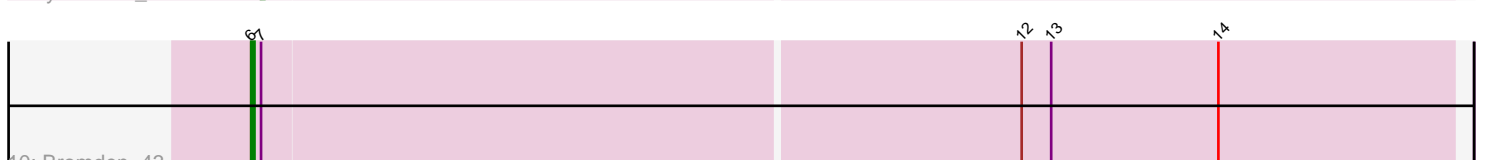
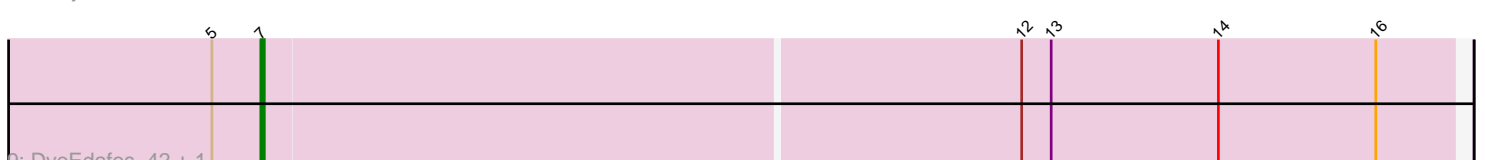
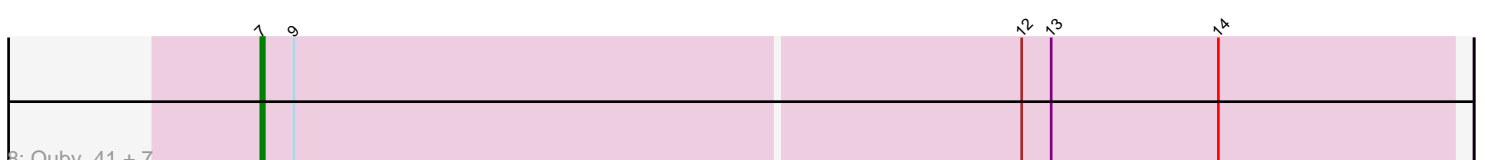
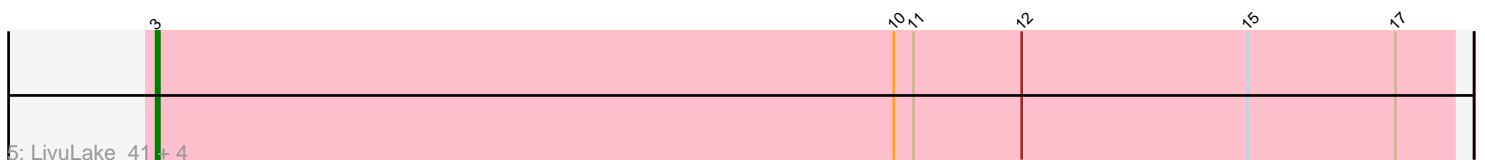
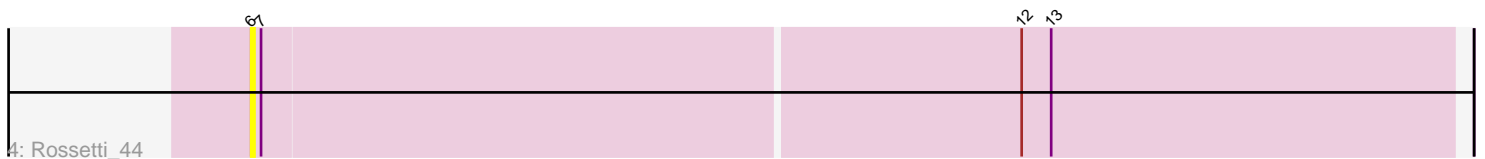
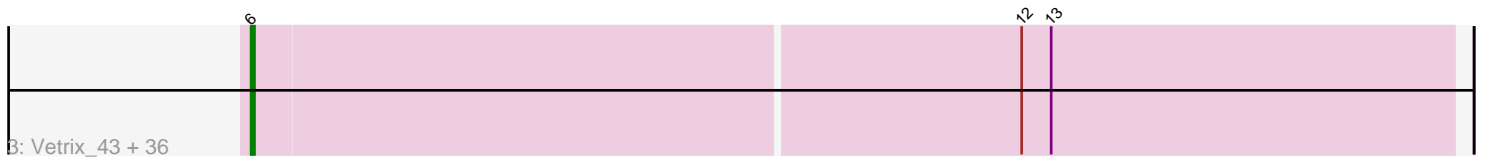
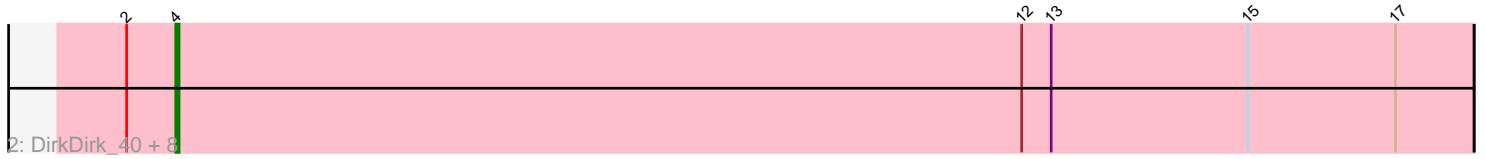
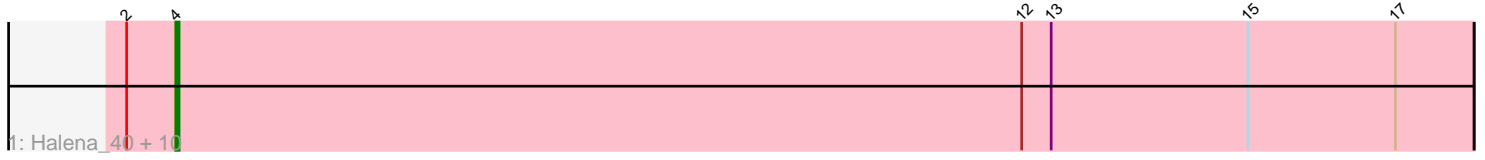


Pham 224480



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 224480 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224480 has 93 members, 26 are drafts.

Phages represented in each track:

- Track 1 : Halena_40, MAckerman_41, CicholasNage_41, Calm_41, Wyatt2_41, Rose5_40, Silverleaf_40, Zaria_41, AvadaKedavra_41, Acquire49_41, Tyson_40
- Track 2 : DirkDirk_40, Wamburgxpress_41, JoeDirt_40, OhShagHennessy_40, Appletree2_40, LeBron_41, UPIE_41, Poochiewood_40, Enceladus_40
- Track 3 : Vetrix_43, Lewan_43, Nicholasp3_43, GuuelaD_43, Sarshaun_43, Kahlid_43, Hafay_43, Winky_43, Crossroads_43, Breezona_43, Soap141_43, Claus_43, Loadrie_43, SoJulia_44, Bazzle_43, Gabriela_43, Itos_42, Finemlucis_43, DHan_44, BobsGarage_43, ZhongYanYuan_41, Gardann_43, Netyap_43, Wilder_43, MkaliMitinis3_43, Rumpelstiltskin_43, Archie_43, Underpass_43, BigCheese_43, Faith1_43, Wigglewiggle_43, Miley16_43, Zakai_43, LilDestine_43, DanBing_42, DrSeegs_43, Baoshan_41
- Track 4 : Rossetti_44
- Track 5 : LiyuLake_41, Krypton555_41, Whirlwind_42, Ellson_41, BourbonZero_40
- Track 6 : Lolly9_41, MsGreen_41, Jobypre_41, MiniLon_41, Kingsolomon_41, Samty_41, Clautastrophe_41, Bellis_41, Red305_41, Snenia_41, Finnry_41, TriFive_41, DuncansLeg_41, MiniMac_41, KirDoubleO7_39, Jubie_41, Nicholas_41, Moostard_41
- Track 7 : Lumos_41
- Track 8 : Quby_41, Douzhi_40, Chaser_40, PYPDinur_40, FarmResident_41, BrainDrainer_41, Sheng711_41, Douge_40
- Track 9 : DyoEdafos_42, Kropertea_40
- Track 10 : Bromden_43

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

The start number called the most often in the published annotations is 6, it was called in 28 of the 67 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archie_43, Baoshan_41, Bazzle_43, BigCheese_43, BobsGarage_43, Breezona_43, Bromden_43, Claus_43, Crossroads_43, DHan_44, DanBing_42, DrSeegs_43, Faith1_43, Finemlucis_43, Gabriela_43, Gardann_43, GuuelaD_43, Hafay_43, Itos_42, Kahlid_43, Lewan_43, LilDestine_43, Loadrie_43, Miley16_43, MkaliMitinis3_43, Netyap_43, Nicholasp3_43, Rossetti_44, Rumpelstiltskin_43,

Sarshaun_43, SoJulia_44, Soap141_43, Underpass_43, Vetrrix_43, Wigglewiggle_43, Wilder_43, Winky_43, Zakai_43, ZhongYanYuan_41,

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

-

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

- Acquire49_41, Appletree2_40, AvadaKedavra_41, Bellis_41, BourbonZero_40, BrainDrainer_41, Calm_41, Chaser_40, CicholasNage_41, Clautastrophe_41, DirkDirk_40, Douge_40, Douzhi_40, DuncansLeg_41, DyoEdafos_42, Ellson_41, Enceladus_40, FarmResident_41, Finnry_41, Halena_40, Jobypre_41, JoeDirt_40, Jubie_41, Kingsolomon_41, KirDoubleO7_39, Kropertea_40, Krypton555_41, LeBron_41, LiyuLake_41, Lolly9_41, Lumos_41, MAckerman_41, MiniLon_41, MiniMac_41, Moostard_41, MsGreen_41, Nicholas_41, OhShagHennessy_40, PYPDinur_40, Poochiewood_40, Quby_41, Red305_41, Rose5_40, Samty_41, Sheng711_41, Silverleaf_40, Snenia_41, TriFive_41, Tyson_40, UPIE_41, Wamburgrxpress_41, Whirlwind_42, Wyatt2_41, Zaria_41,

Summary by start number:

Start 3:

- Found in 24 of 93 (25.8%) of genes in pham
- Manual Annotations of this start: 17 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bellis_41 (L3), BourbonZero_40 (L3), Clautastrophe_41 (L3), DuncansLeg_41 (L3), Ellson_41 (L3), Finnry_41 (L3), Jobypre_41 (L3), Jubie_41 (L3), Kingsolomon_41 (L3), KirDoubleO7_39 (L3), Krypton555_41 (L3), LiyuLake_41 (L3), Lolly9_41 (L3), Lumos_41 (L3), MiniLon_41 (L3), MiniMac_41 (L3), Moostard_41 (L3), MsGreen_41 (L3), Nicholas_41 (L3), Red305_41 (L3), Samty_41 (L3), Snenia_41 (L3), TriFive_41 (L3), Whirlwind_42 (L3),

Start 4:

- Found in 20 of 93 (21.5%) of genes in pham
- Manual Annotations of this start: 19 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_41 (L1), Appletree2_40 (L1), AvadaKedavra_41 (L1), Calm_41 (L1), CicholasNage_41 (L1), DirkDirk_40 (L1), Enceladus_40 (L1), Halena_40 (L1), JoeDirt_40 (L1), LeBron_41 (L1), MAckerman_41 (L1), OhShagHennessy_40 (L1), Poochiewood_40 (L1), Rose5_40 (L1), Silverleaf_40 (L1), Tyson_40 (L1), UPIE_41 (L1), Wamburgrxpress_41 (L1), Wyatt2_41 (L1), Zaria_41 (L1),

Start 6:

- Found in 39 of 93 (41.9%) of genes in pham
- Manual Annotations of this start: 28 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archie_43 (L2), Baoshan_41 (L2), Bazzle_43 (L2), BigCheese_43 (L2), BobsGarage_43 (L2), Breezona_43 (L2), Bromden_43 (L4), Claus_43 (L2), Crossroads_43 (L2), DHan_44 (L2), DanBing_42 (L2), DrSeegs_43 (L2), Faith1_43 (L2), Finemlucis_43 (L2), Gabriela_43 (L2), Gardann_43 (L2), GuuelaD_43 (L2), Hafay_43 (L2), Itos_42 (L2), Kahlid_43 (L2), Lewan_43 (L2), LilDestine_43 (L2), Loadrie_43 (L2), Miley16_43 (L2), MkaliMitinis3_43 (L2), Netyap_43 (L2), Nicholasp3_43 (L2), Rossetti_44 (L2),

Rumpelstiltskin_43 (L2), Sarshaun_43 (L2), SoJulia_44 (L2), Soap141_43 (L2), Underpass_43 (L2), Vetrix_43 (L2), Wigglewobble_43 (L2), Wilder_43 (L2), Winky_43 (L2), Zakai_43 (L2), ZhongYanYuan_41 (L2),

Start 7:

- Found in 12 of 93 (12.9%) of genes in pham
- Manual Annotations of this start: 3 of 67
- Called 83.3% of time when present
- Phage (with cluster) where this start called: BrainDrainer_41 (L4), Chaser_40 (L4), Douge_40 (L4), Douzhi_40 (L4), DyoEdafos_42 (L4), FarmResident_41 (L4), Kropertea_40 (L4), PYPDinur_40 (L4), Quby_41 (L4), Sheng711_41 (L4),

Summary by clusters:

There are 4 clusters represented in this pham: L4, L2, L3, L1,

Info for manual annotations of cluster L1:

- Start number 4 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 6 was manually annotated 27 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 3 was manually annotated 17 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 6 was manually annotated 1 time for cluster L4.
- Start number 7 was manually annotated 3 times for cluster L4.

Gene Information:

Gene: Acquire49_41 Start: 33548, Stop: 33943, Start Num: 4

Candidate Starts for Acquire49_41:

(2, 33533), (Start: 4 @33548 has 19 MA's), (12, 33806), (13, 33815), (15, 33875), (17, 33920),

Gene: Appletree2_40 Start: 33475, Stop: 33870, Start Num: 4

Candidate Starts for Appletree2_40:

(2, 33460), (Start: 4 @33475 has 19 MA's), (12, 33733), (13, 33742), (15, 33802), (17, 33847),

Gene: Archie_43 Start: 35110, Stop: 35472, Start Num: 6

Candidate Starts for Archie_43:

(Start: 6 @35110 has 28 MA's), (12, 35341), (13, 35350),

Gene: AvadaKedavra_41 Start: 33557, Stop: 33952, Start Num: 4

Candidate Starts for AvadaKedavra_41:

(2, 33542), (Start: 4 @33557 has 19 MA's), (12, 33815), (13, 33824), (15, 33884), (17, 33929),

Gene: Baoshan_41 Start: 34767, Stop: 35129, Start Num: 6

Candidate Starts for Baoshan_41:

(Start: 6 @34767 has 28 MA's), (12, 34998), (13, 35007),

Gene: Bazzle_43 Start: 35142, Stop: 35504, Start Num: 6

Candidate Starts for Bazzle_43:

(Start: 6 @35142 has 28 MA's), (12, 35373), (13, 35382),

Gene: Bellis_41 Start: 35165, Stop: 35560, Start Num: 3

Candidate Starts for Bellis_41:

(Start: 3 @35165 has 17 MA's), (8, 35201), (9, 35207), (10, 35390), (11, 35396), (12, 35429), (15, 35498), (17, 35543),

Gene: BigCheese_43 Start: 34906, Stop: 35268, Start Num: 6

Candidate Starts for BigCheese_43:

(Start: 6 @34906 has 28 MA's), (12, 35137), (13, 35146),

Gene: BobsGarage_43 Start: 34906, Stop: 35268, Start Num: 6

Candidate Starts for BobsGarage_43:

(Start: 6 @34906 has 28 MA's), (12, 35137), (13, 35146),

Gene: BourbonZero_40 Start: 35147, Stop: 35542, Start Num: 3

Candidate Starts for BourbonZero_40:

(Start: 3 @35147 has 17 MA's), (10, 35372), (11, 35378), (12, 35411), (15, 35480), (17, 35525),

Gene: BrainDrainer_41 Start: 33839, Stop: 34198, Start Num: 7

Candidate Starts for BrainDrainer_41:

(Start: 7 @33839 has 3 MA's), (9, 33848), (12, 34067), (13, 34076), (14, 34127),

Gene: Breezona_43 Start: 34906, Stop: 35268, Start Num: 6

Candidate Starts for Breezona_43:

(Start: 6 @34906 has 28 MA's), (12, 35137), (13, 35146),

Gene: Bromden_43 Start: 34662, Stop: 35024, Start Num: 6

Candidate Starts for Bromden_43:

(Start: 6 @34662 has 28 MA's), (Start: 7 @34665 has 3 MA's), (12, 34893), (13, 34902), (14, 34953),

Gene: Calm_41 Start: 33563, Stop: 33958, Start Num: 4

Candidate Starts for Calm_41:

(2, 33548), (Start: 4 @33563 has 19 MA's), (12, 33821), (13, 33830), (15, 33890), (17, 33935),

Gene: Chaser_40 Start: 33656, Stop: 34015, Start Num: 7

Candidate Starts for Chaser_40:

(Start: 7 @33656 has 3 MA's), (9, 33665), (12, 33884), (13, 33893), (14, 33944),

Gene: CicholasNage_41 Start: 33584, Stop: 33979, Start Num: 4

Candidate Starts for CicholasNage_41:

(2, 33569), (Start: 4 @33584 has 19 MA's), (12, 33842), (13, 33851), (15, 33911), (17, 33956),

Gene: Claus_43 Start: 34925, Stop: 35287, Start Num: 6

Candidate Starts for Claus_43:

(Start: 6 @34925 has 28 MA's), (12, 35156), (13, 35165),

Gene: Clautastrophe_41 Start: 35163, Stop: 35558, Start Num: 3

Candidate Starts for Clautastrophe_41:

(Start: 3 @35163 has 17 MA's), (8, 35199), (9, 35205), (10, 35388), (11, 35394), (12, 35427), (15, 35496), (17, 35541),

Gene: Crossroads_43 Start: 34908, Stop: 35270, Start Num: 6

Candidate Starts for Crossroads_43:

(Start: 6 @34908 has 28 MA's), (12, 35139), (13, 35148),

Gene: DHan_44 Start: 34866, Stop: 35228, Start Num: 6

Candidate Starts for DHan_44:

(Start: 6 @34866 has 28 MA's), (12, 35097), (13, 35106),

Gene: DanBing_42 Start: 34758, Stop: 35120, Start Num: 6

Candidate Starts for DanBing_42:

(Start: 6 @34758 has 28 MA's), (12, 34989), (13, 34998),

Gene: DirkDirk_40 Start: 33535, Stop: 33930, Start Num: 4

Candidate Starts for DirkDirk_40:

(2, 33520), (Start: 4 @33535 has 19 MA's), (12, 33793), (13, 33802), (15, 33862), (17, 33907),

Gene: Douge_40 Start: 33594, Stop: 33953, Start Num: 7

Candidate Starts for Douge_40:

(Start: 7 @33594 has 3 MA's), (9, 33603), (12, 33822), (13, 33831), (14, 33882),

Gene: Douzhi_40 Start: 33700, Stop: 34059, Start Num: 7

Candidate Starts for Douzhi_40:

(Start: 7 @33700 has 3 MA's), (9, 33709), (12, 33928), (13, 33937), (14, 33988),

Gene: DrSeegs_43 Start: 34906, Stop: 35268, Start Num: 6

Candidate Starts for DrSeegs_43:

(Start: 6 @34906 has 28 MA's), (12, 35137), (13, 35146),

Gene: DuncansLeg_41 Start: 35184, Stop: 35579, Start Num: 3

Candidate Starts for DuncansLeg_41:

(Start: 3 @35184 has 17 MA's), (8, 35220), (9, 35226), (10, 35409), (11, 35415), (12, 35448), (15, 35517), (17, 35562),

Gene: DyoEdafos_42 Start: 33916, Stop: 34275, Start Num: 7

Candidate Starts for DyoEdafos_42:

(5, 33901), (Start: 7 @33916 has 3 MA's), (12, 34144), (13, 34153), (14, 34204), (16, 34252),

Gene: Ellson_41 Start: 35160, Stop: 35555, Start Num: 3

Candidate Starts for Ellson_41:

(Start: 3 @35160 has 17 MA's), (10, 35385), (11, 35391), (12, 35424), (15, 35493), (17, 35538),

Gene: Enceladus_40 Start: 33518, Stop: 33913, Start Num: 4

Candidate Starts for Enceladus_40:

(2, 33503), (Start: 4 @33518 has 19 MA's), (12, 33776), (13, 33785), (15, 33845), (17, 33890),

Gene: Faith1_43 Start: 34906, Stop: 35268, Start Num: 6

Candidate Starts for Faith1_43:

(Start: 6 @34906 has 28 MA's), (12, 35137), (13, 35146),

Gene: FarmResident_41 Start: 33638, Stop: 33997, Start Num: 7

Candidate Starts for FarmResident_41:

(Start: 7 @33638 has 3 MA's), (9, 33647), (12, 33866), (13, 33875), (14, 33926),

Gene: Finemlucis_43 Start: 35182, Stop: 35544, Start Num: 6

Candidate Starts for Finemlucis_43:

(Start: 6 @35182 has 28 MA's), (12, 35413), (13, 35422),

Gene: Finnry_41 Start: 35166, Stop: 35561, Start Num: 3

Candidate Starts for Finnry_41:

(Start: 3 @35166 has 17 MA's), (8, 35202), (9, 35208), (10, 35391), (11, 35397), (12, 35430), (15, 35499), (17, 35544),

Gene: Gabriela_43 Start: 35168, Stop: 35530, Start Num: 6

Candidate Starts for Gabriela_43:

(Start: 6 @35168 has 28 MA's), (12, 35399), (13, 35408),

Gene: Gardann_43 Start: 34907, Stop: 35269, Start Num: 6

Candidate Starts for Gardann_43:

(Start: 6 @34907 has 28 MA's), (12, 35138), (13, 35147),

Gene: GuuelaD_43 Start: 34945, Stop: 35307, Start Num: 6

Candidate Starts for GuuelaD_43:

(Start: 6 @34945 has 28 MA's), (12, 35176), (13, 35185),

Gene: Hafay_43 Start: 34940, Stop: 35302, Start Num: 6

Candidate Starts for Hafay_43:

(Start: 6 @34940 has 28 MA's), (12, 35171), (13, 35180),

Gene: Halena_40 Start: 33559, Stop: 33954, Start Num: 4

Candidate Starts for Halena_40:

(2, 33544), (Start: 4 @33559 has 19 MA's), (12, 33817), (13, 33826), (15, 33886), (17, 33931),

Gene: Itos_42 Start: 33812, Stop: 34174, Start Num: 6

Candidate Starts for Itos_42:

(Start: 6 @33812 has 28 MA's), (12, 34043), (13, 34052),

Gene: Jobypre_41 Start: 35163, Stop: 35558, Start Num: 3

Candidate Starts for Jobypre_41:

(Start: 3 @35163 has 17 MA's), (8, 35199), (9, 35205), (10, 35388), (11, 35394), (12, 35427), (15, 35496), (17, 35541),

Gene: JoeDirt_40 Start: 33516, Stop: 33911, Start Num: 4

Candidate Starts for JoeDirt_40:

(2, 33501), (Start: 4 @33516 has 19 MA's), (12, 33774), (13, 33783), (15, 33843), (17, 33888),

Gene: Jubie_41 Start: 35164, Stop: 35559, Start Num: 3

Candidate Starts for Jubie_41:

(Start: 3 @35164 has 17 MA's), (8, 35200), (9, 35206), (10, 35389), (11, 35395), (12, 35428), (15, 35497), (17, 35542),

Gene: Kahlid_43 Start: 34912, Stop: 35274, Start Num: 6

Candidate Starts for Kahlid_43:

(Start: 6 @34912 has 28 MA's), (12, 35143), (13, 35152),

Gene: Kingsolomon_41 Start: 35163, Stop: 35558, Start Num: 3

Candidate Starts for Kingsolomon_41:

(Start: 3 @35163 has 17 MA's), (8, 35199), (9, 35205), (10, 35388), (11, 35394), (12, 35427), (15, 35496), (17, 35541),

Gene: KirDoubleO7_39 Start: 35188, Stop: 35583, Start Num: 3

Candidate Starts for KirDoubleO7_39:

(Start: 3 @35188 has 17 MA's), (8, 35224), (9, 35230), (10, 35413), (11, 35419), (12, 35452), (15, 35521), (17, 35566),

Gene: Kropertea_40 Start: 33739, Stop: 34098, Start Num: 7

Candidate Starts for Kropertea_40:

(5, 33724), (Start: 7 @33739 has 3 MA's), (12, 33967), (13, 33976), (14, 34027), (16, 34075),

Gene: Krypton555_41 Start: 35080, Stop: 35475, Start Num: 3

Candidate Starts for Krypton555_41:

(Start: 3 @35080 has 17 MA's), (10, 35305), (11, 35311), (12, 35344), (15, 35413), (17, 35458),

Gene: LeBron_41 Start: 33560, Stop: 33955, Start Num: 4

Candidate Starts for LeBron_41:

(2, 33545), (Start: 4 @33560 has 19 MA's), (12, 33818), (13, 33827), (15, 33887), (17, 33932),

Gene: Lewan_43 Start: 34899, Stop: 35261, Start Num: 6

Candidate Starts for Lewan_43:

(Start: 6 @34899 has 28 MA's), (12, 35130), (13, 35139),

Gene: LilDestine_43 Start: 34904, Stop: 35266, Start Num: 6

Candidate Starts for LilDestine_43:

(Start: 6 @34904 has 28 MA's), (12, 35135), (13, 35144),

Gene: LiyuLake_41 Start: 35150, Stop: 35545, Start Num: 3

Candidate Starts for LiyuLake_41:

(Start: 3 @35150 has 17 MA's), (10, 35375), (11, 35381), (12, 35414), (15, 35483), (17, 35528),

Gene: Loadrie_43 Start: 34938, Stop: 35300, Start Num: 6

Candidate Starts for Loadrie_43:

(Start: 6 @34938 has 28 MA's), (12, 35169), (13, 35178),

Gene: Lolly9_41 Start: 34974, Stop: 35369, Start Num: 3

Candidate Starts for Lolly9_41:

(Start: 3 @34974 has 17 MA's), (8, 35010), (9, 35016), (10, 35199), (11, 35205), (12, 35238), (15, 35307), (17, 35352),

Gene: Lumos_41 Start: 35160, Stop: 35555, Start Num: 3

Candidate Starts for Lumos_41:

(1, 35145), (Start: 3 @35160 has 17 MA's), (8, 35196), (9, 35202), (10, 35385), (11, 35391), (12, 35424), (15, 35493), (17, 35538),

Gene: MAckerman_41 Start: 33553, Stop: 33948, Start Num: 4

Candidate Starts for MAckerman_41:

(2, 33538), (Start: 4 @33553 has 19 MA's), (12, 33811), (13, 33820), (15, 33880), (17, 33925),

Gene: Miley16_43 Start: 34906, Stop: 35268, Start Num: 6

Candidate Starts for Miley16_43:

(Start: 6 @34906 has 28 MA's), (12, 35137), (13, 35146),

Gene: MiniLon_41 Start: 34975, Stop: 35370, Start Num: 3

Candidate Starts for MiniLon_41:

(Start: 3 @34975 has 17 MA's), (8, 35011), (9, 35017), (10, 35200), (11, 35206), (12, 35239), (15, 35308), (17, 35353),

Gene: MiniMac_41 Start: 34972, Stop: 35367, Start Num: 3

Candidate Starts for MiniMac_41:

(Start: 3 @34972 has 17 MA's), (8, 35008), (9, 35014), (10, 35197), (11, 35203), (12, 35236), (15, 35305), (17, 35350),

Gene: MkaliMitinis3_43 Start: 34908, Stop: 35270, Start Num: 6

Candidate Starts for MkaliMitinis3_43:

(Start: 6 @34908 has 28 MA's), (12, 35139), (13, 35148),

Gene: Moostard_41 Start: 35165, Stop: 35560, Start Num: 3

Candidate Starts for Moostard_41:

(Start: 3 @35165 has 17 MA's), (8, 35201), (9, 35207), (10, 35390), (11, 35396), (12, 35429), (15, 35498), (17, 35543),

Gene: MsGreen_41 Start: 35163, Stop: 35558, Start Num: 3

Candidate Starts for MsGreen_41:

(Start: 3 @35163 has 17 MA's), (8, 35199), (9, 35205), (10, 35388), (11, 35394), (12, 35427), (15, 35496), (17, 35541),

Gene: Netyap_43 Start: 34906, Stop: 35268, Start Num: 6

Candidate Starts for Netyap_43:

(Start: 6 @34906 has 28 MA's), (12, 35137), (13, 35146),

Gene: Nicholas_41 Start: 35163, Stop: 35558, Start Num: 3

Candidate Starts for Nicholas_41:

(Start: 3 @35163 has 17 MA's), (8, 35199), (9, 35205), (10, 35388), (11, 35394), (12, 35427), (15, 35496), (17, 35541),

Gene: Nicholasp3_43 Start: 34907, Stop: 35269, Start Num: 6

Candidate Starts for Nicholasp3_43:

(Start: 6 @34907 has 28 MA's), (12, 35138), (13, 35147),

Gene: OhShagHennessy_40 Start: 33506, Stop: 33901, Start Num: 4

Candidate Starts for OhShagHennessy_40:

(2, 33491), (Start: 4 @33506 has 19 MA's), (12, 33764), (13, 33773), (15, 33833), (17, 33878),

Gene: PYPDinur_40 Start: 33700, Stop: 34059, Start Num: 7

Candidate Starts for PYPDinur_40:

(Start: 7 @33700 has 3 MA's), (9, 33709), (12, 33928), (13, 33937), (14, 33988),

Gene: Pochiewood_40 Start: 33534, Stop: 33929, Start Num: 4

Candidate Starts for Pochiewood_40:

(2, 33519), (Start: 4 @33534 has 19 MA's), (12, 33792), (13, 33801), (15, 33861), (17, 33906),

Gene: Quby_41 Start: 33594, Stop: 33953, Start Num: 7

Candidate Starts for Quby_41:

(Start: 7 @33594 has 3 MA's), (9, 33603), (12, 33822), (13, 33831), (14, 33882),

Gene: Red305_41 Start: 35163, Stop: 35558, Start Num: 3

Candidate Starts for Red305_41:

(Start: 3 @35163 has 17 MA's), (8, 35199), (9, 35205), (10, 35388), (11, 35394), (12, 35427), (15, 35496), (17, 35541),

Gene: Rose5_40 Start: 33548, Stop: 33943, Start Num: 4

Candidate Starts for Rose5_40:

(2, 33533), (Start: 4 @33548 has 19 MA's), (12, 33806), (13, 33815), (15, 33875), (17, 33920),

Gene: Rossetti_44 Start: 35454, Stop: 35816, Start Num: 6

Candidate Starts for Rossetti_44:

(Start: 6 @35454 has 28 MA's), (Start: 7 @35457 has 3 MA's), (12, 35685), (13, 35694),

Gene: Rumpelstiltskin_43 Start: 35173, Stop: 35535, Start Num: 6

Candidate Starts for Rumpelstiltskin_43:

(Start: 6 @35173 has 28 MA's), (12, 35404), (13, 35413),

Gene: Samty_41 Start: 35164, Stop: 35559, Start Num: 3

Candidate Starts for Samty_41:

(Start: 3 @35164 has 17 MA's), (8, 35200), (9, 35206), (10, 35389), (11, 35395), (12, 35428), (15, 35497), (17, 35542),

Gene: Sarshaun_43 Start: 34940, Stop: 35302, Start Num: 6

Candidate Starts for Sarshaun_43:

(Start: 6 @34940 has 28 MA's), (12, 35171), (13, 35180),

Gene: Sheng711_41 Start: 33700, Stop: 34059, Start Num: 7

Candidate Starts for Sheng711_41:

(Start: 7 @33700 has 3 MA's), (9, 33709), (12, 33928), (13, 33937), (14, 33988),

Gene: Silverleaf_40 Start: 33548, Stop: 33943, Start Num: 4

Candidate Starts for Silverleaf_40:

(2, 33533), (Start: 4 @33548 has 19 MA's), (12, 33806), (13, 33815), (15, 33875), (17, 33920),

Gene: Snenia_41 Start: 35164, Stop: 35559, Start Num: 3

Candidate Starts for Snenia_41:

(Start: 3 @35164 has 17 MA's), (8, 35200), (9, 35206), (10, 35389), (11, 35395), (12, 35428), (15, 35497), (17, 35542),

Gene: SoJulia_44 Start: 35166, Stop: 35528, Start Num: 6

Candidate Starts for SoJulia_44:

(Start: 6 @35166 has 28 MA's), (12, 35397), (13, 35406),

Gene: Soap141_43 Start: 34940, Stop: 35302, Start Num: 6

Candidate Starts for Soap141_43:

(Start: 6 @34940 has 28 MA's), (12, 35171), (13, 35180),

Gene: TriFive_41 Start: 35163, Stop: 35558, Start Num: 3

Candidate Starts for TriFive_41:

(Start: 3 @35163 has 17 MA's), (8, 35199), (9, 35205), (10, 35388), (11, 35394), (12, 35427), (15, 35496), (17, 35541),

Gene: Tyson_40 Start: 33549, Stop: 33944, Start Num: 4

Candidate Starts for Tyson_40:

(2, 33534), (Start: 4 @33549 has 19 MA's), (12, 33807), (13, 33816), (15, 33876), (17, 33921),

Gene: UPIE_41 Start: 33532, Stop: 33927, Start Num: 4

Candidate Starts for UPIE_41:

(2, 33517), (Start: 4 @33532 has 19 MA's), (12, 33790), (13, 33799), (15, 33859), (17, 33904),

Gene: Underpass_43 Start: 34907, Stop: 35269, Start Num: 6

Candidate Starts for Underpass_43:

(Start: 6 @34907 has 28 MA's), (12, 35138), (13, 35147),

Gene: Vetrix_43 Start: 34913, Stop: 35275, Start Num: 6

Candidate Starts for Vetrix_43:

(Start: 6 @34913 has 28 MA's), (12, 35144), (13, 35153),

Gene: Wamburgexpress_41 Start: 33547, Stop: 33942, Start Num: 4

Candidate Starts for Wamburgexpress_41:

(2, 33532), (Start: 4 @33547 has 19 MA's), (12, 33805), (13, 33814), (15, 33874), (17, 33919),

Gene: Whirlwind_42 Start: 34922, Stop: 35317, Start Num: 3

Candidate Starts for Whirlwind_42:

(Start: 3 @34922 has 17 MA's), (10, 35147), (11, 35153), (12, 35186), (15, 35255), (17, 35300),

Gene: Wigglewobble_43 Start: 34939, Stop: 35301, Start Num: 6

Candidate Starts for Wigglewobble_43:

(Start: 6 @34939 has 28 MA's), (12, 35170), (13, 35179),

Gene: Wilder_43 Start: 34912, Stop: 35274, Start Num: 6

Candidate Starts for Wilder_43:

(Start: 6 @34912 has 28 MA's), (12, 35143), (13, 35152),

Gene: Winky_43 Start: 34906, Stop: 35268, Start Num: 6

Candidate Starts for Winky_43:

(Start: 6 @34906 has 28 MA's), (12, 35137), (13, 35146),

Gene: Wyatt2_41 Start: 33548, Stop: 33943, Start Num: 4

Candidate Starts for Wyatt2_41:

(2, 33533), (Start: 4 @33548 has 19 MA's), (12, 33806), (13, 33815), (15, 33875), (17, 33920),

Gene: Zakai_43 Start: 35164, Stop: 35526, Start Num: 6

Candidate Starts for Zakai_43:

(Start: 6 @35164 has 28 MA's), (12, 35395), (13, 35404),

Gene: Zaria_41 Start: 33563, Stop: 33958, Start Num: 4

Candidate Starts for Zaria_41:

(2, 33548), (Start: 4 @33563 has 19 MA's), (12, 33821), (13, 33830), (15, 33890), (17, 33935),

Gene: ZhongYanYuan_41 Start: 34767, Stop: 35129, Start Num: 6

Candidate Starts for ZhongYanYuan_41:

(Start: 6 @34767 has 28 MA's), (12, 34998), (13, 35007),