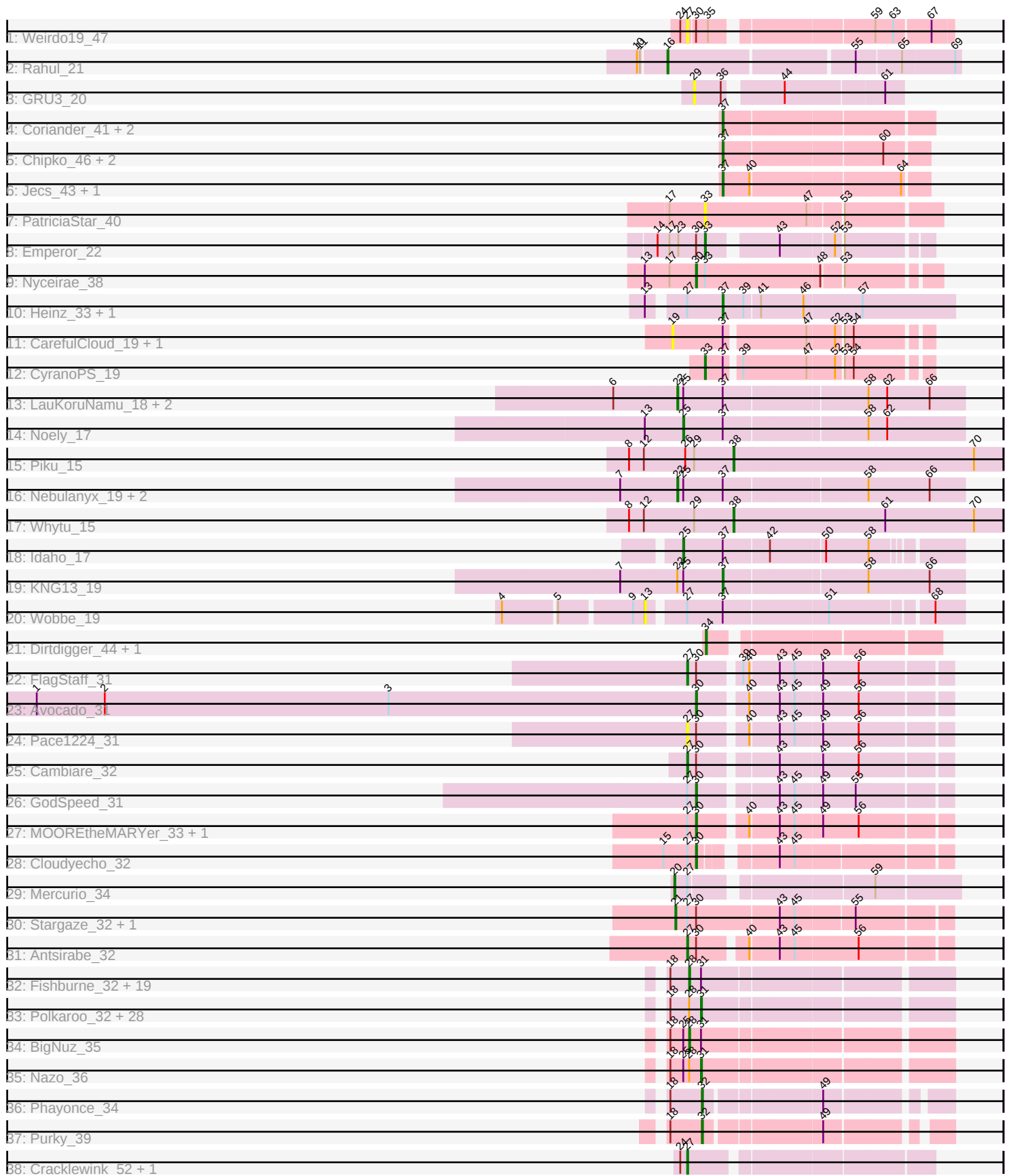




Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 330691 Report

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

Pham number 330691 has 100 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Weirido19_47
- Track 2 : Rahul_21
- Track 3 : GRU3_20
- Track 4 : Coriander_41, Doggs_38, TaronosaurusRx_43
- Track 5 : Chipko_46, Moonflower_40, Dmitri_41
- Track 6 : Jecs_43, Opie_44
- Track 7 : PatriciaStar_40
- Track 8 : Emperor_22
- Track 9 : Nyceirae_38
- Track 10 : Heinz_33, Hibiscus_34
- Track 11 : CarefulCloud_19, TailX7_19
- Track 12 : CyranoPS_19
- Track 13 : LauKoruNamu_18, Pauu_18, CabbageMan_17
- Track 14 : Noely_17
- Track 15 : Piku_15
- Track 16 : Nebulanyx_19, CheeseDanish_19, Corgi_19
- Track 17 : Whytu_15
- Track 18 : Idaho_17
- Track 19 : KNG13_19
- Track 20 : Wobbe_19
- Track 21 : DirtDigger_44, Gusanita_41
- Track 22 : FlagStaff_31
- Track 23 : Avocado_31
- Track 24 : Pace1224_31
- Track 25 : Cambiare_32
- Track 26 : GodSpeed_31
- Track 27 : MOOREtheMARYer_33, Pinnie_33
- Track 28 : Cloudyecho_32
- Track 29 : Mercurio_34
- Track 30 : Stargaze_32, YangYin_32
- Track 31 : Antsirabe_32
- Track 32 : Fishburne_32, GaloreK_32, Atcoo_32, Venti_32, Mangethe_32, Majeke_32, Necropolis_32, Donovan_32, StevieRay_32, Bunnies_32, Kari_32, Willsammy_31, FirstPlacePfu_32, Arib1_32, Juniormint_32, Etoile_32, Thespis_32, Langerak_32, Zilizebeth_32, Phegasus_32
- Track 33 : Polkaroo_32, Brusacoram_32, Bartholomew_31, Bhagsy_32, KilKor_32, Dynamo_32, Phalm_32, PeanutPie_32, BronnyJr_32, HUHilltop_32, Vidya_32,

Shipwreck_34, GreaseLightnin_32, Pygmy_34, Camster_32, Gavriela_32, Chubbello_32, Jebeks_33, Bogie_34, Techage_32, Megiddo_32, Ksquared_32, Malithi_32, Sonah_32, CactusJack_32, StressBall_32, Phineas_32, Glaske_32, Jung_31

- Track 34 : BigNuz_35
- Track 35 : Nazo_36
- Track 36 : Phayonce_34
- Track 37 : Purky_39
- Track 38 : Cracklewink_52, Bipper_52

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

The start number called the most often in the published annotations is 31, it was called in 25 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bartholomew_31, Bhagsy_32, Bogie_34, BronnyJr_32, Brusacoram_32, CactusJack_32, Camster_32, Chubbello_32, Dynamo_32, Gavriela_32, Glaske_32, GreaseLightnin_32, HUHilltop_32, Jebeks_33, Jung_31, KilKor_32, Ksquared_32, Malithi_32, Megiddo_32, Nazo_36, PeanutPie_32, Phalm_32, Phineas_32, Polkaroo_32, Pygmy_34, Shipwreck_34, Sonah_32, StressBall_32, Techage_32, Vidya_32,

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

- Arib1_32, Atcoo_32, BigNuz_35, Bunnies_32, Donovan_32, Etoile_32, FirstPlacePfu_32, Fishburne_32, GaloreK_32, Juniormint_32, Kari_32, Langerak_32, Majeke_32, Mangethe_32, Necropolis_32, Phegasus_32, StevieRay_32, Thespis_32, Venti_32, Willsammy_31, Zilizebeth_32,

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

- Antsirabe_32, Avocado_31, Bipper_52, CabbageMan_17, Cambiare_32, CarefulCloud_19, CheeseDanish_19, Chipko_46, Cloudyecho_32, Corgi_19, Coriander_41, Cracklewink_52, CyranoPS_19, Dirdigger_44, Dmitri_41, Doggs_38, Emperor_22, FlagStaff_31, GRU3_20, GodSpeed_31, Gusanita_41, Heinz_33, Hibiscus_34, Idaho_17, Jecs_43, KNG13_19, LauKoruNamu_18, MOOREtheMARYer_33, Mercurio_34, Moonflower_40, Nebulanyx_19, Noely_17, Nyceirae_38, Opie_44, Pace1224_31, PatriciaStar_40, Pauu_18, Phayonce_34, Piku_15, Pinnie_33, Purky_39, Rahul_21, Stargaze_32, TailX7_19, TaronosaurusRx_43, Weirdo19_47, Whytu_15, Wobbe_19, YangYin_32,

Summary by start number:

Start 13:

- Found in 5 of 100 (5.0%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Wobbe_19 (FE),

Start 16:

- Found in 1 of 100 (1.0%) of genes in pham

- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rahul_21 (CW2),

Start 19:

- Found in 2 of 100 (2.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CarefulCloud_19 (ER), TailX7_19 (ER),

Start 20:

- Found in 1 of 100 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mercurio_34 (G4),

Start 21:

- Found in 2 of 100 (2.0%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stargaze_32 (G5), YangYin_32 (G5),

Start 22:

- Found in 7 of 100 (7.0%) of genes in pham
- Manual Annotations of this start: 5 of 83
- Called 85.7% of time when present
- Phage (with cluster) where this start called: CabbageMan_17 (FE), CheeseDanish_19 (FE), Corgi_19 (FE), LauKoruNamu_18 (FE), Nebulanyx_19 (FE), Pauu_18 (FE),

Start 25:

- Found in 11 of 100 (11.0%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 18.2% of time when present
- Phage (with cluster) where this start called: Idaho_17 (FE), Noely_17 (FE),

Start 27:

- Found in 17 of 100 (17.0%) of genes in pham
- Manual Annotations of this start: 5 of 83
- Called 41.2% of time when present
- Phage (with cluster) where this start called: Antsirabe_32 (G5), Bipper_52 (Y), Cambiare_32 (G2), Cracklewink_52 (Y), FlagStaff_31 (G2), Pace1224_31 (G2), Weirido19_47 (AH),

Start 28:

- Found in 51 of 100 (51.0%) of genes in pham
- Manual Annotations of this start: 20 of 83
- Called 41.2% of time when present
- Phage (with cluster) where this start called: Arib1_32 (P1), Atcoo_32 (P1), BigNuz_35 (P4), Bunnies_32 (P1), Donovan_32 (P1), Etoile_32 (P1), FirstPlacePfu_32 (P1), Fishburne_32 (P1), GaloreK_32 (P1), Juniormint_32 (P1), Kari_32 (P1), Langerak_32 (P1), Majeke_32 (P1), Mangethe_32 (P1), Necropolis_32 (P1), Phegasus_32 (P1), StevieRay_32 (P1), Thespis_32 (P1), Venti_32 (P1),

Willsammy_31 (P1), Zilizebeth_32 (P1),

Start 29:

- Found in 3 of 100 (3.0%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: GRU3_20 (CW2),

Start 30:

- Found in 14 of 100 (14.0%) of genes in pham
- Manual Annotations of this start: 6 of 83
- Called 42.9% of time when present
- Phage (with cluster) where this start called: Avocado_31 (G2), Cloudyecho_32 (G3), GodSpeed_31 (G2), MOOREtheMARYer_33 (G3), Nyceirae_38 (DT), Pinnie_33 (G3),

Start 31:

- Found in 51 of 100 (51.0%) of genes in pham
- Manual Annotations of this start: 25 of 83
- Called 58.8% of time when present
- Phage (with cluster) where this start called: Bartholomew_31 (P1), Bhagsy_32 (P1), Bogie_34 (P1), BronnyJr_32 (P1), Brusacoram_32 (P1), CactusJack_32 (P1), Camster_32 (P1), Chubbello_32 (P1), Dynamo_32 (P1), Gavriela_32 (P1), Glaske_32 (P1), GreaseLightnin_32 (P1), HUHilltop_32 (P1), Jebeks_33 (P1), Jung_31 (P1), KilKor_32 (P1), Ksquared_32 (P1), Malithi_32 (P1), Megiddo_32 (P1), Nazo_36 (P4), PeanutPie_32 (P1), Phalm_32 (P1), Phineas_32 (P1), Polkaroo_32 (P1), Pygmy_34 (P1), Shipwreck_34 (P1), Sonah_32 (P1), StressBall_32 (P1), Techage_32 (P1), Vidya_32 (P1),

Start 32:

- Found in 2 of 100 (2.0%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phayonce_34 (P5), Purky_39 (P6),

Start 33:

- Found in 4 of 100 (4.0%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 75.0% of time when present
- Phage (with cluster) where this start called: CyranoPS_19 (ER), Emperor_22 (DM), PatriciaStar_40 (DB),

Start 34:

- Found in 2 of 100 (2.0%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dirtdigger_44 (FF), Gusanita_41 (FF),

Start 37:

- Found in 23 of 100 (23.0%) of genes in pham
- Manual Annotations of this start: 8 of 83
- Called 47.8% of time when present

- Phage (with cluster) where this start called: Chipko_46 (DB), Coriander_41 (DB), Dmitri_41 (DB), Doggs_38 (DB), Heinz_33 (DY), Hibiscus_34 (DY), Jecs_43 (DB), KNG13_19 (FE), Moonflower_40 (DB), Opie_44 (DB), TarōnosaurusRx_43 (DB),

Start 38:

- Found in 2 of 100 (2.0%) of genes in pham
- Manual Annotations of this start: 2 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Piku_15 (FE), Whytu_15 (FE),

Summary by clusters:

There are 18 clusters represented in this pham: G5, P1, G3, G2, P4, P5, AH, CW2, DB, G4, FE, FF, DY, Y, P6, DT, DM, ER,

Info for manual annotations of cluster CW2:

- Start number 16 was manually annotated 1 time for cluster CW2.

Info for manual annotations of cluster DB:

- Start number 37 was manually annotated 5 times for cluster DB.

Info for manual annotations of cluster DM:

- Start number 33 was manually annotated 1 time for cluster DM.

Info for manual annotations of cluster DT:

- Start number 30 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster DY:

- Start number 37 was manually annotated 2 times for cluster DY.

Info for manual annotations of cluster ER:

- Start number 33 was manually annotated 1 time for cluster ER.

Info for manual annotations of cluster FE:

- Start number 22 was manually annotated 5 times for cluster FE.
- Start number 25 was manually annotated 2 times for cluster FE.
- Start number 37 was manually annotated 1 time for cluster FE.
- Start number 38 was manually annotated 2 times for cluster FE.

Info for manual annotations of cluster FF:

- Start number 34 was manually annotated 2 times for cluster FF.

Info for manual annotations of cluster G2:

- Start number 27 was manually annotated 2 times for cluster G2.
- Start number 30 was manually annotated 2 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 30 was manually annotated 3 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 20 was manually annotated 1 time for cluster G4.

Info for manual annotations of cluster G5:

- Start number 21 was manually annotated 2 times for cluster G5.
- Start number 27 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster P1:

- Start number 28 was manually annotated 19 times for cluster P1.
- Start number 31 was manually annotated 24 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 28 was manually annotated 1 time for cluster P4.
- Start number 31 was manually annotated 1 time for cluster P4.

Info for manual annotations of cluster P5:

- Start number 32 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 32 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Y:

- Start number 27 was manually annotated 2 times for cluster Y.

Gene Information:

Gene: Antsirabe_32 Start: 29568, Stop: 29807, Start Num: 27

Candidate Starts for Antsirabe_32:

(Start: 27 @29568 has 5 MA's), (Start: 30 @29577 has 6 MA's), (40, 29619), (43, 29646), (45, 29661), (56, 29724),

Gene: Arib1_32 Start: 27470, Stop: 27715, Start Num: 28

Candidate Starts for Arib1_32:

(18, 27452), (Start: 28 @27470 has 20 MA's), (Start: 31 @27482 has 25 MA's),

Gene: Atcoo_32 Start: 27951, Stop: 28196, Start Num: 28

Candidate Starts for Atcoo_32:

(18, 27933), (Start: 28 @27951 has 20 MA's), (Start: 31 @27963 has 25 MA's),

Gene: Avocado_31 Start: 29572, Stop: 29802, Start Num: 30

Candidate Starts for Avocado_31:

(1, 28903), (2, 28972), (3, 29260), (Start: 30 @29572 has 6 MA's), (40, 29614), (43, 29641), (45, 29656), (49, 29683), (56, 29719),

Gene: Bartholomew_31 Start: 27476, Stop: 27709, Start Num: 31

Candidate Starts for Bartholomew_31:

(18, 27446), (Start: 28 @27464 has 20 MA's), (Start: 31 @27476 has 25 MA's),

Gene: Bhagsy_32 Start: 27472, Stop: 27705, Start Num: 31

Candidate Starts for Bhagsy_32:

(18, 27442), (Start: 28 @27460 has 20 MA's), (Start: 31 @27472 has 25 MA's),

Gene: BigNuz_35 Start: 29592, Stop: 29837, Start Num: 28

Candidate Starts for BigNuz_35:

(18, 29574), (Start: 25 @29586 has 2 MA's), (Start: 28 @29592 has 20 MA's), (Start: 31 @29604 has 25 MA's),

Gene: Bipper_52 Start: 40190, Stop: 40414, Start Num: 27

Candidate Starts for Bipper_52:

(24, 40184), (Start: 27 @40190 has 5 MA's),

Gene: Bogie_34 Start: 29259, Stop: 29492, Start Num: 31

Candidate Starts for Bogie_34:

(18, 29229), (Start: 28 @29247 has 20 MA's), (Start: 31 @29259 has 25 MA's),

Gene: BronnyJr_32 Start: 27973, Stop: 28206, Start Num: 31

Candidate Starts for BronnyJr_32:

(18, 27943), (Start: 28 @27961 has 20 MA's), (Start: 31 @27973 has 25 MA's),

Gene: Brusacoram_32 Start: 27469, Stop: 27702, Start Num: 31

Candidate Starts for Brusacoram_32:

(18, 27439), (Start: 28 @27457 has 20 MA's), (Start: 31 @27469 has 25 MA's),

Gene: Bunnies_32 Start: 27478, Stop: 27723, Start Num: 28

Candidate Starts for Bunnies_32:

(18, 27460), (Start: 28 @27478 has 20 MA's), (Start: 31 @27490 has 25 MA's),

Gene: CabbageMan_17 Start: 13096, Stop: 13374, Start Num: 22

Candidate Starts for CabbageMan_17:

(6, 13033), (Start: 22 @13096 has 5 MA's), (Start: 25 @13102 has 2 MA's), (Start: 37 @13141 has 8 MA's), (58, 13279), (62, 13297), (66, 13339),

Gene: CactusJack_32 Start: 27733, Stop: 27966, Start Num: 31

Candidate Starts for CactusJack_32:

(18, 27703), (Start: 28 @27721 has 20 MA's), (Start: 31 @27733 has 25 MA's),

Gene: Cambiare_32 Start: 30030, Stop: 30269, Start Num: 27

Candidate Starts for Cambiare_32:

(Start: 27 @30030 has 5 MA's), (Start: 30 @30039 has 6 MA's), (43, 30108), (49, 30150), (56, 30186),

Gene: Camster_32 Start: 27506, Stop: 27739, Start Num: 31

Candidate Starts for Camster_32:

(18, 27476), (Start: 28 @27494 has 20 MA's), (Start: 31 @27506 has 25 MA's),

Gene: CarefulCloud_19 Start: 12759, Stop: 12995, Start Num: 19

Candidate Starts for CarefulCloud_19:

(19, 12759), (Start: 37 @12810 has 8 MA's), (47, 12885), (52, 12912), (53, 12918), (54, 12927),

Gene: CheeseDanish_19 Start: 13255, Stop: 13533, Start Num: 22

Candidate Starts for CheeseDanish_19:

(7, 13198), (Start: 22 @13255 has 5 MA's), (Start: 25 @13261 has 2 MA's), (Start: 37 @13300 has 8 MA's), (58, 13438), (66, 13498),

Gene: Chipko_46 Start: 34356, Stop: 34550, Start Num: 37

Candidate Starts for Chipko_46:

(Start: 37 @34356 has 8 MA's), (60, 34509),

Gene: Chubbello_32 Start: 27475, Stop: 27708, Start Num: 31

Candidate Starts for Chubbello_32:

(18, 27445), (Start: 28 @27463 has 20 MA's), (Start: 31 @27475 has 25 MA's),

Gene: Cloudyecho_32 Start: 29772, Stop: 29990, Start Num: 30

Candidate Starts for Cloudyecho_32:

(15, 29739), (Start: 27 @29763 has 5 MA's), (Start: 30 @29772 has 6 MA's), (43, 29832), (45, 29847),

Gene: Corgi_19 Start: 13255, Stop: 13533, Start Num: 22

Candidate Starts for Corgi_19:

(7, 13198), (Start: 22 @13255 has 5 MA's), (Start: 25 @13261 has 2 MA's), (Start: 37 @13300 has 8 MA's), (58, 13438), (66, 13498),

Gene: Coriander_41 Start: 31926, Stop: 32126, Start Num: 37

Candidate Starts for Coriander_41:

(Start: 37 @31926 has 8 MA's),

Gene: Cracklewink_52 Start: 40183, Stop: 40407, Start Num: 27

Candidate Starts for Cracklewink_52:

(24, 40177), (Start: 27 @40183 has 5 MA's),

Gene: CyranoPS_19 Start: 12813, Stop: 13016, Start Num: 33

Candidate Starts for CyranoPS_19:

(Start: 33 @12813 has 2 MA's), (Start: 37 @12831 has 8 MA's), (39, 12843), (47, 12906), (52, 12933), (53, 12939), (54, 12948),

Gene: Dirtdigger_44 Start: 30893, Stop: 31102, Start Num: 34

Candidate Starts for Dirtdigger_44:

(Start: 34 @30893 has 2 MA's),

Gene: Dmitri_41 Start: 33516, Stop: 33710, Start Num: 37

Candidate Starts for Dmitri_41:

(Start: 37 @33516 has 8 MA's), (60, 33669),

Gene: Doggs_38 Start: 32655, Stop: 32855, Start Num: 37

Candidate Starts for Doggs_38:

(Start: 37 @32655 has 8 MA's),

Gene: Donovan_32 Start: 27486, Stop: 27731, Start Num: 28

Candidate Starts for Donovan_32:

(18, 27468), (Start: 28 @27486 has 20 MA's), (Start: 31 @27498 has 25 MA's),

Gene: Dynamo_32 Start: 27887, Stop: 28120, Start Num: 31

Candidate Starts for Dynamo_32:

(18, 27857), (Start: 28 @27875 has 20 MA's), (Start: 31 @27887 has 25 MA's),

Gene: Emperor_22 Start: 15163, Stop: 15360, Start Num: 33

Candidate Starts for Emperor_22:

(14, 15115), (17, 15127), (23, 15136), (Start: 30 @15154 has 6 MA's), (Start: 33 @15163 has 2 MA's), (43, 15223), (52, 15274), (53, 15280),

Gene: Etoile_32 Start: 27464, Stop: 27709, Start Num: 28

Candidate Starts for Etoile_32:

(18, 27446), (Start: 28 @27464 has 20 MA's), (Start: 31 @27476 has 25 MA's),

Gene: FirstPlacePfu_32 Start: 27496, Stop: 27741, Start Num: 28

Candidate Starts for FirstPlacePfu_32:

(18, 27478), (Start: 28 @27496 has 20 MA's), (Start: 31 @27508 has 25 MA's),

Gene: Fishburne_32 Start: 27464, Stop: 27709, Start Num: 28

Candidate Starts for Fishburne_32:

(18, 27446), (Start: 28 @27464 has 20 MA's), (Start: 31 @27476 has 25 MA's),

Gene: FlagStaff_31 Start: 29350, Stop: 29589, Start Num: 27

Candidate Starts for FlagStaff_31:

(Start: 27 @29350 has 5 MA's), (Start: 30 @29359 has 6 MA's), (39, 29395), (40, 29401), (43, 29428), (45, 29443), (49, 29470), (56, 29506),

Gene: GRU3_20 Start: 14761, Stop: 14949, Start Num: 29

Candidate Starts for GRU3_20:

(29, 14761), (36, 14788), (44, 14836), (61, 14932),

Gene: GaloreK_32 Start: 27460, Stop: 27705, Start Num: 28

Candidate Starts for GaloreK_32:

(18, 27442), (Start: 28 @27460 has 20 MA's), (Start: 31 @27472 has 25 MA's),

Gene: Gavriela_32 Start: 27733, Stop: 27966, Start Num: 31

Candidate Starts for Gavriela_32:

(18, 27703), (Start: 28 @27721 has 20 MA's), (Start: 31 @27733 has 25 MA's),

Gene: Glaske_32 Start: 27733, Stop: 27966, Start Num: 31

Candidate Starts for Glaske_32:

(18, 27703), (Start: 28 @27721 has 20 MA's), (Start: 31 @27733 has 25 MA's),

Gene: GodSpeed_31 Start: 29382, Stop: 29612, Start Num: 30

Candidate Starts for GodSpeed_31:

(Start: 27 @29373 has 5 MA's), (Start: 30 @29382 has 6 MA's), (43, 29451), (45, 29466), (49, 29493), (55, 29526),

Gene: GreaseLightnin_32 Start: 27725, Stop: 27958, Start Num: 31

Candidate Starts for GreaseLightnin_32:

(18, 27695), (Start: 28 @27713 has 20 MA's), (Start: 31 @27725 has 25 MA's),

Gene: Gusanita_41 Start: 30644, Stop: 30853, Start Num: 34

Candidate Starts for Gusanita_41:

(Start: 34 @30644 has 2 MA's),

Gene: HUHilltop_32 Start: 27509, Stop: 27742, Start Num: 31

Candidate Starts for HUHilltop_32:

(18, 27479), (Start: 28 @27497 has 20 MA's), (Start: 31 @27509 has 25 MA's),

Gene: Heinz_33 Start: 25599, Stop: 25826, Start Num: 37

Candidate Starts for Heinz_33:

(13, 25533), (Start: 27 @25563 has 5 MA's), (Start: 37 @25599 has 8 MA's), (39, 25620), (41, 25635), (46, 25677), (57, 25734),

Gene: Hibiscus_34 Start: 25548, Stop: 25775, Start Num: 37

Candidate Starts for Hibiscus_34:

(13, 25482), (Start: 27 @25512 has 5 MA's), (Start: 37 @25548 has 8 MA's), (39, 25569), (41, 25584), (46, 25626), (57, 25683),

Gene: Idaho_17 Start: 13517, Stop: 13774, Start Num: 25

Candidate Starts for Idaho_17:

(Start: 25 @13517 has 2 MA's), (Start: 37 @13556 has 8 MA's), (42, 13601), (50, 13652), (58, 13694),

Gene: Jebeks_33 Start: 27461, Stop: 27694, Start Num: 31

Candidate Starts for Jebeks_33:

(18, 27431), (Start: 28 @27449 has 20 MA's), (Start: 31 @27461 has 25 MA's),

Gene: Jecs_43 Start: 32124, Stop: 32318, Start Num: 37

Candidate Starts for Jecs_43:

(Start: 37 @32124 has 8 MA's), (40, 32151), (64, 32295),

Gene: Jung_31 Start: 27440, Stop: 27673, Start Num: 31

Candidate Starts for Jung_31:

(18, 27410), (Start: 28 @27428 has 20 MA's), (Start: 31 @27440 has 25 MA's),

Gene: Juniormint_32 Start: 27500, Stop: 27745, Start Num: 28

Candidate Starts for Juniormint_32:

(18, 27482), (Start: 28 @27500 has 20 MA's), (Start: 31 @27512 has 25 MA's),

Gene: KNG13_19 Start: 13297, Stop: 13530, Start Num: 37

Candidate Starts for KNG13_19:

(7, 13195), (Start: 22 @13252 has 5 MA's), (Start: 25 @13258 has 2 MA's), (Start: 37 @13297 has 8 MA's), (58, 13435), (66, 13495),

Gene: Kari_32 Start: 27461, Stop: 27706, Start Num: 28

Candidate Starts for Kari_32:

(18, 27443), (Start: 28 @27461 has 20 MA's), (Start: 31 @27473 has 25 MA's),

Gene: KilKor_32 Start: 27733, Stop: 27966, Start Num: 31

Candidate Starts for KilKor_32:

(18, 27703), (Start: 28 @27721 has 20 MA's), (Start: 31 @27733 has 25 MA's),

Gene: Ksquared_32 Start: 27490, Stop: 27723, Start Num: 31

Candidate Starts for Ksquared_32:

(18, 27460), (Start: 28 @27478 has 20 MA's), (Start: 31 @27490 has 25 MA's),

Gene: Langerak_32 Start: 27480, Stop: 27725, Start Num: 28

Candidate Starts for Langerak_32:

(18, 27462), (Start: 28 @27480 has 20 MA's), (Start: 31 @27492 has 25 MA's),

Gene: LauKoruNamu_18 Start: 13096, Stop: 13374, Start Num: 22

Candidate Starts for LauKoruNamu_18:

(6, 13033), (Start: 22 @13096 has 5 MA's), (Start: 25 @13102 has 2 MA's), (Start: 37 @13141 has 8 MA's), (58, 13279), (62, 13297), (66, 13339),

Gene: MOOREtheMARYer_33 Start: 29854, Stop: 30084, Start Num: 30

Candidate Starts for MOOREtheMARYer_33:

(Start: 27 @29845 has 5 MA's), (Start: 30 @29854 has 6 MA's), (40, 29896), (43, 29923), (45, 29938), (49, 29965), (56, 30001),

Gene: Majeke_32 Start: 27502, Stop: 27747, Start Num: 28

Candidate Starts for Majeke_32:

(18, 27484), (Start: 28 @27502 has 20 MA's), (Start: 31 @27514 has 25 MA's),

Gene: Malithi_32 Start: 27399, Stop: 27632, Start Num: 31

Candidate Starts for Malithi_32:

(18, 27369), (Start: 28 @27387 has 20 MA's), (Start: 31 @27399 has 25 MA's),

Gene: Mangethe_32 Start: 27502, Stop: 27747, Start Num: 28

Candidate Starts for Mangethe_32:

(18, 27484), (Start: 28 @27502 has 20 MA's), (Start: 31 @27514 has 25 MA's),

Gene: Megiddo_32 Start: 27733, Stop: 27966, Start Num: 31

Candidate Starts for Megiddo_32:

(18, 27703), (Start: 28 @27721 has 20 MA's), (Start: 31 @27733 has 25 MA's),

Gene: Mercurio_34 Start: 30005, Stop: 30259, Start Num: 20

Candidate Starts for Mercurio_34:

(Start: 20 @30005 has 1 MA's), (Start: 27 @30017 has 5 MA's), (59, 30179),

Gene: Moonflower_40 Start: 33379, Stop: 33573, Start Num: 37

Candidate Starts for Moonflower_40:

(Start: 37 @33379 has 8 MA's), (60, 33532),

Gene: Nazo_36 Start: 29606, Stop: 29839, Start Num: 31

Candidate Starts for Nazo_36:

(18, 29576), (Start: 25 @29588 has 2 MA's), (Start: 28 @29594 has 20 MA's), (Start: 31 @29606 has 25 MA's),

Gene: Nebulanyx_19 Start: 13252, Stop: 13530, Start Num: 22

Candidate Starts for Nebulanyx_19:

(7, 13195), (Start: 22 @13252 has 5 MA's), (Start: 25 @13258 has 2 MA's), (Start: 37 @13297 has 8 MA's), (58, 13435), (66, 13495),

Gene: Necropolis_32 Start: 27461, Stop: 27706, Start Num: 28

Candidate Starts for Necropolis_32:

(18, 27443), (Start: 28 @27461 has 20 MA's), (Start: 31 @27473 has 25 MA's),

Gene: Noely_17 Start: 12627, Stop: 12899, Start Num: 25

Candidate Starts for Noely_17:

(13, 12588), (Start: 25 @12627 has 2 MA's), (Start: 37 @12666 has 8 MA's), (58, 12804), (62, 12822),

Gene: Nyceirae_38 Start: 30354, Stop: 30581, Start Num: 30

Candidate Starts for Nyceirae_38:

(13, 30303), (17, 30327), (Start: 30 @30354 has 6 MA's), (Start: 33 @30363 has 2 MA's), (48, 30477), (53, 30495),

Gene: Opie_44 Start: 33313, Stop: 33507, Start Num: 37

Candidate Starts for Opie_44:

(Start: 37 @33313 has 8 MA's), (40, 33340), (64, 33484),

Gene: Pace1224_31 Start: 29350, Stop: 29589, Start Num: 27

Candidate Starts for Pace1224_31:

(Start: 27 @29350 has 5 MA's), (Start: 30 @29359 has 6 MA's), (40, 29401), (43, 29428), (45, 29443), (49, 29470), (56, 29506),

Gene: PatriciaStar_40 Start: 32550, Stop: 32774, Start Num: 33

Candidate Starts for PatriciaStar_40:

(17, 32514), (Start: 33 @32550 has 2 MA's), (47, 32652), (53, 32682),

Gene: Pauu_18 Start: 13096, Stop: 13374, Start Num: 22

Candidate Starts for Pauu_18:

(6, 13033), (Start: 22 @13096 has 5 MA's), (Start: 25 @13102 has 2 MA's), (Start: 37 @13141 has 8 MA's), (58, 13279), (62, 13297), (66, 13339),

Gene: PeanutPie_32 Start: 27472, Stop: 27705, Start Num: 31

Candidate Starts for PeanutPie_32:

(18, 27442), (Start: 28 @27460 has 20 MA's), (Start: 31 @27472 has 25 MA's),

Gene: Phalm_32 Start: 27733, Stop: 27966, Start Num: 31

Candidate Starts for Phalm_32:

(18, 27703), (Start: 28 @27721 has 20 MA's), (Start: 31 @27733 has 25 MA's),

Gene: Phayonce_34 Start: 29517, Stop: 29735, Start Num: 32

Candidate Starts for Phayonce_34:

(18, 29487), (Start: 32 @29517 has 2 MA's), (49, 29625),

Gene: Phegasus_32 Start: 27469, Stop: 27714, Start Num: 28

Candidate Starts for Phegasus_32:

(18, 27451), (Start: 28 @27469 has 20 MA's), (Start: 31 @27481 has 25 MA's),

Gene: Phineas_32 Start: 27847, Stop: 28080, Start Num: 31

Candidate Starts for Phineas_32:

(18, 27817), (Start: 28 @27835 has 20 MA's), (Start: 31 @27847 has 25 MA's),

Gene: Piku_15 Start: 12477, Stop: 12746, Start Num: 38

Candidate Starts for Piku_15:

(8, 12372), (12, 12387), (26, 12429), (29, 12438), (Start: 38 @12477 has 2 MA's), (70, 12717),

Gene: Pinnie_33 Start: 30225, Stop: 30455, Start Num: 30

Candidate Starts for Pinnie_33:

(Start: 27 @30216 has 5 MA's), (Start: 30 @30225 has 6 MA's), (40, 30267), (43, 30294), (45, 30309), (49, 30336), (56, 30372),

Gene: Polkaroo_32 Start: 27490, Stop: 27723, Start Num: 31

Candidate Starts for Polkaroo_32:

(18, 27460), (Start: 28 @27478 has 20 MA's), (Start: 31 @27490 has 25 MA's),

Gene: Purky_39 Start: 30247, Stop: 30462, Start Num: 32

Candidate Starts for Purky_39:

(18, 30217), (Start: 32 @30247 has 2 MA's), (49, 30355),

Gene: Pygmy_34 Start: 29315, Stop: 29548, Start Num: 31

Candidate Starts for Pygmy_34:

(18, 29285), (Start: 28 @29303 has 20 MA's), (Start: 31 @29315 has 25 MA's),

Gene: Rahul_21 Start: 14448, Stop: 14720, Start Num: 16

Candidate Starts for Rahul_21:

(10, 14421), (11, 14424), (Start: 16 @14448 has 1 MA's), (55, 14622), (65, 14664), (69, 14715),

Gene: Shipwreck_34 Start: 29290, Stop: 29523, Start Num: 31

Candidate Starts for Shipwreck_34:

(18, 29260), (Start: 28 @29278 has 20 MA's), (Start: 31 @29290 has 25 MA's),

Gene: Sonah_32 Start: 27462, Stop: 27695, Start Num: 31

Candidate Starts for Sonah_32:

(18, 27432), (Start: 28 @27450 has 20 MA's), (Start: 31 @27462 has 25 MA's),

Gene: Stargaze_32 Start: 29578, Stop: 29838, Start Num: 21

Candidate Starts for Stargaze_32:

(Start: 21 @29578 has 2 MA's), (Start: 27 @29590 has 5 MA's), (Start: 30 @29599 has 6 MA's), (43, 29680), (45, 29695), (55, 29752),

Gene: StevieRay_32 Start: 27429, Stop: 27674, Start Num: 28

Candidate Starts for StevieRay_32:

(18, 27411), (Start: 28 @27429 has 20 MA's), (Start: 31 @27441 has 25 MA's),

Gene: StressBall_32 Start: 27733, Stop: 27966, Start Num: 31

Candidate Starts for StressBall_32:

(18, 27703), (Start: 28 @27721 has 20 MA's), (Start: 31 @27733 has 25 MA's),

Gene: TailX7_19 Start: 12907, Stop: 13143, Start Num: 19

Candidate Starts for TailX7_19:

(19, 12907), (Start: 37 @12958 has 8 MA's), (47, 13033), (52, 13060), (53, 13066), (54, 13075),

Gene: TaronosaurusRx_43 Start: 31715, Stop: 31909, Start Num: 37

Candidate Starts for TaronosaurusRx_43:

(Start: 37 @31715 has 8 MA's),

Gene: Techage_32 Start: 27499, Stop: 27732, Start Num: 31

Candidate Starts for Techage_32:

(18, 27469), (Start: 28 @27487 has 20 MA's), (Start: 31 @27499 has 25 MA's),

Gene: Thespis_32 Start: 27457, Stop: 27702, Start Num: 28

Candidate Starts for Thespis_32:

(18, 27439), (Start: 28 @27457 has 20 MA's), (Start: 31 @27469 has 25 MA's),

Gene: Venti_32 Start: 27464, Stop: 27709, Start Num: 28

Candidate Starts for Venti_32:

(18, 27446), (Start: 28 @27464 has 20 MA's), (Start: 31 @27476 has 25 MA's),

Gene: Vidya_32 Start: 27509, Stop: 27742, Start Num: 31

Candidate Starts for Vidya_32:

(18, 27479), (Start: 28 @27497 has 20 MA's), (Start: 31 @27509 has 25 MA's),

Gene: Weirdo19_47 Start: 35144, Stop: 35377, Start Num: 27

Candidate Starts for Weirido19_47:

(24, 35138), (Start: 27 @35144 has 5 MA's), (Start: 30 @35150 has 6 MA's), (35, 35162), (59, 35306), (63, 35324), (67, 35357),

Gene: Whytu_15 Start: 12543, Stop: 12812, Start Num: 38

Candidate Starts for Whytu_15:

(8, 12438), (12, 12453), (29, 12504), (Start: 38 @12543 has 2 MA's), (61, 12693), (70, 12783),

Gene: Willsammy_31 Start: 27204, Stop: 27449, Start Num: 28

Candidate Starts for Willsammy_31:

(18, 27186), (Start: 28 @27204 has 20 MA's), (Start: 31 @27216 has 25 MA's),

Gene: Wobbe_19 Start: 13011, Stop: 13301, Start Num: 13

Candidate Starts for Wobbe_19:

(4, 12879), (5, 12930), (9, 12999), (13, 13011), (Start: 27 @13041 has 5 MA's), (Start: 37 @13077 has 8 MA's), (51, 13179), (68, 13272),

Gene: YangYin_32 Start: 29604, Stop: 29864, Start Num: 21

Candidate Starts for YangYin_32:

(Start: 21 @29604 has 2 MA's), (Start: 27 @29616 has 5 MA's), (Start: 30 @29625 has 6 MA's), (43, 29706), (45, 29721), (55, 29778),

Gene: Zilizebeth_32 Start: 27496, Stop: 27741, Start Num: 28

Candidate Starts for Zilizebeth_32:

(18, 27478), (Start: 28 @27496 has 20 MA's), (Start: 31 @27508 has 25 MA's),