



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 330575 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330575 has 147 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Bachome_47, Fibonacci_45, Wolpertinger_44, Petersenfast_45, Bud_45, Lucivia_46, Orange_45, Bowtie_46, Hutc2_45, Insomnia_46, Mulciber_45, Snape_45, Gilberta_46, MaCh_46, Jabith_46, Munch_46, Aneem_46, Joselito_46
- Track 2 : Sham4_45, Flaverint_46
- Track 3 : Gail_51
- Track 4 : Sunhee_49
- Track 5 : Boohoo_49, DekHockey33_49, ShayRa_50, Anaysia_49, LastResort_48, Soups_49, KatherineG_50, Looper_49, ReMo_48, Nebulosus_48
- Track 6 : Nedarya_44
- Track 7 : Ravana_50
- Track 8 : EagleEye_47, PainterBoy_46, Lucyedi_46
- Track 9 : Agape74_48, Iwokeupliedis_49, JoshKayV_48, Turbido_47, Jerm_48
- Track 10 : HippoHollow_46, Heffalump_45
- Track 11 : Equemioh13_47, WideWale_47, Baehexic_45, Updawg_47, Centaur_47, Gratitude_46, MiculUcigas_46, NaSiaTalie_46, Sknot_46, Terrific_49, Flare16_46
- Track 12 : LadyBird_49, AN3_47, DudeLittle_45, VA6_45
- Track 13 : SwirlSquare_47
- Track 14 : Bugsy_48
- Track 15 : Smeagan_49, Dignity_48, AbbyPaige_48, LilTurb_47, Whabigail7_47
- Track 16 : Pukovnik_45
- Track 17 : CRB1_48
- Track 18 : HarryHoudini_47
- Track 19 : Trooper_47
- Track 20 : 20ES_47, First_0046, BengiVuitton_46, Deloris_45
- Track 21 : IronMan_46
- Track 22 : Leviathan_48
- Track 23 : Herbertwm_43
- Track 24 : Echild_46, Benvolio_43
- Track 25 : BabyBack_44
- Track 26 : Ph8s_47
- Track 27 : Piro94_46, Drake55_48
- Track 28 : MissWhite_44
- Track 29 : Fameo_46
- Track 30 : Koduck_46
- Track 31 : Landor_46, Bactobuster_45
- Track 32 : Adzzy_47
- Track 33 : TarsusIV_44

- Track 34 : FatCactus_37
- Track 35 : Anthony_41
- Track 36 : Lilbunny_45, Artemis2UCLA_46, ToneTone_43, Isiphiwo_44, Wiks_45, SuperAwesome_46, WunderPhul_46, DaVinci_46, Cookiedough_46, Newrala_46, Zaka_46, Roksolana_47, Pmask_46, Chartreuse_46, Yokurt_46, Neeharika16_46, JewelBug_48, BlessJoy_47, Zulu_47, CloudWang3_46, Hexamo_46, Jeffabunny_46, Jordennis_46, Tucker_47, Imbriano_45, Gruunaga_46
- Track 37 : BennyP_47, Kipper29_46, SmellyB_46, Dorothea_46, VohminGhazi_46, Kazan_47, McFly_46, EricB_46, Hoot_46, Candra_46
- Track 38 : Priamo_48
- Track 39 : Koko_48
- Track 40 : Garak_48, Temprado_47, Helmet_48, Indra_49, Polyphemos_47
- Track 41 : GreedyLawyer_46
- Track 42 : Hammer_48
- Track 43 : Blue7_49, Rifter_48
- Track 44 : Blinn1_49, BABullseye_44
- Track 45 : Celestiallunch_43
- Track 46 : SheaKeira_44
- Track 47 : Klodlith_44, Charm_43, DreamTeam1_43
- Track 48 : MegTheThird_44

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

The start number called the most often in the published annotations is 12, it was called in 129 of the 134 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES_47, AN3_47, AbbyPaige_48, Adzzy_47, Agape74_48, Anaysia_49, Aneem_46, Anthony_41, Artemis2UCLA_46, BABullseye_44, BabyBack_44, Bachome_47, Bactobuster_45, Baehexic_45, BengiVuitton_46, BennyP_47, Benvolio_43, BlessJoy_47, Blinn1_49, Blue7_49, Boohoo_49, Bowtie_46, Bud_45, Buggy_48, CRB1_48, Candra_46, Celestiallunch_43, Centaur_47, Chartreuse_46, CloudWang3_46, Cookiedough_46, DaVinci_46, DekHockey33_49, Deloris_45, Dignity_48, Dorothea_46, Drake55_48, DudeLittle_45, EagleEye_47, Echid_46, Equemioh13_47, EricB_46, Fameo_46, FatCactus_37, Fibonacci_45, First_0046, Flare16_46, Gail_51, Garak_48, Gilberta_46, Gratitude_46, GreedyLawyer_46, Gruunaga_46, Hammer_48, HarryHoudini_47, Heffalump_45, Helmet_48, Hexamo_46, HippoHollow_46, Hoot_46, Hutc2_45, Imbriano_45, Indra_49, Insomnia_46, IronMan_46, Isiphiwo_44, Iwokeuplikedis_49, Jabith_46, Jeffabunny_46, Jerm_48, JewelBug_48, Jordennis_46, Joselito_46, JoshKayV_48, KatherineG_50, Kazan_47, Kipper29_46, Koduck_46, Koko_48, LadyBird_49, Landor_46, LastResort_48, Leviathan_48, LilTurb_47, Lilbunny_45, Looper_49, Lucivia_46, Lucyedi_46, MaCh_46, McFly_46, MiculUcigas_46, MissWhite_44, Mulciber_45, Munch_46, NaSiaTalie_46, Nebulosus_48, Nedarya_44, Neeharika16_46, Newrala_46, Orange_45, PainterBoy_46, Petersenfast_45, Ph8s_47, Piro94_46, Pmask_46, Polyphemos_47, Priamo_48, Pukovnik_45, Ravana_50, ReMo_48, Rifter_48, Roksolana_47, ShayRa_50, SheaKeira_44, Sknot_46, Smeagan_49, SmellyB_46, Snape_45, Soups_49, Sunhee_49, SuperAwesome_46, SwirlSquare_47, TarsusIV_44, Temprado_47, Terrific_49, ToneTone_43, Trooper_47, Tucker_47, Turbido_47, Updawg_47, VA6_45,

VohminGhazi_46, Whabigail7_47, WideWale_47, Wiks_45, Wolpertinger_44, WunderPhul_46, Yokurt_46, Zaka_46, Zulu_47,

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

- Flaverint_46, MegTheThird_44, Sham4_45,

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

- Charm_43, DreamTeam1_43, Herbertwm_43, Klodlith_44,

Summary by start number:

Start 8:

- Found in 1 of 147 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 134
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Herbertwm_43 (A2),

Start 10:

- Found in 20 of 147 (13.6%) of genes in pham
- Manual Annotations of this start: 2 of 134
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Flaverint_46 (A11), Sham4_45 (A11),

Start 11:

- Found in 6 of 147 (4.1%) of genes in pham
- Manual Annotations of this start: 2 of 134
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Charm_43 (A9), DreamTeam1_43 (A9), Klodlith_44 (A9), MegTheThird_44 (A9),

Start 12:

- Found in 143 of 147 (97.3%) of genes in pham
- Manual Annotations of this start: 129 of 134
- Called 97.9% of time when present
- Phage (with cluster) where this start called: 20ES_47 (A2), AN3_47 (A2), AbbyPaige_48 (A2), Adzzy_47 (A2), Agape74_48 (A2), Anaysia_49 (A15), Aneem_46 (A11), Anthony_41 (A20), Artemis2UCLA_46 (A6), BABullseye_44 (A6), BabyBack_44 (A2), Bachome_47 (A11), Bactobuster_45 (A2), Baehexic_45 (A2), BengiVuitton_46 (A2), BennyP_47 (A6), Benvolio_43 (A2), BlessJoy_47 (A6), Blinn1_49 (A6), Blue7_49 (A6), Boohoo_49 (A15), Bowtie_46 (A11), Bud_45 (A11), Buggy_48 (A2), CRB1_48 (A2), Candra_46 (A6), Celestiallunch_43 (A9), Centaur_47 (A2), Chartreuse_46 (A6), CloudWang3_46 (A6), Cookiedough_46 (A6), DaVinci_46 (A6), DekHockey33_49 (A15), Deloris_45 (A2), Dignity_48 (A2), Dorothea_46 (A6), Drake55_48 (A2), DudeLittle_45 (A2), EagleEye_47 (A16), Echild_46 (A2), Equemioh13_47 (A2), EricB_46 (A6), Fameo_46 (A2), FatCactus_37 (A20), Fibonacci_45 (A11), First_0046 (A2), Flare16_46 (A2), Gail_51 (A14), Garak_48 (A6), Gilberta_46 (A11), Gratitude_46 (A2), GreedyLawyer_46 (A6), Gruunaga_46 (A6), Hammer_48 (A6), HarryHoudini_47 (A2), Heffalump_45 (A2), Helmet_48 (A6), Hexamo_46 (A6), HippoHollow_46 (A2), Hoot_46 (A6), Hutc2_45 (A11), Imbriano_45 (A6), Indra_49 (A6), Insomnia_46 (A11), IronMan_46 (A2), Isiphiwo_44 (A6), Iwokeuplikedis_49 (A2), Jabith_46 (A11), Jeffabunny_46 (A6), Jerm_48 (A2), JewelBug_48 (A6), Jordennis_46 (A6), Joselito_46 (A11), JoshKayV_48 (A2), KatherineG_50 (A15), Kazan_47 (A6), Kipper29_46 (A6), Koduck_46 (A2), Koko_48

(A6), LadyBird_49 (A2), Landor_46 (A2), LastResort_48 (A15), Leviathan_48 (A2), LilTurb_47 (A2), Lilbunny_45 (A6), Looper_49 (A15), Lucivia_46 (A11), Lucyedi_46 (A16), MaCh_46 (A11), McFly_46 (A6), MiculUcigas_46 (A2), MissWhite_44 (A2), Mulciber_45 (A11), Munch_46 (A11), NaSiaTalie_46 (A2), Nebulosus_48 (A15), Nedarya_44 (A15), Neeharika16_46 (A6), Newra1a_46 (A6), Orange_45 (A11), PainterBoy_46 (A16), Petersenfast_45 (A11), Ph8s_47 (A2), Piro94_46 (A2), Pmask_46 (A6), Polyphemus_47 (A6), Priamo_48 (A6), Pukovnik_45 (A2), Ravana_50 (A15), ReMo_48 (A15), Rifter_48 (A6), Roksolana_47 (A6), ShayRa_50 (A15), SheaKeira_44 (A9), Sknot_46 (A2), Smeagan_49 (A2), SmellyB_46 (A6), Snape_45 (A11), Soups_49 (A15), Sunhee_49 (A14), SuperAwesome_46 (A6), SwirlSquare_47 (A2), TarsusIV_44 (A2), Temprado_47 (A6), Terrific_49 (A2), ToneTone_43 (A6), Trooper_47 (A2), Tucker_47 (A6), Turbido_47 (A2), Updawg_47 (A2), VA6_45 (A2), VohminGhazi_46 (A6), Whabigail7_47 (A2), WideWale_47 (A2), Wiks_45 (A6), Wolpertinger_44 (A11), WunderPhul_46 (A6), Yokurt_46 (A6), Zaka_46 (A6), Zulu_47 (A6),

Summary by clusters:

There are 8 clusters represented in this pham: A15, A14, A16, A11, A20, A2, A6, A9,

Info for manual annotations of cluster A11:

- Start number 10 was manually annotated 2 times for cluster A11.
- Start number 12 was manually annotated 17 times for cluster A11.

Info for manual annotations of cluster A14:

- Start number 12 was manually annotated 2 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 12 was manually annotated 12 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 12 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 8 was manually annotated 1 time for cluster A2.
- Start number 12 was manually annotated 46 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 12 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A6:

- Start number 12 was manually annotated 46 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 11 was manually annotated 2 times for cluster A9.
- Start number 12 was manually annotated 2 times for cluster A9.

Gene Information:

Gene: 20ES_47 Start: 31813, Stop: 31625, Start Num: 12

Candidate Starts for 20ES_47:

(Start: 12 @31813 has 129 MA's), (37, 31639),

Gene: AN3_47 Start: 32193, Stop: 32005, Start Num: 12

Candidate Starts for AN3_47:

(Start: 12 @32193 has 129 MA's), (30, 32043),

Gene: AbbyPaige_48 Start: 32194, Stop: 32009, Start Num: 12

Candidate Starts for AbbyPaige_48:

(Start: 12 @32194 has 129 MA's), (15, 32149), (30, 32044),

Gene: Adzzy_47 Start: 30308, Stop: 30099, Start Num: 12

Candidate Starts for Adzzy_47:

(6, 30443), (Start: 12 @30308 has 129 MA's), (23, 30227), (26, 30212), (27, 30191), (32, 30161), (34, 30155), (43, 30107),

Gene: Agape74_48 Start: 32179, Stop: 31994, Start Num: 12

Candidate Starts for Agape74_48:

(Start: 12 @32179 has 129 MA's), (30, 32029),

Gene: Anaysia_49 Start: 30563, Stop: 30327, Start Num: 12

Candidate Starts for Anaysia_49:

(2, 30968), (4, 30884), (5, 30881), (Start: 12 @30563 has 129 MA's), (19, 30500),

Gene: Aneem_46 Start: 31023, Stop: 30784, Start Num: 12

Candidate Starts for Aneem_46:

(Start: 10 @31032 has 2 MA's), (Start: 12 @31023 has 129 MA's), (44, 30804), (45, 30789),

Gene: Anthony_41 Start: 29481, Stop: 29272, Start Num: 12

Candidate Starts for Anthony_41:

(Start: 12 @29481 has 129 MA's), (17, 29433), (18, 29430), (29, 29337), (38, 29304),

Gene: Artemis2UCLA_46 Start: 29520, Stop: 29332, Start Num: 12

Candidate Starts for Artemis2UCLA_46:

(Start: 12 @29520 has 129 MA's), (25, 29436), (26, 29433), (27, 29412), (31, 29388),

Gene: BABullseye_44 Start: 29366, Stop: 29178, Start Num: 12

Candidate Starts for BABullseye_44:

(Start: 12 @29366 has 129 MA's), (25, 29282), (26, 29279), (27, 29258),

Gene: BabyBack_44 Start: 32081, Stop: 31851, Start Num: 12

Candidate Starts for BabyBack_44:

(6, 32216), (Start: 12 @32081 has 129 MA's), (19, 32027), (26, 31988), (40, 31913),

Gene: Bachome_47 Start: 31011, Stop: 30772, Start Num: 12

Candidate Starts for Bachome_47:

(Start: 10 @31020 has 2 MA's), (Start: 12 @31011 has 129 MA's), (44, 30792), (45, 30777),

Gene: Bactobuster_45 Start: 32677, Stop: 32492, Start Num: 12

Candidate Starts for Bactobuster_45:

(Start: 12 @32677 has 129 MA's), (14, 32644), (30, 32527),

Gene: Baehexic_45 Start: 31869, Stop: 31684, Start Num: 12

Candidate Starts for Baehexic_45:

(Start: 12 @31869 has 129 MA's), (30, 31719),

Gene: BengiVuitton_46 Start: 31775, Stop: 31587, Start Num: 12

Candidate Starts for BengiVuitton_46:

(Start: 12 @31775 has 129 MA's), (37, 31601),

Gene: BennyP_47 Start: 29968, Stop: 29780, Start Num: 12

Candidate Starts for BennyP_47:

(Start: 12 @29968 has 129 MA's), (19, 29923), (26, 29881), (31, 29836),

Gene: Benvolio_43 Start: 31141, Stop: 30953, Start Num: 12

Candidate Starts for Benvolio_43:

(1, 31576), (Start: 12 @31141 has 129 MA's), (30, 30991),

Gene: BlessJoy_47 Start: 29981, Stop: 29793, Start Num: 12

Candidate Starts for BlessJoy_47:

(Start: 12 @29981 has 129 MA's), (25, 29897), (26, 29894), (27, 29873), (31, 29849),

Gene: Blinn1_49 Start: 30331, Stop: 30152, Start Num: 12

Candidate Starts for Blinn1_49:

(Start: 12 @30331 has 129 MA's), (25, 30247), (26, 30244), (27, 30223),

Gene: Blue7_49 Start: 30167, Stop: 29988, Start Num: 12

Candidate Starts for Blue7_49:

(Start: 12 @30167 has 129 MA's), (19, 30122), (26, 30080), (30, 30038), (37, 30014),

Gene: Boohoo_49 Start: 30563, Stop: 30327, Start Num: 12

Candidate Starts for Boohoo_49:

(2, 30968), (4, 30884), (5, 30881), (Start: 12 @30563 has 129 MA's), (19, 30500),

Gene: Bowtie_46 Start: 31030, Stop: 30791, Start Num: 12

Candidate Starts for Bowtie_46:

(Start: 10 @31039 has 2 MA's), (Start: 12 @31030 has 129 MA's), (44, 30811), (45, 30796),

Gene: Bud_45 Start: 30585, Stop: 30346, Start Num: 12

Candidate Starts for Bud_45:

(Start: 10 @30594 has 2 MA's), (Start: 12 @30585 has 129 MA's), (44, 30366), (45, 30351),

Gene: Bugsy_48 Start: 32239, Stop: 32054, Start Num: 12

Candidate Starts for Bugsy_48:

(Start: 12 @32239 has 129 MA's), (15, 32194), (30, 32089),

Gene: CRB1_48 Start: 32159, Stop: 31977, Start Num: 12

Candidate Starts for CRB1_48:

(Start: 12 @32159 has 129 MA's),

Gene: Candra_46 Start: 29859, Stop: 29671, Start Num: 12

Candidate Starts for Candra_46:

(Start: 12 @29859 has 129 MA's), (19, 29814), (26, 29772), (31, 29727),

Gene: Celestiallunch_43 Start: 31004, Stop: 30789, Start Num: 12

Candidate Starts for Celestiallunch_43:

(Start: 11 @31007 has 2 MA's), (Start: 12 @31004 has 129 MA's), (13, 30992), (35, 30860),

Gene: Centaur_47 Start: 32086, Stop: 31901, Start Num: 12

Candidate Starts for Centaur_47:

(Start: 12 @32086 has 129 MA's), (30, 31936),

Gene: Charm_43 Start: 31035, Stop: 30844, Start Num: 11

Candidate Starts for Charm_43:

(6, 31164), (Start: 11 @31035 has 2 MA's), (19, 30984), (42, 30852),

Gene: Chartreuse_46 Start: 29770, Stop: 29582, Start Num: 12

Candidate Starts for Chartreuse_46:

(Start: 12 @29770 has 129 MA's), (25, 29686), (26, 29683), (27, 29662), (31, 29638),

Gene: CloudWang3_46 Start: 29620, Stop: 29432, Start Num: 12

Candidate Starts for CloudWang3_46:

(Start: 12 @29620 has 129 MA's), (25, 29536), (26, 29533), (27, 29512), (31, 29488),

Gene: Cookiedough_46 Start: 29835, Stop: 29647, Start Num: 12

Candidate Starts for Cookiedough_46:

(Start: 12 @29835 has 129 MA's), (25, 29751), (26, 29748), (27, 29727), (31, 29703),

Gene: DaVinci_46 Start: 29824, Stop: 29636, Start Num: 12

Candidate Starts for DaVinci_46:

(Start: 12 @29824 has 129 MA's), (25, 29740), (26, 29737), (27, 29716), (31, 29692),

Gene: DekHockey33_49 Start: 30778, Stop: 30542, Start Num: 12

Candidate Starts for DekHockey33_49:

(2, 31183), (4, 31099), (5, 31096), (Start: 12 @30778 has 129 MA's), (19, 30715),

Gene: Deloris_45 Start: 31444, Stop: 31256, Start Num: 12

Candidate Starts for Deloris_45:

(Start: 12 @31444 has 129 MA's), (37, 31270),

Gene: Dignity_48 Start: 32259, Stop: 32074, Start Num: 12

Candidate Starts for Dignity_48:

(Start: 12 @32259 has 129 MA's), (15, 32214), (30, 32109),

Gene: Dorothea_46 Start: 29842, Stop: 29654, Start Num: 12

Candidate Starts for Dorothea_46:

(Start: 12 @29842 has 129 MA's), (19, 29797), (26, 29755), (31, 29710),

Gene: Drake55_48 Start: 32183, Stop: 31998, Start Num: 12

Candidate Starts for Drake55_48:

(3, 32552), (Start: 12 @32183 has 129 MA's), (15, 32138), (30, 32033),

Gene: DreamTeam1_43 Start: 30909, Stop: 30718, Start Num: 11

Candidate Starts for DreamTeam1_43:

(6, 31038), (Start: 11 @30909 has 2 MA's), (19, 30858), (42, 30726),

Gene: DudeLittle_45 Start: 31828, Stop: 31643, Start Num: 12

Candidate Starts for DudeLittle_45:

(Start: 12 @31828 has 129 MA's), (30, 31678),

Gene: EagleEye_47 Start: 30973, Stop: 30788, Start Num: 12
Candidate Starts for EagleEye_47:
(Start: 12 @30973 has 129 MA's), (19, 30916), (23, 30892), (33, 30823),

Gene: Echid_46 Start: 31165, Stop: 30977, Start Num: 12
Candidate Starts for Echid_46:
(1, 31600), (Start: 12 @31165 has 129 MA's), (30, 31015),

Gene: Equemioh13_47 Start: 31988, Stop: 31803, Start Num: 12
Candidate Starts for Equemioh13_47:
(Start: 12 @31988 has 129 MA's), (30, 31838),

Gene: EricB_46 Start: 29816, Stop: 29628, Start Num: 12
Candidate Starts for EricB_46:
(Start: 12 @29816 has 129 MA's), (19, 29771), (26, 29729), (31, 29684),

Gene: Fameo_46 Start: 32004, Stop: 31819, Start Num: 12
Candidate Starts for Fameo_46:
(Start: 12 @32004 has 129 MA's), (14, 31971), (30, 31854), (37, 31830),

Gene: FatCactus_37 Start: 28563, Stop: 28351, Start Num: 12
Candidate Starts for FatCactus_37:
(Start: 12 @28563 has 129 MA's), (18, 28512), (22, 28479), (28, 28422), (29, 28419),

Gene: Fibonacci_45 Start: 30577, Stop: 30338, Start Num: 12
Candidate Starts for Fibonacci_45:
(Start: 10 @30586 has 2 MA's), (Start: 12 @30577 has 129 MA's), (44, 30358), (45, 30343),

Gene: First_0046 Start: 31689, Stop: 31501, Start Num: 12
Candidate Starts for First_0046:
(Start: 12 @31689 has 129 MA's), (37, 31515),

Gene: Flare16_46 Start: 31747, Stop: 31562, Start Num: 12
Candidate Starts for Flare16_46:
(Start: 12 @31747 has 129 MA's), (30, 31597),

Gene: Flaverint_46 Start: 31033, Stop: 30785, Start Num: 10
Candidate Starts for Flaverint_46:
(Start: 10 @31033 has 2 MA's), (Start: 12 @31024 has 129 MA's), (44, 30805), (45, 30790),

Gene: Gail_51 Start: 33528, Stop: 33352, Start Num: 12
Candidate Starts for Gail_51:
(Start: 12 @33528 has 129 MA's), (33, 33375), (36, 33363),

Gene: Garak_48 Start: 29987, Stop: 29799, Start Num: 12
Candidate Starts for Garak_48:
(Start: 12 @29987 has 129 MA's), (26, 29900), (27, 29879), (31, 29855),

Gene: Gilberta_46 Start: 31014, Stop: 30775, Start Num: 12
Candidate Starts for Gilberta_46:
(Start: 10 @31023 has 2 MA's), (Start: 12 @31014 has 129 MA's), (44, 30795), (45, 30780),

Gene: Gratitude_46 Start: 31988, Stop: 31803, Start Num: 12

Candidate Starts for Gratitude_46:
(Start: 12 @31988 has 129 MA's), (30, 31838),

Gene: GreedyLawyer_46 Start: 29823, Stop: 29635, Start Num: 12
Candidate Starts for GreedyLawyer_46:
(Start: 12 @29823 has 129 MA's), (19, 29778), (25, 29739), (26, 29736), (27, 29715), (31, 29691),

Gene: Gruunaga_46 Start: 29823, Stop: 29635, Start Num: 12
Candidate Starts for Gruunaga_46:
(Start: 12 @29823 has 129 MA's), (25, 29739), (26, 29736), (27, 29715), (31, 29691),

Gene: Hammer_48 Start: 29977, Stop: 29798, Start Num: 12
Candidate Starts for Hammer_48:
(Start: 12 @29977 has 129 MA's), (19, 29932), (30, 29848), (37, 29824),

Gene: HarryHoudini_47 Start: 32192, Stop: 32007, Start Num: 12
Candidate Starts for HarryHoudini_47:
(3, 32561), (Start: 12 @32192 has 129 MA's), (30, 32042),

Gene: Heffalump_45 Start: 32472, Stop: 32287, Start Num: 12
Candidate Starts for Heffalump_45:
(Start: 12 @32472 has 129 MA's), (14, 32439), (30, 32322),

Gene: Helmet_48 Start: 29987, Stop: 29799, Start Num: 12
Candidate Starts for Helmet_48:
(Start: 12 @29987 has 129 MA's), (26, 29900), (27, 29879), (31, 29855),

Gene: Herbertwm_43 Start: 30942, Stop: 30700, Start Num: 8
Candidate Starts for Herbertwm_43:
(Start: 8 @30942 has 1 MA's), (9, 30933), (16, 30882), (20, 30861), (21, 30846), (26, 30825), (39, 30753),

Gene: Hexamo_46 Start: 29608, Stop: 29420, Start Num: 12
Candidate Starts for Hexamo_46:
(Start: 12 @29608 has 129 MA's), (25, 29524), (26, 29521), (27, 29500), (31, 29476),

Gene: HippoHollow_46 Start: 33225, Stop: 33037, Start Num: 12
Candidate Starts for HippoHollow_46:
(Start: 12 @33225 has 129 MA's), (14, 33192), (30, 33075),

Gene: Hoot_46 Start: 29801, Stop: 29613, Start Num: 12
Candidate Starts for Hoot_46:
(Start: 12 @29801 has 129 MA's), (19, 29756), (26, 29714), (31, 29669),

Gene: Hutc2_45 Start: 30577, Stop: 30338, Start Num: 12
Candidate Starts for Hutc2_45:
(Start: 10 @30586 has 2 MA's), (Start: 12 @30577 has 129 MA's), (44, 30358), (45, 30343),

Gene: Imbriano_45 Start: 29841, Stop: 29653, Start Num: 12
Candidate Starts for Imbriano_45:
(Start: 12 @29841 has 129 MA's), (25, 29757), (26, 29754), (27, 29733), (31, 29709),

Gene: Indra_49 Start: 29988, Stop: 29800, Start Num: 12

Candidate Starts for Indra_49:

(Start: 12 @29988 has 129 MA's), (26, 29901), (27, 29880), (31, 29856),

Gene: Insomnia_46 Start: 31082, Stop: 30843, Start Num: 12

Candidate Starts for Insomnia_46:

(Start: 10 @31091 has 2 MA's), (Start: 12 @31082 has 129 MA's), (44, 30863), (45, 30848),

Gene: IronMan_46 Start: 32860, Stop: 32675, Start Num: 12

Candidate Starts for IronMan_46:

(Start: 12 @32860 has 129 MA's), (14, 32827), (30, 32710), (37, 32686),

Gene: Isiphiwo_44 Start: 29360, Stop: 29172, Start Num: 12

Candidate Starts for Isiphiwo_44:

(Start: 12 @29360 has 129 MA's), (25, 29276), (26, 29273), (27, 29252), (31, 29228),

Gene: Iwokeuplikedis_49 Start: 31788, Stop: 31606, Start Num: 12

Candidate Starts for Iwokeuplikedis_49:

(Start: 12 @31788 has 129 MA's), (30, 31638),

Gene: Jabith_46 Start: 31083, Stop: 30844, Start Num: 12

Candidate Starts for Jabith_46:

(Start: 10 @31092 has 2 MA's), (Start: 12 @31083 has 129 MA's), (44, 30864), (45, 30849),

Gene: Jeffabunny_46 Start: 29644, Stop: 29456, Start Num: 12

Candidate Starts for Jeffabunny_46:

(Start: 12 @29644 has 129 MA's), (25, 29560), (26, 29557), (27, 29536), (31, 29512),

Gene: Jerm_48 Start: 32252, Stop: 32067, Start Num: 12

Candidate Starts for Jerm_48:

(Start: 12 @32252 has 129 MA's), (30, 32102),

Gene: JewelBug_48 Start: 29992, Stop: 29804, Start Num: 12

Candidate Starts for JewelBug_48:

(Start: 12 @29992 has 129 MA's), (25, 29908), (26, 29905), (27, 29884), (31, 29860),

Gene: Jordennis_46 Start: 29831, Stop: 29643, Start Num: 12

Candidate Starts for Jordennis_46:

(Start: 12 @29831 has 129 MA's), (25, 29747), (26, 29744), (27, 29723), (31, 29699),

Gene: Joselito_46 Start: 31023, Stop: 30784, Start Num: 12

Candidate Starts for Joselito_46:

(Start: 10 @31032 has 2 MA's), (Start: 12 @31023 has 129 MA's), (44, 30804), (45, 30789),

Gene: JoshKayV_48 Start: 32333, Stop: 32151, Start Num: 12

Candidate Starts for JoshKayV_48:

(Start: 12 @32333 has 129 MA's), (30, 32183),

Gene: KatherineG_50 Start: 30778, Stop: 30542, Start Num: 12

Candidate Starts for KatherineG_50:

(2, 31183), (4, 31099), (5, 31096), (Start: 12 @30778 has 129 MA's), (19, 30715),

Gene: Kazan_47 Start: 29829, Stop: 29641, Start Num: 12

Candidate Starts for Kazan_47:

(Start: 12 @29829 has 129 MA's), (19, 29784), (26, 29742), (31, 29697),

Gene: Kipper29_46 Start: 29842, Stop: 29654, Start Num: 12

Candidate Starts for Kipper29_46:

(Start: 12 @29842 has 129 MA's), (19, 29797), (26, 29755), (31, 29710),

Gene: Klodlith_44 Start: 30926, Stop: 30735, Start Num: 11

Candidate Starts for Klodlith_44:

(6, 31055), (Start: 11 @30926 has 2 MA's), (19, 30875), (42, 30743),

Gene: Koduck_46 Start: 30554, Stop: 30345, Start Num: 12

Candidate Starts for Koduck_46:

(Start: 12 @30554 has 129 MA's), (23, 30473), (24, 30467), (26, 30458), (27, 30437), (32, 30407), (34, 30401), (43, 30353),

Gene: Koko_48 Start: 30516, Stop: 30337, Start Num: 12

Candidate Starts for Koko_48:

(Start: 12 @30516 has 129 MA's), (19, 30471), (30, 30387), (37, 30363),

Gene: LadyBird_49 Start: 32124, Stop: 31936, Start Num: 12

Candidate Starts for LadyBird_49:

(Start: 12 @32124 has 129 MA's), (30, 31974),

Gene: Landor_46 Start: 32938, Stop: 32753, Start Num: 12

Candidate Starts for Landor_46:

(Start: 12 @32938 has 129 MA's), (14, 32905), (30, 32788),

Gene: LastResort_48 Start: 30339, Stop: 30103, Start Num: 12

Candidate Starts for LastResort_48:

(2, 30744), (4, 30660), (5, 30657), (Start: 12 @30339 has 129 MA's), (19, 30276),

Gene: Leviathan_48 Start: 32308, Stop: 32123, Start Num: 12

Candidate Starts for Leviathan_48:

(Start: 12 @32308 has 129 MA's), (30, 32158),

Gene: LilTurb_47 Start: 32141, Stop: 31956, Start Num: 12

Candidate Starts for LilTurb_47:

(Start: 12 @32141 has 129 MA's), (15, 32096), (30, 31991),

Gene: Lilbunny_45 Start: 29618, Stop: 29430, Start Num: 12

Candidate Starts for Lilbunny_45:

(Start: 12 @29618 has 129 MA's), (25, 29534), (26, 29531), (27, 29510), (31, 29486),

Gene: Looper_49 Start: 30316, Stop: 30080, Start Num: 12

Candidate Starts for Looper_49:

(2, 30721), (4, 30637), (5, 30634), (Start: 12 @30316 has 129 MA's), (19, 30253),

Gene: Lucivia_46 Start: 31072, Stop: 30833, Start Num: 12

Candidate Starts for Lucivia_46:

(Start: 10 @31081 has 2 MA's), (Start: 12 @31072 has 129 MA's), (44, 30853), (45, 30838),

Gene: Lucyedi_46 Start: 31168, Stop: 30983, Start Num: 12

Candidate Starts for Lucyedi_46:

(Start: 12 @31168 has 129 MA's), (19, 31111), (23, 31087), (33, 31018),

Gene: MaCh_46 Start: 31010, Stop: 30771, Start Num: 12

Candidate Starts for MaCh_46:

(Start: 10 @31019 has 2 MA's), (Start: 12 @31010 has 129 MA's), (44, 30791), (45, 30776),

Gene: McFly_46 Start: 29823, Stop: 29635, Start Num: 12

Candidate Starts for McFly_46:

(Start: 12 @29823 has 129 MA's), (19, 29778), (26, 29736), (31, 29691),

Gene: MegTheThird_44 Start: 31006, Stop: 30788, Start Num: 11

Candidate Starts for MegTheThird_44:

(Start: 11 @31006 has 2 MA's), (Start: 12 @31003 has 129 MA's), (13, 30991), (35, 30859),

Gene: MiculUcigas_46 Start: 31647, Stop: 31462, Start Num: 12

Candidate Starts for MiculUcigas_46:

(Start: 12 @31647 has 129 MA's), (30, 31497),

Gene: MissWhite_44 Start: 29921, Stop: 29754, Start Num: 12

Candidate Starts for MissWhite_44:

(Start: 12 @29921 has 129 MA's), (19, 29867),

Gene: Mulciber_45 Start: 30574, Stop: 30335, Start Num: 12

Candidate Starts for Mulciber_45:

(Start: 10 @30583 has 2 MA's), (Start: 12 @30574 has 129 MA's), (44, 30355), (45, 30340),

Gene: Munch_46 Start: 31023, Stop: 30784, Start Num: 12

Candidate Starts for Munch_46:

(Start: 10 @31032 has 2 MA's), (Start: 12 @31023 has 129 MA's), (44, 30804), (45, 30789),

Gene: NaSiaTalie_46 Start: 31744, Stop: 31559, Start Num: 12

Candidate Starts for NaSiaTalie_46:

(Start: 12 @31744 has 129 MA's), (30, 31594),

Gene: Nebulosus_48 Start: 30335, Stop: 30099, Start Num: 12

Candidate Starts for Nebulosus_48:

(2, 30740), (4, 30656), (5, 30653), (Start: 12 @30335 has 129 MA's), (19, 30272),

Gene: Nedarya_44 Start: 29716, Stop: 29513, Start Num: 12

Candidate Starts for Nedarya_44:

(Start: 12 @29716 has 129 MA's),

Gene: Neeharika16_46 Start: 29834, Stop: 29646, Start Num: 12

Candidate Starts for Neeharika16_46:

(Start: 12 @29834 has 129 MA's), (25, 29750), (26, 29747), (27, 29726), (31, 29702),

Gene: Newrala_46 Start: 29834, Stop: 29646, Start Num: 12

Candidate Starts for Newrala_46:

(Start: 12 @29834 has 129 MA's), (25, 29750), (26, 29747), (27, 29726), (31, 29702),

Gene: Orange_45 Start: 30572, Stop: 30333, Start Num: 12

Candidate Starts for Orange_45:

(Start: 10 @30581 has 2 MA's), (Start: 12 @30572 has 129 MA's), (44, 30353), (45, 30338),

Gene: PainterBoy_46 Start: 31104, Stop: 30919, Start Num: 12
Candidate Starts for PainterBoy_46:
(Start: 12 @31104 has 129 MA's), (19, 31047), (23, 31023), (33, 30954),

Gene: Petersenfast_45 Start: 30579, Stop: 30340, Start Num: 12
Candidate Starts for Petersenfast_45:
(Start: 10 @30588 has 2 MA's), (Start: 12 @30579 has 129 MA's), (44, 30360), (45, 30345),

Gene: Ph8s_47 Start: 30743, Stop: 30534, Start Num: 12
Candidate Starts for Ph8s_47:
(6, 30878), (Start: 12 @30743 has 129 MA's), (23, 30662), (24, 30656), (26, 30647), (34, 30590), (41, 30560), (43, 30542),

Gene: Piro94_46 Start: 32109, Stop: 31924, Start Num: 12
Candidate Starts for Piro94_46:
(3, 32478), (Start: 12 @32109 has 129 MA's), (15, 32064), (30, 31959),

Gene: Pmask_46 Start: 29835, Stop: 29647, Start Num: 12
Candidate Starts for Pmask_46:
(Start: 12 @29835 has 129 MA's), (25, 29751), (26, 29748), (27, 29727), (31, 29703),

Gene: Polyphemus_47 Start: 29978, Stop: 29790, Start Num: 12
Candidate Starts for Polyphemus_47:
(Start: 12 @29978 has 129 MA's), (26, 29891), (27, 29870), (31, 29846),

Gene: Priamo_48 Start: 30135, Stop: 29947, Start Num: 12
Candidate Starts for Priamo_48:
(7, 30213), (Start: 12 @30135 has 129 MA's), (25, 30051), (26, 30048), (27, 30027), (31, 30003),

Gene: Pukovnik_45 Start: 32528, Stop: 32343, Start Num: 12
Candidate Starts for Pukovnik_45:
(Start: 12 @32528 has 129 MA's),

Gene: Ravana_50 Start: 30946, Stop: 30728, Start Num: 12
Candidate Starts for Ravana_50:
(2, 31333), (Start: 12 @30946 has 129 MA's),

Gene: ReMo_48 Start: 30336, Stop: 30100, Start Num: 12
Candidate Starts for ReMo_48:
(2, 30741), (4, 30657), (5, 30654), (Start: 12 @30336 has 129 MA's), (19, 30273),

Gene: Rifter_48 Start: 29940, Stop: 29761, Start Num: 12
Candidate Starts for Rifter_48:
(Start: 12 @29940 has 129 MA's), (19, 29895), (26, 29853), (30, 29811), (37, 29787),

Gene: Roksolana_47 Start: 29871, Stop: 29683, Start Num: 12
Candidate Starts for Roksolana_47:
(Start: 12 @29871 has 129 MA's), (25, 29787), (26, 29784), (27, 29763), (31, 29739),

Gene: Sham4_45 Start: 30587, Stop: 30339, Start Num: 10
Candidate Starts for Sham4_45:
(Start: 10 @30587 has 2 MA's), (Start: 12 @30578 has 129 MA's), (44, 30359), (45, 30344),

Gene: ShayRa_50 Start: 30540, Stop: 30304, Start Num: 12

Candidate Starts for ShayRa_50:

(2, 30945), (4, 30861), (5, 30858), (Start: 12 @30540 has 129 MA's), (19, 30477),

Gene: SheaKeira_44 Start: 31011, Stop: 30799, Start Num: 12

Candidate Starts for SheaKeira_44:

(6, 31143), (Start: 11 @31014 has 2 MA's), (Start: 12 @31011 has 129 MA's), (13, 30999), (19, 30960), (31, 30879), (35, 30867),

Gene: Sknot_46 Start: 31747, Stop: 31562, Start Num: 12

Candidate Starts for Sknot_46:

(Start: 12 @31747 has 129 MA's), (30, 31597),

Gene: Smeagan_49 Start: 32395, Stop: 32210, Start Num: 12

Candidate Starts for Smeagan_49:

(Start: 12 @32395 has 129 MA's), (15, 32350), (30, 32245),

Gene: SmellyB_46 Start: 29823, Stop: 29635, Start Num: 12

Candidate Starts for SmellyB_46:

(Start: 12 @29823 has 129 MA's), (19, 29778), (26, 29736), (31, 29691),

Gene: Snape_45 Start: 30576, Stop: 30337, Start Num: 12

Candidate Starts for Snape_45:

(Start: 10 @30585 has 2 MA's), (Start: 12 @30576 has 129 MA's), (44, 30357), (45, 30342),

Gene: Soups_49 Start: 30539, Stop: 30303, Start Num: 12

Candidate Starts for Soups_49:

(2, 30944), (4, 30860), (5, 30857), (Start: 12 @30539 has 129 MA's), (19, 30476),

Gene: Sunhee_49 Start: 31730, Stop: 31551, Start Num: 12

Candidate Starts for Sunhee_49:

(Start: 12 @31730 has 129 MA's),

Gene: SuperAwesome_46 Start: 29834, Stop: 29646, Start Num: 12

Candidate Starts for SuperAwesome_46:

(Start: 12 @29834 has 129 MA's), (25, 29750), (26, 29747), (27, 29726), (31, 29702),

Gene: SwirlSquare_47 Start: 30451, Stop: 30257, Start Num: 12

Candidate Starts for SwirlSquare_47:

(Start: 12 @30451 has 129 MA's), (26, 30358), (30, 30319), (39, 30292), (42, 30265),

Gene: TarsusIV_44 Start: 31542, Stop: 31357, Start Num: 12

Candidate Starts for TarsusIV_44:

(Start: 12 @31542 has 129 MA's),

Gene: Temprado_47 Start: 29987, Stop: 29799, Start Num: 12

Candidate Starts for Temprado_47:

(Start: 12 @29987 has 129 MA's), (26, 29900), (27, 29879), (31, 29855),

Gene: Terrific_49 Start: 32101, Stop: 31916, Start Num: 12

Candidate Starts for Terrific_49:

(Start: 12 @32101 has 129 MA's), (30, 31951),

Gene: ToneTone_43 Start: 29550, Stop: 29362, Start Num: 12

Candidate Starts for ToneTone_43:

(Start: 12 @29550 has 129 MA's), (25, 29466), (26, 29463), (27, 29442), (31, 29418),

Gene: Trooper_47 Start: 32104, Stop: 31925, Start Num: 12

Candidate Starts for Trooper_47:

(Start: 12 @32104 has 129 MA's), (15, 32059),

Gene: Tucker_47 Start: 29988, Stop: 29800, Start Num: 12

Candidate Starts for Tucker_47:

(Start: 12 @29988 has 129 MA's), (25, 29904), (26, 29901), (27, 29880), (31, 29856),

Gene: Turbido_47 Start: 32138, Stop: 31950, Start Num: 12

Candidate Starts for Turbido_47:

(Start: 12 @32138 has 129 MA's), (30, 31988),

Gene: Updawg_47 Start: 31988, Stop: 31803, Start Num: 12

Candidate Starts for Updawg_47:

(Start: 12 @31988 has 129 MA's), (30, 31838),

Gene: VA6_45 Start: 31667, Stop: 31479, Start Num: 12

Candidate Starts for VA6_45:

(Start: 12 @31667 has 129 MA's), (30, 31517),

Gene: VohminGhazi_46 Start: 29824, Stop: 29636, Start Num: 12

Candidate Starts for VohminGhazi_46:

(Start: 12 @29824 has 129 MA's), (19, 29779), (26, 29737), (31, 29692),

Gene: Whabigail7_47 Start: 32123, Stop: 31938, Start Num: 12

Candidate Starts for Whabigail7_47:

(Start: 12 @32123 has 129 MA's), (15, 32078), (30, 31973),

Gene: WideWale_47 Start: 31988, Stop: 31803, Start Num: 12

Candidate Starts for WideWale_47:

(Start: 12 @31988 has 129 MA's), (30, 31838),

Gene: Wiks_45 Start: 29618, Stop: 29430, Start Num: 12

Candidate Starts for Wiks_45:

(Start: 12 @29618 has 129 MA's), (25, 29534), (26, 29531), (27, 29510), (31, 29486),

Gene: Wolpertinger_44 Start: 30579, Stop: 30340, Start Num: 12

Candidate Starts for Wolpertinger_44:

(Start: 10 @30588 has 2 MA's), (Start: 12 @30579 has 129 MA's), (44, 30360), (45, 30345),

Gene: WunderPhul_46 Start: 29616, Stop: 29428, Start Num: 12

Candidate Starts for WunderPhul_46:

(Start: 12 @29616 has 129 MA's), (25, 29532), (26, 29529), (27, 29508), (31, 29484),

Gene: Yokurt_46 Start: 29618, Stop: 29430, Start Num: 12

Candidate Starts for Yokurt_46:

(Start: 12 @29618 has 129 MA's), (25, 29534), (26, 29531), (27, 29510), (31, 29486),

Gene: Zaka_46 Start: 29618, Stop: 29430, Start Num: 12

Candidate Starts for Zaka_46:

(Start: 12 @29618 has 129 MA's), (25, 29534), (26, 29531), (27, 29510), (31, 29486),

Gene: Zulu_47 Start: 29969, Stop: 29781, Start Num: 12

Candidate Starts for Zulu_47:

(Start: 12 @29969 has 129 MA's), (25, 29885), (26, 29882), (27, 29861), (31, 29837),