gene: RedRock_49 Start: 33308, Stop: 32886, Start Num: 8

Candidate Starts for RedRock_49:

(Start: 8 @33308 has 49 MA's), (Start: 11 @33299 has 59 MA's), (19, 33242), (27, 33206), (69, 32933),

Gene: Retro23_48 Start: 32504, Stop: 32082, Start Num: 8

Candidate Starts for Retro23_48:

(Start: 8 @32504 has 49 MA's), (Start: 11 @32495 has 59 MA's), (27, 32402), (40, 32372), (69, 32129),

Gene: Rifter_50 Start: 30703, Stop: 30275, Start Num: 11

Candidate Starts for Rifter_50:

(Start: 7 @30730 has 3 MA's), (Start: 11 @30703 has 59 MA's), (28, 30607), (56, 30493), (62, 30451), (71, 30295),

Gene: Roksolana_50 Start: 31185, Stop: 30757, Start Num: 11

Candidate Starts for Roksolana_50:

(Start: 7 @31212 has 3 MA's), (Start: 11 @31185 has 59 MA's), (28, 31089), (37, 31053), (59, 30963), (61, 30936), (62, 30933), (71, 30777),

Gene: SemperFi_48 Start: 32365, Stop: 31943, Start Num: 8

Candidate Starts for SemperFi_48:

(Start: 8 @32365 has 49 MA's), (Start: 11 @32356 has 59 MA's), (27, 32263), (40, 32233), (69, 31990),

Gene: Serenity_47 Start: 31249, Stop: 30842, Start Num: 11

Candidate Starts for Serenity_47:

(Start: 11 @31249 has 59 MA's), (55, 31066), (61, 31021), (67, 30922), (69, 30889),

Gene: SheaKeira_46 Start: 31684, Stop: 31340, Start Num: 23

Candidate Starts for SheaKeira_46:

(Start: 23 @31684 has 1 MA's), (25, 31669), (26, 31663), (41, 31621), (54, 31579), (57, 31546), (71, 31360), (72, 31351),

Gene: Smeagan_50 Start: 32817, Stop: 32395, Start Num: 8

Candidate Starts for Smeagan_50:

(Start: 8 @32817 has 49 MA's), (Start: 11 @32808 has 59 MA's), (27, 32715), (29, 32709), (40, 32685), (69, 32442),

Gene: SmellyB_49 Start: 31137, Stop: 30709, Start Num: 11

Candidate Starts for SmellyB_49:

(Start: 7 @31164 has 3 MA's), (Start: 11 @31137 has 59 MA's), (28, 31041), (37, 31005), (59, 30915), (61, 30888), (62, 30885), (71, 30729),

Gene: SnapTap_47 Start: 32176, Stop: 31754, Start Num: 8

Candidate Starts for SnapTap_47:

(Start: 8 @32176 has 49 MA's), (Start: 11 @32167 has 59 MA's), (13, 32131), (24, 32089), (69, 31801),

Gene: StarStuff_49 Start: 31909, Stop: 31499, Start Num: 10

Candidate Starts for StarStuff_49:

(2, 32236), (3, 32224), (Start: 10 @31909 has 15 MA's), (39, 31789), (50, 31765), (51, 31759), (64, 31666), (67, 31579), (69, 31546),

Gene: SuperAwesome_49 Start: 31148, Stop: 30720, Start Num: 11
Candidate Starts for SuperAwesome_49:
(Start: 7 @31175 has 3 MA's), (Start: 11 @31148 has 59 MA's), (28, 31052), (37, 31016), (59, 30926),
(61, 30899), (62, 30896), (71, 30740),

Gene: SuperCallie99_48 Start: 31021, Stop: 30593, Start Num: 11
Candidate Starts for SuperCallie99_48:
(Start: 7 @31048 has 3 MA's), (Start: 11 @31021 has 59 MA's), (28, 30925), (37, 30889), (59, 30799),
(61, 30772), (62, 30769), (71, 30613),

Gene: Superchunk_46 Start: 30723, Stop: 30316, Start Num: 11
Candidate Starts for Superchunk_46:
(Start: 11 @30723 has 59 MA's), (34, 30624), (60, 30510), (67, 30396), (69, 30363),

Gene: SweetiePie_47 Start: 32305, Stop: 31883, Start Num: 8
Candidate Starts for SweetiePie_47:
(Start: 8 @32305 has 49 MA's), (Start: 11 @32296 has 59 MA's), (27, 32203), (40, 32173), (69,
31930),

Gene: SwirlSquare_52 Start: 31390, Stop: 30980, Start Num: 10
Candidate Starts for SwirlSquare_52:
(Start: 10 @31390 has 15 MA's), (31, 31300), (35, 31285), (44, 31258), (50, 31246), (51, 31240), (57,
31195), (67, 31060), (69, 31027),

Gene: TarsusIV_45 Start: 31964, Stop: 31542, Start Num: 8
Candidate Starts for TarsusIV_45:
(Start: 8 @31964 has 49 MA's), (36, 31847), (39, 31835), (69, 31589),

Gene: TipsytheTRex_44 Start: 31322, Stop: 30915, Start Num: 11
Candidate Starts for TipsytheTRex_44:
(Start: 11 @31322 has 59 MA's), (55, 31139), (67, 30995), (69, 30962),

Gene: Tomathan_49 Start: 31906, Stop: 31496, Start Num: 10
Candidate Starts for Tomathan_49:
(2, 32233), (3, 32221), (Start: 10 @31906 has 15 MA's), (39, 31786), (50, 31762), (51, 31756), (64,
31663), (67, 31576), (69, 31543),

Gene: ToneTone_46 Start: 30864, Stop: 30436, Start Num: 11
Candidate Starts for ToneTone_46:
(Start: 7 @30891 has 3 MA's), (Start: 11 @30864 has 59 MA's), (28, 30768), (56, 30654), (62, 30612),
(71, 30456),

Gene: Trixie_45 Start: 32233, Stop: 31820, Start Num: 10
Candidate Starts for Trixie_45:
(Start: 10 @32233 has 15 MA's), (24, 32155), (28, 32137), (69, 31867),

Gene: Trooper_48 Start: 32526, Stop: 32104, Start Num: 8
Candidate Starts for Trooper_48:
(Start: 8 @32526 has 49 MA's), (Start: 11 @32517 has 59 MA's), (16, 32469), (24, 32439), (42,
32391), (46, 32382), (69, 32151),

Gene: Tucker_49 Start: 30751, Stop: 30323, Start Num: 11
Candidate Starts for Tucker_49:

(Start: 7 @30778 has 3 MA's), (Start: 11 @30751 has 59 MA's), (28, 30655), (56, 30541), (62, 30499), (71, 30343),

Gene: Turbido_48 Start: 32560, Stop: 32138, Start Num: 8

Candidate Starts for Turbido_48:

(Start: 8 @32560 has 49 MA's), (Start: 11 @32551 has 59 MA's), (27, 32458), (40, 32428), (69, 32185),

Gene: Updawg_48 Start: 32422, Stop: 31988, Start Num: 11

Candidate Starts for Updawg_48:

(Start: 11 @32422 has 59 MA's), (29, 32323), (38, 32287), (69, 32035),

Gene: VA6_47 Start: 32280, Stop: 31867, Start Num: 8

Candidate Starts for VA6_47:

(Start: 8 @32280 has 49 MA's), (26, 32190), (29, 32181), (46, 32145), (58, 32079), (69, 31914),

Gene: VC3_50 Start: 32346, Stop: 31912, Start Num: 10

Candidate Starts for VC3_50:

(Start: 10 @32346 has 15 MA's), (Start: 11 @32343 has 59 MA's), (29, 32244), (39, 32202), (50, 32178), (64, 32079), (67, 31992), (69, 31959),

Gene: VohminGhazi_49 Start: 31138, Stop: 30710, Start Num: 11

Candidate Starts for VohminGhazi_49:

(Start: 7 @31165 has 3 MA's), (Start: 11 @31138 has 59 MA's), (28, 31042), (37, 31006), (59, 30916), (61, 30889), (62, 30886), (71, 30730),

Gene: WeiHuaDA_49 Start: 33119, Stop: 32706, Start Num: 11

Candidate Starts for WeiHuaDA_49:

(Start: 11 @33119 has 59 MA's), (24, 33041), (39, 32999), (69, 32753),

Gene: Whabigail7_48 Start: 32545, Stop: 32123, Start Num: 8

Candidate Starts for Whabigail7_48:

(Start: 8 @32545 has 49 MA's), (Start: 11 @32536 has 59 MA's), (27, 32443), (29, 32437), (69, 32170),

Gene: WideWale_48 Start: 32422, Stop: 31988, Start Num: 11

Candidate Starts for WideWale_48:

(Start: 11 @32422 has 59 MA's), (29, 32323), (38, 32287), (69, 32035),

Gene: Wiks_48 Start: 30932, Stop: 30504, Start Num: 11

Candidate Starts for Wiks_48:

(Start: 7 @30959 has 3 MA's), (Start: 11 @30932 has 59 MA's), (28, 30836), (56, 30722), (62, 30680), (71, 30524),

Gene: WunderPhul_49 Start: 30930, Stop: 30502, Start Num: 11

Candidate Starts for WunderPhul_49:

(Start: 7 @30957 has 3 MA's), (Start: 11 @30930 has 59 MA's), (28, 30834), (56, 30720), (62, 30678), (71, 30522),

Gene: Yokurt_49 Start: 30959, Stop: 30504, Start Num: 7

Candidate Starts for Yokurt_49:

(Start: 7 @30959 has 3 MA's), (Start: 11 @30932 has 59 MA's), (28, 30836), (56, 30722), (62, 30680), (71, 30524),

Gene: Zaka_49 Start: 30932, Stop: 30504, Start Num: 11

Candidate Starts for Zaka_49:

(Start: 7 @30959 has 3 MA's), (Start: 11 @30932 has 59 MA's), (28, 30836), (56, 30722), (62, 30680), (71, 30524),

Gene: Zulu_49 Start: 30732, Stop: 30304, Start Num: 11

Candidate Starts for Zulu_49:

(Start: 7 @30759 has 3 MA's), (Start: 11 @30732 has 59 MA's), (28, 30636), (56, 30522), (62, 30480), (71, 30324),