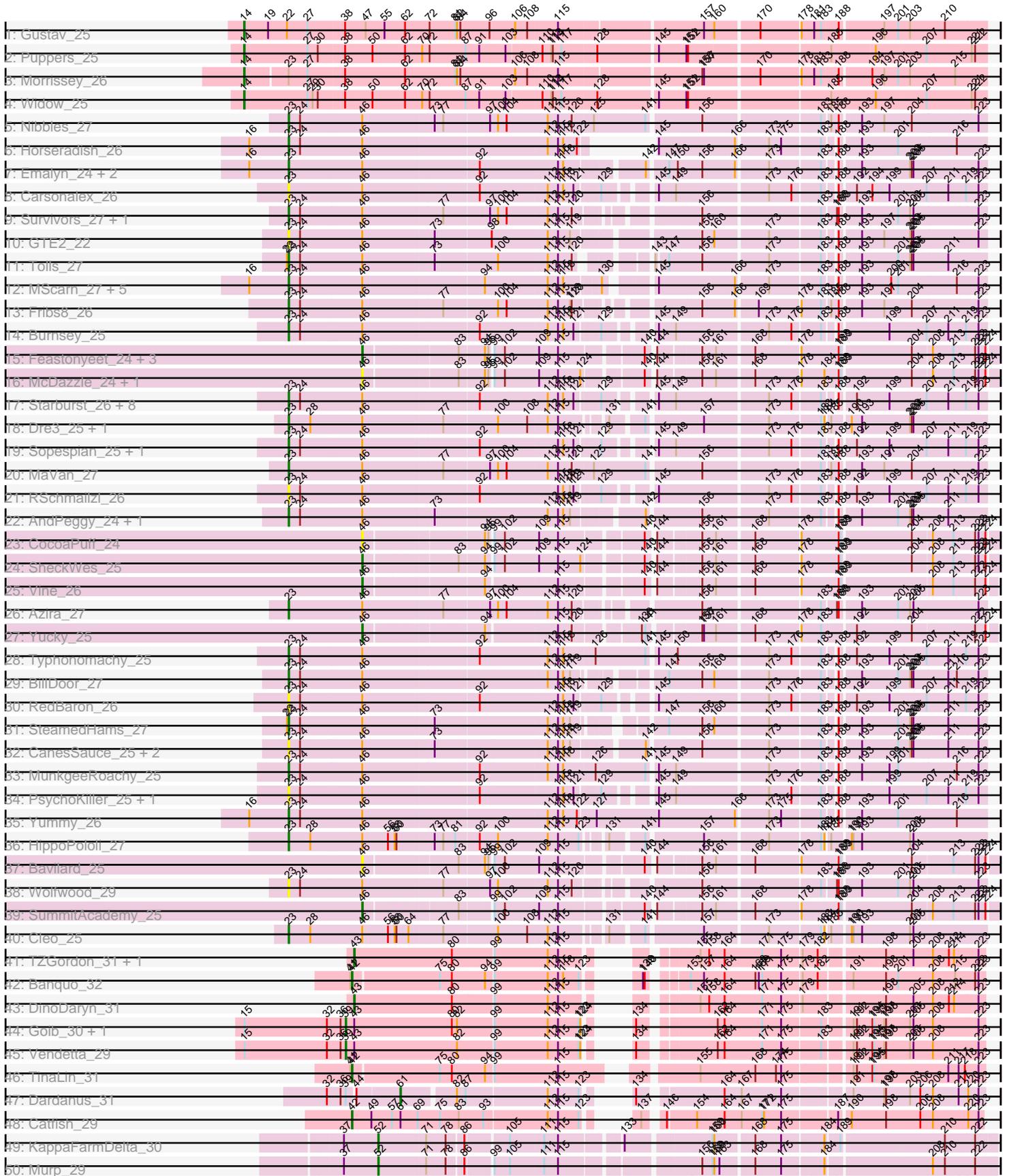
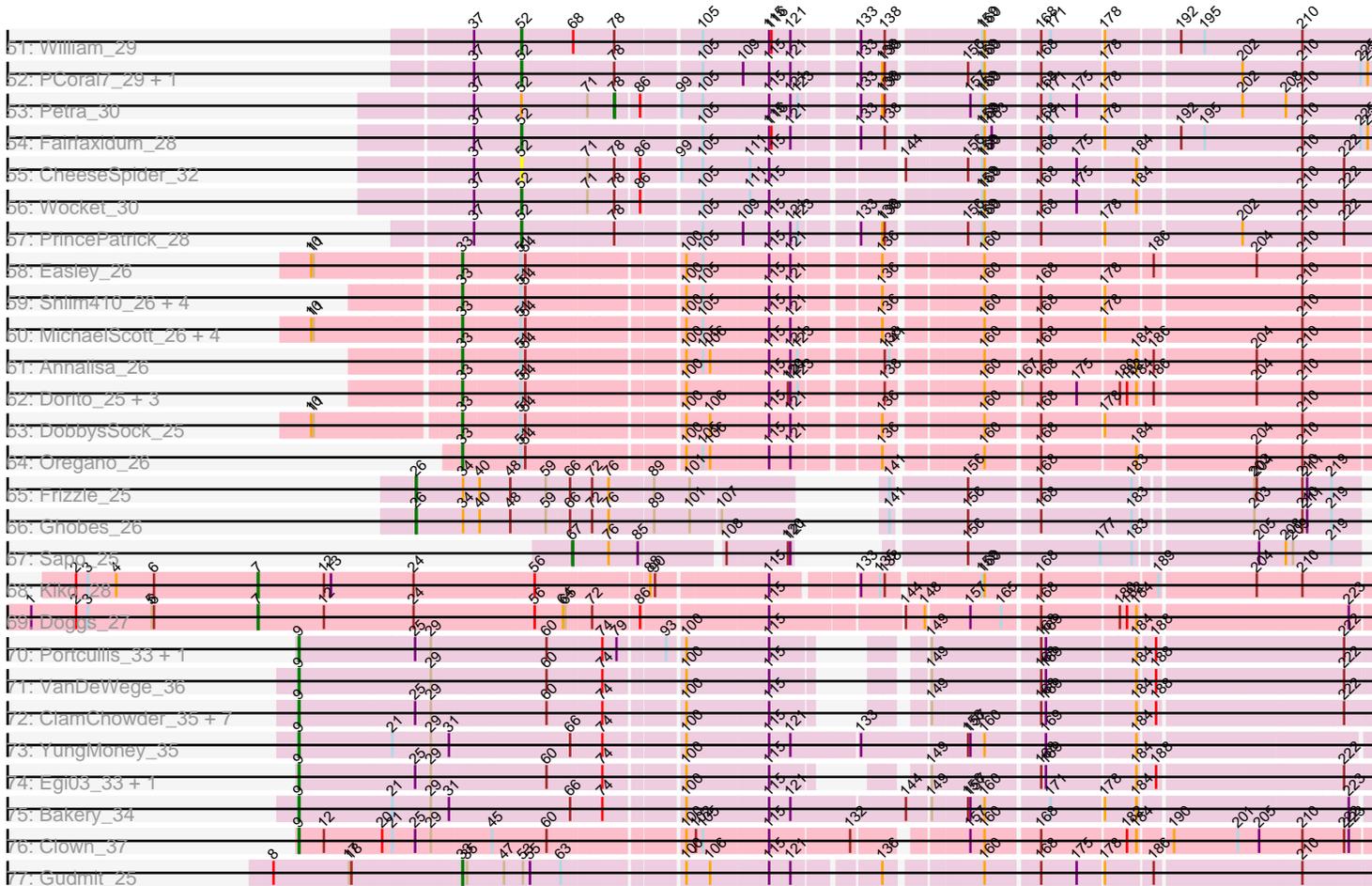


Pham 283609



Pham 283609



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 283609 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283609 has 126 members, 23 are drafts.

Phages represented in each track:

- Track 1 : Gustav\_25
- Track 2 : Poppers\_25
- Track 3 : Morrissey\_26
- Track 4 : Widow\_25
- Track 5 : Nibbles\_27
- Track 6 : Horseradish\_26
- Track 7 : Emalyn\_24, Amok\_24, AikoCarson\_24
- Track 8 : Carsonalex\_26
- Track 9 : Survivors\_27, Zareef\_27
- Track 10 : GTE2\_22
- Track 11 : Tolls\_27
- Track 12 : MScarn\_27, Blondies\_26, Biskit\_26, Buttrmlkdreams\_25, SketchMex\_24, Troje\_25
- Track 13 : Fribs8\_26
- Track 14 : Burnsey\_25
- Track 15 : Feastonyeet\_24, Balloona\_24, PotPie\_25, BigChungus\_24
- Track 16 : McDazzle\_24, ElJefes\_24
- Track 17 : Starburst\_26, Axym\_25, RADical\_26, Agatha\_25, GoldHunter\_26, Cozz\_25, Socotra\_26, Bubble\_25, Quasar\_25
- Track 18 : Dre3\_25, Gibbous\_25
- Track 19 : Sopespian\_25, Nina\_26
- Track 20 : MaVan\_27
- Track 21 : RSchmailzl\_26
- Track 22 : AndPeggy\_24, Yarn\_24
- Track 23 : CocoaPuff\_24
- Track 24 : SheckWes\_25
- Track 25 : Vine\_26
- Track 26 : Azira\_27
- Track 27 : Yucky\_25
- Track 28 : Typhonomachy\_25
- Track 29 : BillDoor\_27
- Track 30 : RedBaron\_26
- Track 31 : SteamedHams\_27
- Track 32 : CanesSauce\_25, CaramelLatte\_25, ChocoMunchkin\_25
- Track 33 : MunkgeeRoachy\_25
- Track 34 : PsychoKiller\_25, Elliott\_25
- Track 35 : Yummy\_26

- Track 36 : HippoPololi\_27
- Track 37 : Bavidard\_25
- Track 38 : Wolfwood\_29
- Track 39 : SummitAcademy\_25
- Track 40 : Cleo\_25
- Track 41 : TZGordon\_31, Huffy\_31
- Track 42 : Banquo\_32
- Track 43 : DinoDaryn\_31
- Track 44 : Goib\_30, Splinter\_29
- Track 45 : Vendetta\_29
- Track 46 : TinaLin\_31
- Track 47 : Dardanus\_31
- Track 48 : Catfish\_29
- Track 49 : KappaFarmDelta\_30
- Track 50 : Murp\_29
- Track 51 : William\_29
- Track 52 : PCoral7\_29, Toast\_29
- Track 53 : Petra\_30
- Track 54 : Fairfaxidum\_28
- Track 55 : CheeseSpider\_32
- Track 56 : Wocket\_30
- Track 57 : PrincePatrick\_28
- Track 58 : Easley\_26
- Track 59 : Shlim410\_26, Adora\_26, Howe\_26, Hortense\_26, Twinkle\_26
- Track 60 : MichaelScott\_26, Dolores\_26, Clark\_26, WinkNick\_26, Mcklovin\_26
- Track 61 : Annalisa\_26
- Track 62 : Dorito\_25, Sekhmet\_26, Samman98\_26, PhriskyACE\_25
- Track 63 : DobbysSock\_25
- Track 64 : Oregano\_26
- Track 65 : Frizzle\_25
- Track 66 : Ghobes\_26
- Track 67 : Sapo\_25
- Track 68 : Kiko\_28
- Track 69 : Doggs\_27
- Track 70 : Portcullis\_33, Shinji\_33
- Track 71 : VanDeWege\_36
- Track 72 : ClamChowder\_35, Fugax\_35, PinkCoffee\_35, Barb\_35, CoveyB\_35, Twister6\_35, Arri\_36, Danyall\_35
- Track 73 : YungMoney\_35
- Track 74 : Egi03\_33, RogerDodger\_36
- Track 75 : Bakery\_34
- Track 76 : Clown\_37
- Track 77 : Gudmit\_25

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

The start number called the most often in the published annotations is 23, it was called in 35 of the 103 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha\_25, AikoCarson\_24, Amok\_24, AndPeggy\_24, Axym\_25, Azira\_27, BillDoor\_27, Biskit\_26, Blondies\_26, Bubble\_25, Burnsey\_25, Buttrmlkdreams\_25, CanesSauce\_25, CaramellLatte\_25, Carsonalex\_26, ChocoMunchkin\_25, Cleo\_25, Cozz\_25, Dre3\_25, Elliott\_25, Emalyn\_24, Fribs8\_26, GTE2\_22, Gibbous\_25, GoldHunter\_26, HippoPololi\_27, Horseradish\_26, MScarn\_27, MaVan\_27, MunkgeeRoachy\_25, Nibbles\_27, Nina\_26, PsychoKiller\_25, Quasar\_25, RADical\_26, RSchmailzl\_26, RedBaron\_26, SketchMex\_24, Socotra\_26, Sopespian\_25, Starburst\_26, SteamedHams\_27, Survivors\_27, Tolls\_27, Troje\_25, Typhonomachy\_25, Wolfwood\_29, Yarn\_24, Yummy\_26, Zareef\_27,

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

- Morrissey\_26,

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

- Adora\_26, Annalisa\_26, Arri\_36, Bakery\_34, Balloona\_24, Banquo\_32, Barb\_35, Bavidard\_25, BigChungus\_24, Catfish\_29, CheeseSpider\_32, ClamChowder\_35, Clark\_26, Clown\_37, CocoaPuff\_24, CoveyB\_35, Danyall\_35, Dardanus\_31, DinoDaryn\_31, DobbysSock\_25, Doggs\_27, Dolores\_26, Dorito\_25, Easley\_26, Egi03\_33, ElJefes\_24, Fairfaxidum\_28, Feastonyeet\_24, Frizzle\_25, Fugax\_35, Ghobes\_26, Goib\_30, Gudmit\_25, Gustav\_25, Hortense\_26, Howe\_26, Huffy\_31, KappaFarmDelta\_30, Kiko\_28, McDazzle\_24, Mcklovin\_26, MichaelScott\_26, Murp\_29, Oregano\_26, PCoral7\_29, Petra\_30, PhriskyACE\_25, PinkCoffee\_35, Portcullis\_33, PotPie\_25, PrincePatrick\_28, Puppies\_25, RogerDodger\_36, Samman98\_26, Sapo\_25, Sekhmet\_26, SheckWes\_25, Shinji\_33, Shlim410\_26, Splinter\_29, SummitAcademy\_25, TZGordon\_31, TinaLin\_31, Toast\_29, Twinkle\_26, Twister6\_35, VanDeWege\_36, Vendetta\_29, Vine\_26, Widow\_25, William\_29, WinkNick\_26, Wocket\_30, Yucky\_25, YungMoney\_35,

### Summary by start number:

Start 7:

- Found in 2 of 126 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 2 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Doggs\_27 (DB), Kiko\_28 (DB),

Start 9:

- Found in 16 of 126 ( 12.7% ) of genes in pham
- Manual Annotations of this start: 15 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arri\_36 (DC1), Bakery\_34 (DC1), Barb\_35 (DC1), ClamChowder\_35 (DC1), Clown\_37 (DC2), CoveyB\_35 (DC1), Danyall\_35 (DC1), Egi03\_33 (DC1), Fugax\_35 (DC1), PinkCoffee\_35 (DC1), Portcullis\_33 (DC1), RogerDodger\_36 (DC1), Shinji\_33 (DC1), Twister6\_35 (DC1), VanDeWege\_36 (DC1), YungMoney\_35 (DC1),

Start 14:

- Found in 4 of 126 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 4 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gustav\_25 (CD), Morrissey\_26 (CD), Puppies\_25 (CD), Widow\_25 (CD),

#### Start 23:

- Found in 51 of 126 ( 40.5% ) of genes in pham
- Manual Annotations of this start: 35 of 103
- Called 98.0% of time when present
- Phage (with cluster) where this start called: Agatha\_25 (CT), AikoCarson\_24 (CT), Amok\_24 (CT), AndPeggy\_24 (CT), Axym\_25 (CT), Azira\_27 (CT), BillDoor\_27 (CT), Biskit\_26 (CT), Blondies\_26 (CT), Bubble\_25 (CT), Burnsey\_25 (CT), Buttrmlkdreams\_25 (CT), CanesSauce\_25 (CT), CaramelLatte\_25 (CT), Carsonalex\_26 (CT), ChocoMunchkin\_25 (CT), Cleo\_25 (CT), Cozz\_25 (CT), Dre3\_25 (CT), Elliott\_25 (CT), Emalyn\_24 (CT), Fribs8\_26 (CT), GTE2\_22 (CT), Gibbous\_25 (CT), GoldHunter\_26 (CT), HippoPololi\_27 (CT), Horseradish\_26 (CT), MScarn\_27 (CT), MaVan\_27 (CT), MunkgeeRoachy\_25 (CT), Nibbles\_27 (CT), Nina\_26 (CT), PsychoKiller\_25 (CT), Quasar\_25 (CT), RADical\_26 (CT), RSchmailzl\_26 (CT), RedBaron\_26 (CT), SketchMex\_24 (CT), Socotra\_26 (CT), Sopespian\_25 (CT), Starburst\_26 (CT), SteamedHams\_27 (CT), Survivors\_27 (CT), Tolls\_27 (CT), Troje\_25 (CT), Typhonmarchy\_25 (CT), Wolfwood\_29 (CT), Yarn\_24 (CT), Yummy\_26 (CT), Zareef\_27 (CT),

#### Start 26:

- Found in 2 of 126 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 2 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Frizzle\_25 (DA), Ghobes\_26 (DA),

#### Start 33:

- Found in 19 of 126 ( 15.1% ) of genes in pham
- Manual Annotations of this start: 18 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adora\_26 (CZ4), Annalisa\_26 (CZ4), Clark\_26 (CZ4), DobbysSock\_25 (CZ4), Dolores\_26 (CZ4), Dorito\_25 (CZ4), Easley\_26 (CZ4), Gudmit\_25 (singleton), Hortense\_26 (CZ4), Howe\_26 (CZ4), Mcklovin\_26 (CZ4), MichaelScott\_26 (CZ4), Oregano\_26 (CZ4), PhriskyACE\_25 (CZ4), Samman98\_26 (CZ4), Sekhmet\_26 (CZ4), Shlim410\_26 (CZ4), Twinkle\_26 (CZ4), WinkNick\_26 (CZ4),

#### Start 39:

- Found in 4 of 126 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 3 of 103
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Goib\_30 (CU1), Splinter\_29 (CU1), Vendetta\_29 (CU1),

#### Start 42:

- Found in 3 of 126 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 3 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo\_32 (CU1), Catfish\_29 (CU5), TinaLin\_31 (CU1),

#### Start 43:

- Found in 6 of 126 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 3 of 103
- Called 50.0% of time when present

- Phage (with cluster) where this start called: DinoDaryn\_31 (CU1), Huffy\_31 (CU1), TZGordon\_31 (CU1),

#### Start 46:

- Found in 62 of 126 ( 49.2% ) of genes in pham
- Manual Annotations of this start: 7 of 103
- Called 19.4% of time when present
- Phage (with cluster) where this start called: Balloona\_24 (CT), Bavidard\_25 (CT), BigChungus\_24 (CT), CocoaPuff\_24 (CT), ElJefes\_24 (CT), Feastonyeet\_24 (CT), McDazzle\_24 (CT), PotPie\_25 (CT), SheckWes\_25 (CT), SummitAcademy\_25 (CT), Vine\_26 (CT), Yucky\_25 (CT),

#### Start 52:

- Found in 10 of 126 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 8 of 103
- Called 90.0% of time when present
- Phage (with cluster) where this start called: CheeseSpider\_32 (CV), Fairfaxidum\_28 (CV), KappaFarmDelta\_30 (CV), Murp\_29 (CV), PCoral7\_29 (CV), PrincePatrick\_28 (CV), Toast\_29 (CV), William\_29 (CV), Wocket\_30 (CV),

#### Start 61:

- Found in 2 of 126 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 1 of 103
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Dardanus\_31 (CU3),

#### Start 67:

- Found in 1 of 126 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 103
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sapo\_25 (DA),

#### Start 78:

- Found in 9 of 126 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 1 of 103
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Petra\_30 (CV),

### Summary by clusters:

There are 12 clusters represented in this pham: singleton, DA, CU1, DB, CU5, CZ4, CD, CU3, CT, DC2, CV, DC1,

#### Info for manual annotations of cluster CD:

- Start number 14 was manually annotated 4 times for cluster CD.

#### Info for manual annotations of cluster CT:

- Start number 23 was manually annotated 35 times for cluster CT.
- Start number 46 was manually annotated 7 times for cluster CT.

#### Info for manual annotations of cluster CU1:

- Start number 39 was manually annotated 3 times for cluster CU1.
- Start number 42 was manually annotated 2 times for cluster CU1.

- Start number 43 was manually annotated 3 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 61 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU5:

- Start number 42 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:

- Start number 52 was manually annotated 8 times for cluster CV.
- Start number 78 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CZ4:

- Start number 33 was manually annotated 17 times for cluster CZ4.

Info for manual annotations of cluster DA:

- Start number 26 was manually annotated 2 times for cluster DA.
- Start number 67 was manually annotated 1 time for cluster DA.

Info for manual annotations of cluster DB:

- Start number 7 was manually annotated 2 times for cluster DB.

Info for manual annotations of cluster DC1:

- Start number 9 was manually annotated 14 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 9 was manually annotated 1 time for cluster DC2.

### ***Gene Information:***

Gene: Adora\_26 Start: 22572, Stop: 23609, Start Num: 33

Candidate Starts for Adora\_26:

(Start: 33 @22572 has 18 MA's), (51, 22641), (54, 22647), (100, 22827), (105, 22848), (115, 22929), (121, 22956), (136, 23049), (160, 23157), (168, 23220), (178, 23295), (210, 23526),

Gene: Agatha\_25 Start: 20517, Stop: 21614, Start Num: 23

Candidate Starts for Agatha\_25:

(Start: 23 @20517 has 35 MA's), (24, 20535), (Start: 46 @20640 has 7 MA's), (92, 20838), (112, 20952), (115, 20970), (118, 20979), (121, 20997), (129, 21033), (145, 21093), (149, 21123), (173, 21273), (176, 21312), (183, 21357), (188, 21375), (192, 21399), (199, 21456), (207, 21516), (211, 21552), (219, 21582), (223, 21603),

Gene: AikoCarson\_24 Start: 19778, Stop: 20890, Start Num: 23

Candidate Starts for AikoCarson\_24:

(16, 19709), (Start: 23 @19778 has 35 MA's), (Start: 46 @19901 has 7 MA's), (92, 20099), (115, 20231), (118, 20240), (142, 20357), (147, 20387), (150, 20402), (156, 20441), (166, 20498), (173, 20549), (183, 20633), (188, 20651), (193, 20684), (203, 20765), (204, 20768), (205, 20771), (223, 20879),

Gene: Amok\_24 Start: 19775, Stop: 20848, Start Num: 23

Candidate Starts for Amok\_24:

(16, 19706), (Start: 23 @19775 has 35 MA's), (Start: 46 @19898 has 7 MA's), (92, 20096), (115, 20228), (118, 20237), (142, 20315), (147, 20345), (150, 20360), (156, 20399), (166, 20456), (173, 20507), (183, 20591), (188, 20609), (193, 20642), (203, 20723), (204, 20726), (205, 20729), (223, 20837),

Gene: AndPeggy\_24 Start: 20180, Stop: 21292, Start Num: 23

Candidate Starts for AndPeggy\_24:

(Start: 23 @20180 has 35 MA's), (24, 20198), (Start: 46 @20303 has 7 MA's), (73, 20426), (112, 20615), (115, 20633), (118, 20642), (119, 20654), (142, 20759), (156, 20843), (173, 20951), (183, 21035), (188, 21053), (193, 21086), (201, 21149), (203, 21167), (204, 21170), (205, 21173), (211, 21230),

Gene: Annalisa\_26 Start: 22034, Stop: 23074, Start Num: 33

Candidate Starts for Annalisa\_26:

(Start: 33 @22034 has 18 MA's), (51, 22103), (54, 22109), (100, 22289), (105, 22310), (106, 22319), (115, 22391), (121, 22418), (123, 22427), (138, 22514), (141, 22520), (160, 22619), (168, 22682), (184, 22796), (186, 22811), (204, 22934), (210, 22991),

Gene: Arri\_36 Start: 28916, Stop: 30088, Start Num: 9

Candidate Starts for Arri\_36:

(Start: 9 @28916 has 15 MA's), (25, 29057), (29, 29075), (60, 29210), (74, 29276), (100, 29363), (115, 29465), (149, 29570), (168, 29696), (169, 29702), (184, 29810), (188, 29828), (222, 30053),

Gene: Axym\_25 Start: 20517, Stop: 21614, Start Num: 23

Candidate Starts for Axym\_25:

(Start: 23 @20517 has 35 MA's), (24, 20535), (Start: 46 @20640 has 7 MA's), (92, 20838), (112, 20952), (115, 20970), (118, 20979), (121, 20997), (129, 21033), (145, 21093), (149, 21123), (173, 21273), (176, 21312), (183, 21357), (188, 21375), (192, 21399), (199, 21456), (207, 21516), (211, 21552), (219, 21582), (223, 21603),

Gene: Azira\_27 Start: 21488, Stop: 22588, Start Num: 23

Candidate Starts for Azira\_27:

(Start: 23 @21488 has 35 MA's), (Start: 46 @21611 has 7 MA's), (77, 21749), (97, 21827), (100, 21839), (104, 21854), (112, 21923), (115, 21941), (120, 21965), (156, 22133), (183, 22325), (186, 22346), (188, 22349), (193, 22382), (201, 22445), (203, 22463), (205, 22469), (223, 22577),

Gene: Bakery\_34 Start: 28127, Stop: 29377, Start Num: 9

Candidate Starts for Bakery\_34:

(Start: 9 @28127 has 15 MA's), (21, 28241), (29, 28286), (31, 28307), (66, 28451), (74, 28487), (100, 28574), (115, 28676), (121, 28703), (144, 28838), (149, 28865), (156, 28907), (157, 28910), (160, 28928), (171, 29003), (178, 29066), (184, 29105), (223, 29354),

Gene: Balloona\_24 Start: 20277, Stop: 21269, Start Num: 46

Candidate Starts for Balloona\_24:

(Start: 46 @20277 has 7 MA's), (83, 20424), (94, 20466), (95, 20472), (99, 20475), (102, 20493), (109, 20550), (115, 20583), (140, 20712), (144, 20721), (156, 20790), (161, 20814), (168, 20874), (178, 20949), (188, 21009), (189, 21012), (204, 21129), (208, 21162), (213, 21198), (222, 21234), (223, 21240), (224, 21252),

Gene: Banquo\_32 Start: 23108, Stop: 24055, Start Num: 42

Candidate Starts for Banquo\_32:

(41, 23105), (Start: 42 @23108 has 3 MA's), (75, 23255), (80, 23276), (94, 23333), (99, 23345), (112, 23438), (115, 23456), (118, 23465), (123, 23492), (139, 23525), (140, 23528), (153, 23576), (157,

23597), (164, 23633), (168, 23684), (169, 23690), (171, 23696), (175, 23729), (179, 23762), (182, 23786), (191, 23834), (198, 23891), (201, 23912), (208, 23969), (215, 24008), (222, 24041), (223, 24047),

Gene: Barb\_35 Start: 28934, Stop: 30106, Start Num: 9

Candidate Starts for Barb\_35:

(Start: 9 @28934 has 15 MA's), (25, 29075), (29, 29093), (60, 29228), (74, 29294), (100, 29381), (115, 29483), (149, 29588), (168, 29714), (169, 29720), (184, 29828), (188, 29846), (222, 30071),

Gene: Bavilard\_25 Start: 21062, Stop: 22054, Start Num: 46

Candidate Starts for Bavilard\_25:

(Start: 46 @21062 has 7 MA's), (83, 21209), (94, 21251), (95, 21257), (99, 21260), (102, 21278), (109, 21335), (115, 21368), (140, 21497), (144, 21506), (156, 21575), (161, 21599), (168, 21659), (178, 21734), (188, 21794), (189, 21797), (204, 21914), (213, 21983), (222, 22019), (223, 22025), (224, 22037),

Gene: BigChungus\_24 Start: 20320, Stop: 21312, Start Num: 46

Candidate Starts for BigChungus\_24:

(Start: 46 @20320 has 7 MA's), (83, 20467), (94, 20509), (95, 20515), (99, 20518), (102, 20536), (109, 20593), (115, 20626), (140, 20755), (144, 20764), (156, 20833), (161, 20857), (168, 20917), (178, 20992), (188, 21052), (189, 21055), (204, 21172), (208, 21205), (213, 21241), (222, 21277), (223, 21283), (224, 21295),

Gene: BillDoor\_27 Start: 20148, Stop: 21239, Start Num: 23

Candidate Starts for BillDoor\_27:

(Start: 23 @20148 has 35 MA's), (24, 20166), (Start: 46 @20271 has 7 MA's), (112, 20583), (115, 20601), (118, 20610), (119, 20622), (147, 20736), (156, 20790), (160, 20811), (173, 20898), (183, 20982), (188, 21000), (193, 21033), (201, 21096), (203, 21114), (204, 21117), (205, 21120), (211, 21177), (216, 21192), (223, 21228),

Gene: Biskit\_26 Start: 20168, Stop: 21265, Start Num: 23

Candidate Starts for Biskit\_26:

(16, 20099), (Start: 23 @20168 has 35 MA's), (24, 20186), (Start: 46 @20291 has 7 MA's), (94, 20498), (112, 20603), (115, 20621), (118, 20630), (130, 20684), (145, 20744), (166, 20873), (173, 20924), (183, 21008), (188, 21026), (193, 21059), (200, 21110), (201, 21122), (216, 21218), (223, 21254),

Gene: Blondies\_26 Start: 20151, Stop: 21248, Start Num: 23

Candidate Starts for Blondies\_26:

(16, 20082), (Start: 23 @20151 has 35 MA's), (24, 20169), (Start: 46 @20274 has 7 MA's), (94, 20481), (112, 20586), (115, 20604), (118, 20613), (130, 20667), (145, 20727), (166, 20856), (173, 20907), (183, 20991), (188, 21009), (193, 21042), (200, 21093), (201, 21105), (216, 21201), (223, 21237),

Gene: Bubble\_25 Start: 20517, Stop: 21614, Start Num: 23

Candidate Starts for Bubble\_25:

(Start: 23 @20517 has 35 MA's), (24, 20535), (Start: 46 @20640 has 7 MA's), (92, 20838), (112, 20952), (115, 20970), (118, 20979), (121, 20997), (129, 21033), (145, 21093), (149, 21123), (173, 21273), (176, 21312), (183, 21357), (188, 21375), (192, 21399), (199, 21456), (207, 21516), (211, 21552), (219, 21582), (223, 21603),

Gene: Burnsey\_25 Start: 20518, Stop: 21615, Start Num: 23

Candidate Starts for Burnsey\_25:

(Start: 23 @20518 has 35 MA's), (24, 20536), (Start: 46 @20641 has 7 MA's), (92, 20839), (112, 20953), (115, 20971), (118, 20980), (121, 20998), (129, 21034), (145, 21094), (149, 21124), (173,

21274), (176, 21313), (183, 21358), (188, 21376), (199, 21457), (207, 21517), (211, 21553), (219, 21583), (223, 21604),

Gene: Buttrmlkdreams\_25 Start: 20150, Stop: 21247, Start Num: 23

Candidate Starts for Buttrmlkdreams\_25:

(16, 20081), (Start: 23 @20150 has 35 MA's), (24, 20168), (Start: 46 @20273 has 7 MA's), (94, 20480), (112, 20585), (115, 20603), (118, 20612), (130, 20666), (145, 20726), (166, 20855), (173, 20906), (183, 20990), (188, 21008), (193, 21041), (200, 21092), (201, 21104), (216, 21200), (223, 21236),

Gene: CanesSauce\_25 Start: 20181, Stop: 21293, Start Num: 23

Candidate Starts for CanesSauce\_25:

(Start: 23 @20181 has 35 MA's), (24, 20199), (Start: 46 @20304 has 7 MA's), (73, 20427), (112, 20616), (115, 20634), (118, 20643), (119, 20655), (142, 20760), (156, 20844), (173, 20952), (183, 21036), (188, 21054), (193, 21087), (201, 21150), (203, 21168), (204, 21171), (205, 21174), (211, 21231), (223, 21282),

Gene: CaramellLatte\_25 Start: 20181, Stop: 21293, Start Num: 23

Candidate Starts for CaramellLatte\_25:

(Start: 23 @20181 has 35 MA's), (24, 20199), (Start: 46 @20304 has 7 MA's), (73, 20427), (112, 20616), (115, 20634), (118, 20643), (119, 20655), (142, 20760), (156, 20844), (173, 20952), (183, 21036), (188, 21054), (193, 21087), (201, 21150), (203, 21168), (204, 21171), (205, 21174), (211, 21231), (223, 21282),

Gene: Carsonalex\_26 Start: 20575, Stop: 21672, Start Num: 23

Candidate Starts for Carsonalex\_26:

(Start: 23 @20575 has 35 MA's), (Start: 46 @20698 has 7 MA's), (92, 20896), (112, 21010), (115, 21028), (118, 21037), (121, 21055), (129, 21091), (145, 21151), (149, 21181), (173, 21331), (176, 21370), (183, 21415), (188, 21433), (192, 21457), (194, 21484), (199, 21514), (207, 21574), (211, 21610), (219, 21640), (223, 21661),

Gene: Catfish\_29 Start: 24416, Stop: 25366, Start Num: 42

Candidate Starts for Catfish\_29:

(Start: 42 @24416 has 3 MA's), (49, 24446), (57, 24482), (Start: 61 @24497 has 1 MA's), (69, 24527), (75, 24566), (83, 24599), (93, 24641), (112, 24749), (115, 24767), (123, 24803), (137, 24830), (146, 24854), (154, 24896), (164, 24944), (167, 24971), (171, 25007), (172, 25010), (175, 25040), (187, 25127), (190, 25142), (198, 25202), (206, 25259), (208, 25280), (220, 25340), (223, 25358),

Gene: CheeseSpider\_32 Start: 23943, Stop: 24920, Start Num: 52

Candidate Starts for CheeseSpider\_32:

(37, 23883), (Start: 52 @23943 has 8 MA's), (71, 24024), (Start: 78 @24057 has 1 MA's), (86, 24084), (99, 24123), (105, 24150), (111, 24207), (115, 24231), (144, 24369), (156, 24444), (159, 24462), (160, 24465), (168, 24528), (175, 24573), (184, 24642), (210, 24834), (222, 24885),

Gene: ChocoMunchkin\_25 Start: 20181, Stop: 21293, Start Num: 23

Candidate Starts for ChocoMunchkin\_25:

(Start: 23 @20181 has 35 MA's), (24, 20199), (Start: 46 @20304 has 7 MA's), (73, 20427), (112, 20616), (115, 20634), (118, 20643), (119, 20655), (142, 20760), (156, 20844), (173, 20952), (183, 21036), (188, 21054), (193, 21087), (201, 21150), (203, 21168), (204, 21171), (205, 21174), (211, 21231), (223, 21282),

Gene: ClamChowder\_35 Start: 28934, Stop: 30106, Start Num: 9

Candidate Starts for ClamChowder\_35:

(Start: 9 @28934 has 15 MA's), (25, 29075), (29, 29093), (60, 29228), (74, 29294), (100, 29381), (115, 29483), (149, 29588), (168, 29714), (169, 29720), (184, 29828), (188, 29846), (222, 30071),

Gene: Clark\_26 Start: 22034, Stop: 23071, Start Num: 33

Candidate Starts for Clark\_26:

(10, 21863), (11, 21866), (Start: 33 @22034 has 18 MA's), (51, 22103), (54, 22109), (100, 22289), (105, 22310), (115, 22391), (121, 22418), (136, 22511), (160, 22619), (168, 22682), (178, 22757), (210, 22988),

Gene: Cleo\_25 Start: 20832, Stop: 21935, Start Num: 23

Candidate Starts for Cleo\_25:

(Start: 23 @20832 has 35 MA's), (28, 20868), (Start: 46 @20955 has 7 MA's), (56, 21000), (58, 21012), (60, 21015), (64, 21036), (77, 21093), (100, 21183), (108, 21234), (112, 21267), (115, 21285), (131, 21348), (141, 21396), (157, 21483), (173, 21588), (183, 21672), (184, 21678), (185, 21684), (190, 21711), (191, 21714), (193, 21729), (203, 21810), (205, 21816),

Gene: Clown\_37 Start: 30957, Stop: 32189, Start Num: 9

Candidate Starts for Clown\_37:

(Start: 9 @30957 has 15 MA's), (12, 30987), (20, 31059), (21, 31071), (25, 31098), (29, 31116), (45, 31185), (60, 31251), (100, 31404), (102, 31416), (105, 31425), (115, 31506), (132, 31602), (157, 31719), (160, 31737), (168, 31800), (182, 31902), (184, 31914), (190, 31947), (201, 32028), (205, 32052), (210, 32106), (222, 32157), (223, 32163),

Gene: CocoaPuff\_24 Start: 20274, Stop: 21266, Start Num: 46

Candidate Starts for CocoaPuff\_24:

(Start: 46 @20274 has 7 MA's), (94, 20463), (95, 20469), (99, 20472), (102, 20490), (109, 20547), (115, 20580), (140, 20709), (144, 20718), (156, 20787), (161, 20811), (168, 20871), (178, 20946), (188, 21006), (189, 21009), (204, 21126), (208, 21159), (213, 21195), (222, 21231), (223, 21237), (224, 21249),

Gene: CoveyB\_35 Start: 28734, Stop: 29906, Start Num: 9

Candidate Starts for CoveyB\_35:

(Start: 9 @28734 has 15 MA's), (25, 28875), (29, 28893), (60, 29028), (74, 29094), (100, 29181), (115, 29283), (149, 29388), (168, 29514), (169, 29520), (184, 29628), (188, 29646), (222, 29871),

Gene: Cozz\_25 Start: 20518, Stop: 21615, Start Num: 23

Candidate Starts for Cozz\_25:

(Start: 23 @20518 has 35 MA's), (24, 20536), (Start: 46 @20641 has 7 MA's), (92, 20839), (112, 20953), (115, 20971), (118, 20980), (121, 20998), (129, 21034), (145, 21094), (149, 21124), (173, 21274), (176, 21313), (183, 21358), (188, 21376), (192, 21400), (199, 21457), (207, 21517), (211, 21553), (219, 21583), (223, 21604),

Gene: Danyall\_35 Start: 28734, Stop: 29906, Start Num: 9

Candidate Starts for Danyall\_35:

(Start: 9 @28734 has 15 MA's), (25, 28875), (29, 28893), (60, 29028), (74, 29094), (100, 29181), (115, 29283), (149, 29388), (168, 29514), (169, 29520), (184, 29628), (188, 29646), (222, 29871),

Gene: Dardanus\_31 Start: 23524, Stop: 24384, Start Num: 61

Candidate Starts for Dardanus\_31:

(32, 23410), (36, 23434), (Start: 39 @23443 has 3 MA's), (44, 23455), (Start: 61 @23524 has 1 MA's), (82, 23611), (87, 23626), (112, 23764), (115, 23782), (123, 23818), (134, 23836), (164, 23959), (167, 23986), (175, 24055), (191, 24160), (197, 24214), (198, 24217), (203, 24256), (206, 24274), (208, 24295), (217, 24340), (220, 24355), (223, 24373),

Gene: DinoDaryn\_31 Start: 22562, Stop: 23509, Start Num: 43

Candidate Starts for DinoDaryn\_31:

(Start: 43 @22562 has 3 MA's), (80, 22733), (99, 22802), (112, 22895), (115, 22913), (155, 23045), (158, 23060), (164, 23087), (171, 23150), (175, 23183), (179, 23216), (198, 23345), (205, 23390), (208, 23420), (212, 23447), (214, 23456), (223, 23498),

Gene: DobbysSock\_25 Start: 21508, Stop: 22545, Start Num: 33

Candidate Starts for DobbysSock\_25:

(10, 21337), (11, 21340), (Start: 33 @21508 has 18 MA's), (51, 21577), (54, 21583), (100, 21763), (106, 21793), (115, 21865), (121, 21892), (136, 21985), (160, 22093), (168, 22156), (178, 22231), (210, 22462),

Gene: Doggs\_27 Start: 22931, Stop: 24244, Start Num: 7

Candidate Starts for Doggs\_27:

(1, 22643), (2, 22700), (3, 22715), (5, 22796), (6, 22799), (Start: 7 @22931 has 2 MA's), (12, 23015), (24, 23129), (56, 23282), (64, 23318), (65, 23321), (72, 23351), (86, 23405), (115, 23549), (144, 23705), (148, 23729), (157, 23777), (165, 23816), (168, 23858), (180, 23951), (182, 23960), (184, 23972), (223, 24221),

Gene: Dolores\_26 Start: 22010, Stop: 23047, Start Num: 33

Candidate Starts for Dolores\_26:

(10, 21839), (11, 21842), (Start: 33 @22010 has 18 MA's), (51, 22079), (54, 22085), (100, 22265), (105, 22286), (115, 22367), (121, 22394), (136, 22487), (160, 22595), (168, 22658), (178, 22733), (210, 22964),

Gene: Dorito\_25 Start: 21473, Stop: 22513, Start Num: 33

Candidate Starts for Dorito\_25:

(Start: 33 @21473 has 18 MA's), (51, 21542), (54, 21548), (100, 21728), (115, 21830), (120, 21854), (121, 21857), (123, 21866), (138, 21953), (160, 22058), (167, 22097), (168, 22121), (175, 22166), (180, 22214), (182, 22223), (184, 22235), (186, 22250), (204, 22373), (210, 22430),

Gene: Dre3\_25 Start: 20758, Stop: 21861, Start Num: 23

Candidate Starts for Dre3\_25:

(Start: 23 @20758 has 35 MA's), (28, 20794), (Start: 46 @20881 has 7 MA's), (77, 21019), (100, 21109), (108, 21160), (112, 21193), (115, 21211), (131, 21274), (141, 21322), (157, 21409), (173, 21514), (183, 21598), (184, 21604), (185, 21610), (190, 21637), (193, 21655), (203, 21736), (204, 21739), (205, 21742),

Gene: Easley\_26 Start: 22020, Stop: 23057, Start Num: 33

Candidate Starts for Easley\_26:

(10, 21849), (11, 21852), (Start: 33 @22020 has 18 MA's), (51, 22089), (54, 22095), (100, 22275), (105, 22296), (115, 22377), (121, 22404), (136, 22497), (160, 22605), (186, 22797), (204, 22917), (210, 22974),

Gene: Egi03\_33 Start: 28412, Stop: 29584, Start Num: 9

Candidate Starts for Egi03\_33:

(Start: 9 @28412 has 15 MA's), (25, 28553), (29, 28571), (60, 28706), (74, 28772), (100, 28859), (115, 28961), (149, 29066), (168, 29192), (169, 29198), (184, 29306), (188, 29324), (222, 29549),

Gene: ElJefes\_24 Start: 20753, Stop: 21745, Start Num: 46

Candidate Starts for ElJefes\_24:

(Start: 46 @20753 has 7 MA's), (83, 20900), (94, 20942), (95, 20948), (99, 20951), (102, 20969), (109, 21026), (115, 21059), (124, 21098), (140, 21188), (144, 21197), (156, 21266), (161, 21290), (168, 21350), (178, 21425), (184, 21464), (188, 21485), (189, 21488), (204, 21605), (208, 21638), (213, 21674), (222, 21710), (223, 21716), (224, 21728),

Gene: Elliott\_25 Start: 20517, Stop: 21614, Start Num: 23

Candidate Starts for Elliott\_25:

(Start: 23 @20517 has 35 MA's), (24, 20535), (Start: 46 @20640 has 7 MA's), (92, 20838), (115, 20970), (118, 20979), (121, 20997), (129, 21033), (145, 21093), (149, 21123), (173, 21273), (176, 21312), (183, 21357), (188, 21375), (199, 21456), (207, 21516), (211, 21552), (219, 21582), (223, 21603),

Gene: Emalyn\_24 Start: 19777, Stop: 20889, Start Num: 23

Candidate Starts for Emalyn\_24:

(16, 19708), (Start: 23 @19777 has 35 MA's), (Start: 46 @19900 has 7 MA's), (92, 20098), (115, 20230), (118, 20239), (142, 20356), (147, 20386), (150, 20401), (156, 20440), (166, 20497), (173, 20548), (183, 20632), (188, 20650), (193, 20683), (203, 20764), (204, 20767), (205, 20770), (223, 20878),

Gene: Fairfaxidum\_28 Start: 23698, Stop: 24678, Start Num: 52

Candidate Starts for Fairfaxidum\_28:

(37, 23638), (Start: 52 @23698 has 8 MA's), (105, 23905), (115, 23986), (116, 23989), (121, 24013), (133, 24082), (138, 24109), (159, 24217), (160, 24220), (163, 24229), (168, 24283), (171, 24295), (178, 24358), (192, 24439), (195, 24469), (210, 24589), (225, 24661), (226, 24670),

Gene: Feastonyeet\_24 Start: 20320, Stop: 21312, Start Num: 46

Candidate Starts for Feastonyeet\_24:

(Start: 46 @20320 has 7 MA's), (83, 20467), (94, 20509), (95, 20515), (99, 20518), (102, 20536), (109, 20593), (115, 20626), (140, 20755), (144, 20764), (156, 20833), (161, 20857), (168, 20917), (178, 20992), (188, 21052), (189, 21055), (204, 21172), (208, 21205), (213, 21241), (222, 21277), (223, 21283), (224, 21295),

Gene: Fribs8\_26 Start: 21343, Stop: 22440, Start Num: 23

Candidate Starts for Fribs8\_26:

(Start: 23 @21343 has 35 MA's), (24, 21361), (Start: 46 @21466 has 7 MA's), (77, 21604), (100, 21694), (104, 21709), (112, 21778), (115, 21796), (119, 21817), (120, 21820), (156, 21985), (166, 22042), (169, 22075), (178, 22144), (183, 22177), (185, 22189), (188, 22201), (193, 22234), (197, 22273), (204, 22318), (223, 22429),

Gene: Frizzle\_25 Start: 21406, Stop: 22404, Start Num: 26

Candidate Starts for Frizzle\_25:

(Start: 26 @21406 has 2 MA's), (34, 21466), (40, 21487), (48, 21523), (59, 21568), (66, 21595), (72, 21619), (76, 21640), (89, 21694), (101, 21736), (141, 21868), (156, 21952), (168, 22036), (183, 22144), (203, 22276), (204, 22279), (210, 22333), (211, 22339), (219, 22369),

Gene: Fugax\_35 Start: 28934, Stop: 30106, Start Num: 9

Candidate Starts for Fugax\_35:

(Start: 9 @28934 has 15 MA's), (25, 29075), (29, 29093), (60, 29228), (74, 29294), (100, 29381), (115, 29483), (149, 29588), (168, 29714), (169, 29720), (184, 29828), (188, 29846), (222, 30071),

Gene: GTE2\_22 Start: 19853, Stop: 20965, Start Num: 23

Candidate Starts for GTE2\_22:

(Start: 23 @19853 has 35 MA's), (24, 19871), (Start: 46 @19976 has 7 MA's), (73, 20099), (98, 20195), (112, 20288), (115, 20306), (119, 20327), (156, 20516), (160, 20537), (173, 20624), (183, 20708), (188, 20726), (193, 20759), (197, 20798), (203, 20840), (204, 20843), (205, 20846), (223, 20954),

Gene: Ghobes\_26 Start: 21406, Stop: 22404, Start Num: 26

Candidate Starts for Ghobes\_26:

(Start: 26 @21406 has 2 MA's), (34, 21466), (40, 21487), (48, 21523), (59, 21568), (66, 21595), (72, 21619), (76, 21640), (89, 21694), (101, 21736), (107, 21772), (141, 21868), (156, 21952), (168, 22036), (183, 22144), (203, 22276), (210, 22333), (211, 22339), (219, 22369),

Gene: Gibbous\_25 Start: 20758, Stop: 21861, Start Num: 23

Candidate Starts for Gibbous\_25:

(Start: 23 @20758 has 35 MA's), (28, 20794), (Start: 46 @20881 has 7 MA's), (77, 21019), (100, 21109), (108, 21160), (112, 21193), (115, 21211), (131, 21274), (141, 21322), (157, 21409), (173, 21514), (183, 21598), (184, 21604), (185, 21610), (190, 21637), (193, 21655), (203, 21736), (204, 21739), (205, 21742),

Gene: Goib\_30 Start: 22610, Stop: 23578, Start Num: 39

Candidate Starts for Goib\_30:

(15, 22433), (32, 22577), (36, 22601), (Start: 39 @22610 has 3 MA's), (Start: 43 @22625 has 3 MA's), (80, 22796), (82, 22805), (99, 22865), (112, 22958), (115, 22976), (123, 23012), (124, 23015), (134, 23030), (162, 23138), (164, 23150), (171, 23216), (175, 23249), (183, 23312), (191, 23354), (192, 23360), (194, 23387), (195, 23390), (197, 23408), (198, 23411), (203, 23450), (205, 23456), (208, 23489), (223, 23567),

Gene: GoldHunter\_26 Start: 20518, Stop: 21615, Start Num: 23

Candidate Starts for GoldHunter\_26:

(Start: 23 @20518 has 35 MA's), (24, 20536), (Start: 46 @20641 has 7 MA's), (92, 20839), (112, 20953), (115, 20971), (118, 20980), (121, 20998), (129, 21034), (145, 21094), (149, 21124), (173, 21274), (176, 21313), (183, 21358), (188, 21376), (192, 21400), (199, 21457), (207, 21517), (211, 21553), (219, 21583), (223, 21604),

Gene: Gudmit\_25 Start: 20321, Stop: 21364, Start Num: 33

Candidate Starts for Gudmit\_25:

(8, 20090), (17, 20186), (18, 20189), (Start: 33 @20321 has 18 MA's), (35, 20327), (47, 20372), (53, 20396), (55, 20405), (63, 20444), (100, 20579), (106, 20609), (115, 20681), (121, 20708), (136, 20801), (160, 20909), (168, 20972), (175, 21017), (178, 21047), (186, 21101), (210, 21278),

Gene: Gustav\_25 Start: 19979, Stop: 21202, Start Num: 14

Candidate Starts for Gustav\_25:

(Start: 14 @19979 has 4 MA's), (19, 20021), (22, 20051), (27, 20087), (38, 20150), (47, 20183), (55, 20216), (62, 20252), (72, 20294), (81, 20339), (82, 20342), (84, 20348), (96, 20399), (106, 20444), (108, 20465), (115, 20513), (157, 20741), (160, 20759), (170, 20831), (178, 20897), (181, 20918), (183, 20930), (188, 20957), (197, 21029), (201, 21053), (203, 21071), (210, 21131),

Gene: HippoPololi\_27 Start: 21407, Stop: 22510, Start Num: 23

Candidate Starts for HippoPololi\_27:

(Start: 23 @21407 has 35 MA's), (28, 21443), (Start: 46 @21530 has 7 MA's), (56, 21575), (58, 21587), (60, 21590), (73, 21653), (77, 21668), (81, 21689), (92, 21728), (100, 21758), (112, 21842), (115, 21860), (123, 21896), (131, 21923), (141, 21971), (157, 22058), (173, 22163), (183, 22247), (184, 22253), (185, 22259), (190, 22286), (191, 22289), (193, 22304), (203, 22385), (205, 22391),

Gene: Horseradish\_26 Start: 20064, Stop: 21086, Start Num: 23

Candidate Starts for Horseradish\_26:

(16, 19995), (Start: 23 @20064 has 35 MA's), (24, 20082), (Start: 46 @20187 has 7 MA's), (112, 20499), (115, 20517), (118, 20526), (122, 20550), (145, 20565), (166, 20694), (173, 20745), (175, 20766), (183, 20829), (188, 20847), (193, 20880), (201, 20943), (216, 21039),

Gene: Hortense\_26 Start: 22619, Stop: 23656, Start Num: 33

Candidate Starts for Hortense\_26:

(Start: 33 @22619 has 18 MA's), (51, 22688), (54, 22694), (100, 22874), (105, 22895), (115, 22976), (121, 23003), (136, 23096), (160, 23204), (168, 23267), (178, 23342), (210, 23573),

Gene: Howe\_26 Start: 22619, Stop: 23656, Start Num: 33

Candidate Starts for Howe\_26:

(Start: 33 @22619 has 18 MA's), (51, 22688), (54, 22694), (100, 22874), (105, 22895), (115, 22976), (121, 23003), (136, 23096), (160, 23204), (168, 23267), (178, 23342), (210, 23573),

Gene: Huff\_31 Start: 22562, Stop: 23509, Start Num: 43

Candidate Starts for Huff\_31:

(Start: 43 @22562 has 3 MA's), (80, 22733), (99, 22802), (112, 22895), (115, 22913), (155, 23045), (158, 23060), (164, 23087), (171, 23150), (175, 23183), (179, 23216), (182, 23240), (198, 23345), (205, 23390), (208, 23420), (212, 23447), (214, 23456), (223, 23498),

Gene: KappaFarmDelta\_30 Start: 23868, Stop: 24845, Start Num: 52

Candidate Starts for KappaFarmDelta\_30:

(37, 23808), (Start: 52 @23868 has 8 MA's), (71, 23949), (Start: 78 @23982 has 1 MA's), (86, 24009), (105, 24075), (111, 24132), (115, 24156), (133, 24252), (159, 24387), (160, 24390), (168, 24453), (175, 24498), (184, 24567), (189, 24588), (210, 24759), (222, 24810),

Gene: Kiko\_28 Start: 22114, Stop: 23412, Start Num: 7

Candidate Starts for Kiko\_28:

(2, 21883), (3, 21898), (4, 21934), (6, 21982), (Start: 7 @22114 has 2 MA's), (12, 22198), (13, 22207), (24, 22309), (56, 22462), (88, 22594), (90, 22600), (115, 22729), (133, 22825), (135, 22849), (138, 22852), (159, 22957), (160, 22960), (168, 23023), (189, 23158), (204, 23272), (210, 23329),

Gene: MScarn\_27 Start: 20153, Stop: 21250, Start Num: 23

Candidate Starts for MScarn\_27:

(16, 20084), (Start: 23 @20153 has 35 MA's), (24, 20171), (Start: 46 @20276 has 7 MA's), (94, 20483), (112, 20588), (115, 20606), (118, 20615), (130, 20669), (145, 20729), (166, 20858), (173, 20909), (183, 20993), (188, 21011), (193, 21044), (200, 21095), (201, 21107), (216, 21203), (223, 21239),

Gene: MaVan\_27 Start: 21488, Stop: 22621, Start Num: 23

Candidate Starts for MaVan\_27:

(Start: 23 @21488 has 35 MA's), (Start: 46 @21611 has 7 MA's), (77, 21749), (97, 21827), (100, 21839), (104, 21854), (112, 21923), (115, 21941), (120, 21965), (125, 22001), (141, 22082), (156, 22166), (183, 22358), (185, 22370), (188, 22382), (193, 22415), (197, 22454), (204, 22499), (223, 22610),

Gene: McDazzle\_24 Start: 20747, Stop: 21739, Start Num: 46

Candidate Starts for McDazzle\_24:

(Start: 46 @20747 has 7 MA's), (83, 20894), (94, 20936), (95, 20942), (99, 20945), (102, 20963), (109, 21020), (115, 21053), (124, 21092), (140, 21182), (144, 21191), (156, 21260), (161, 21284), (168, 21344), (178, 21419), (184, 21458), (188, 21479), (189, 21482), (204, 21599), (208, 21632), (213, 21668), (222, 21704), (223, 21710), (224, 21722),

Gene: Mcklovin\_26 Start: 24788, Stop: 25825, Start Num: 33

Candidate Starts for Mcklovin\_26:

(10, 24617), (11, 24620), (Start: 33 @24788 has 18 MA's), (51, 24857), (54, 24863), (100, 25043), (105, 25064), (115, 25145), (121, 25172), (136, 25265), (160, 25373), (168, 25436), (178, 25511), (210, 25742),

Gene: MichaelScott\_26 Start: 22391, Stop: 23428, Start Num: 33

Candidate Starts for MichaelScott\_26:

(10, 22220), (11, 22223), (Start: 33 @22391 has 18 MA's), (51, 22460), (54, 22466), (100, 22646), (105, 22667), (115, 22748), (121, 22775), (136, 22868), (160, 22976), (168, 23039), (178, 23114), (210, 23345),

Gene: Morrissey\_26 Start: 20856, Stop: 22073, Start Num: 14

Candidate Starts for Morrissey\_26:

(Start: 14 @20856 has 4 MA's), (Start: 23 @20922 has 35 MA's), (27, 20955), (38, 21018), (62, 21120), (81, 21207), (82, 21210), (84, 21216), (106, 21312), (108, 21333), (115, 21381), (156, 21609), (157, 21612), (170, 21702), (178, 21768), (181, 21789), (183, 21801), (188, 21828), (194, 21879), (197, 21900), (201, 21924), (203, 21942), (215, 22020),

Gene: MunkgeeRoachy\_25 Start: 20565, Stop: 21695, Start Num: 23

Candidate Starts for MunkgeeRoachy\_25:

(Start: 23 @20565 has 35 MA's), (24, 20583), (Start: 46 @20688 has 7 MA's), (92, 20886), (112, 21000), (115, 21018), (118, 21027), (126, 21081), (141, 21162), (145, 21174), (149, 21204), (173, 21354), (183, 21438), (188, 21456), (193, 21489), (199, 21537), (201, 21552), (216, 21648), (223, 21684),

Gene: Murp\_29 Start: 23645, Stop: 24622, Start Num: 52

Candidate Starts for Murp\_29:

(37, 23585), (Start: 52 @23645 has 8 MA's), (71, 23726), (Start: 78 @23759 has 1 MA's), (86, 23786), (99, 23825), (105, 23852), (111, 23909), (115, 23933), (156, 24146), (159, 24164), (160, 24167), (163, 24176), (168, 24230), (175, 24275), (184, 24344), (208, 24515), (210, 24536), (222, 24587),

Gene: Nibbles\_27 Start: 21488, Stop: 22621, Start Num: 23

Candidate Starts for Nibbles\_27:

(Start: 23 @21488 has 35 MA's), (24, 21506), (Start: 46 @21611 has 7 MA's), (73, 21734), (77, 21749), (97, 21827), (100, 21839), (104, 21854), (112, 21923), (115, 21941), (120, 21965), (125, 22001), (141, 22082), (156, 22166), (183, 22358), (185, 22370), (188, 22382), (193, 22415), (197, 22454), (204, 22499), (223, 22610),

Gene: Nina\_26 Start: 21560, Stop: 22657, Start Num: 23

Candidate Starts for Nina\_26:

(Start: 23 @21560 has 35 MA's), (24, 21578), (Start: 46 @21683 has 7 MA's), (92, 21881), (115, 22013), (118, 22022), (121, 22040), (129, 22076), (145, 22136), (149, 22166), (173, 22316), (176, 22355), (183, 22400), (188, 22418), (192, 22442), (199, 22499), (207, 22559), (211, 22595), (219, 22625), (223, 22646),

Gene: Oregano\_26 Start: 22056, Stop: 23096, Start Num: 33

Candidate Starts for Oregano\_26:

(Start: 33 @22056 has 18 MA's), (51, 22125), (54, 22131), (100, 22311), (105, 22332), (106, 22341), (115, 22413), (121, 22440), (136, 22533), (160, 22641), (168, 22704), (184, 22818), (204, 22956), (210, 23013),

Gene: PCoral7\_29 Start: 23615, Stop: 24595, Start Num: 52

Candidate Starts for PCoral7\_29:

(37, 23555), (Start: 52 @23615 has 8 MA's), (Start: 78 @23726 has 1 MA's), (105, 23822), (109, 23870), (115, 23903), (121, 23930), (133, 23999), (136, 24023), (138, 24026), (156, 24116), (159, 24134), (160, 24137), (168, 24200), (178, 24275), (202, 24431), (210, 24506), (225, 24578), (226, 24587),

Gene: Petra\_30 Start: 23485, Stop: 24351, Start Num: 78

Candidate Starts for Petra\_30:

(37, 23311), (Start: 52 @23371 has 8 MA's), (71, 23452), (Start: 78 @23485 has 1 MA's), (86, 23512), (99, 23551), (105, 23578), (115, 23659), (121, 23686), (123, 23695), (133, 23755), (136, 23779), (138, 23782), (157, 23875), (159, 23890), (160, 23893), (168, 23956), (171, 23968), (175, 24001), (178, 24031), (202, 24187), (208, 24241), (210, 24262),

Gene: PhriskyACE\_25 Start: 21473, Stop: 22513, Start Num: 33

Candidate Starts for PhriskyACE\_25:

(Start: 33 @21473 has 18 MA's), (51, 21542), (54, 21548), (100, 21728), (115, 21830), (120, 21854), (121, 21857), (123, 21866), (138, 21953), (160, 22058), (167, 22097), (168, 22121), (175, 22166), (180, 22214), (182, 22223), (184, 22235), (186, 22250), (204, 22373), (210, 22430),

Gene: PinkCoffee\_35 Start: 28943, Stop: 30115, Start Num: 9

Candidate Starts for PinkCoffee\_35:

(Start: 9 @28943 has 15 MA's), (25, 29084), (29, 29102), (60, 29237), (74, 29303), (100, 29390), (115, 29492), (149, 29597), (168, 29723), (169, 29729), (184, 29837), (188, 29855), (222, 30080),

Gene: Portcullis\_33 Start: 28253, Stop: 29425, Start Num: 9

Candidate Starts for Portcullis\_33:

(Start: 9 @28253 has 15 MA's), (25, 28394), (29, 28412), (60, 28547), (74, 28613), (79, 28631), (93, 28682), (100, 28700), (115, 28802), (149, 28907), (168, 29033), (169, 29039), (184, 29147), (188, 29165), (222, 29390),

Gene: PotPie\_25 Start: 21139, Stop: 22131, Start Num: 46

Candidate Starts for PotPie\_25:

(Start: 46 @21139 has 7 MA's), (83, 21286), (94, 21328), (95, 21334), (99, 21337), (102, 21355), (109, 21412), (115, 21445), (140, 21574), (144, 21583), (156, 21652), (161, 21676), (168, 21736), (178, 21811), (188, 21871), (189, 21874), (204, 21991), (208, 22024), (213, 22060), (222, 22096), (223, 22102), (224, 22114),

Gene: PrincePatrick\_28 Start: 23694, Stop: 24674, Start Num: 52

Candidate Starts for PrincePatrick\_28:

(37, 23634), (Start: 52 @23694 has 8 MA's), (Start: 78 @23805 has 1 MA's), (105, 23901), (109, 23949), (115, 23982), (121, 24009), (123, 24018), (133, 24078), (136, 24102), (138, 24105), (156, 24195), (159, 24213), (160, 24216), (168, 24279), (178, 24354), (202, 24510), (210, 24585), (222, 24636),

Gene: PsychoKiller\_25 Start: 20517, Stop: 21614, Start Num: 23

Candidate Starts for PsychoKiller\_25:

(Start: 23 @20517 has 35 MA's), (24, 20535), (Start: 46 @20640 has 7 MA's), (92, 20838), (115, 20970), (118, 20979), (121, 20997), (129, 21033), (145, 21093), (149, 21123), (173, 21273), (176, 21312), (183, 21357), (188, 21375), (199, 21456), (207, 21516), (211, 21552), (219, 21582), (223, 21603),

Gene: Puppies\_25 Start: 19683, Stop: 20918, Start Num: 14

Candidate Starts for Puppies\_25:

(Start: 14 @19683 has 4 MA's), (27, 19794), (30, 19812), (38, 19857), (50, 19902), (62, 19959), (70, 19989), (72, 20001), (87, 20064), (91, 20088), (103, 20133), (110, 20187), (113, 20202), (114, 20205), (117, 20220), (128, 20280), (145, 20376), (151, 20424), (152, 20427), (185, 20658), (196, 20733), (207, 20817), (221, 20892), (222, 20898),

Gene: Quasar\_25 Start: 21126, Stop: 22223, Start Num: 23

Candidate Starts for Quasar\_25:

(Start: 23 @21126 has 35 MA's), (24, 21144), (Start: 46 @21249 has 7 MA's), (92, 21447), (112, 21561), (115, 21579), (118, 21588), (121, 21606), (129, 21642), (145, 21702), (149, 21732), (173, 21882), (176, 21921), (183, 21966), (188, 21984), (192, 22008), (199, 22065), (207, 22125), (211, 22161), (219, 22191), (223, 22212),

Gene: RADical\_26 Start: 20518, Stop: 21615, Start Num: 23

Candidate Starts for RADical\_26:

(Start: 23 @20518 has 35 MA's), (24, 20536), (Start: 46 @20641 has 7 MA's), (92, 20839), (112, 20953), (115, 20971), (118, 20980), (121, 20998), (129, 21034), (145, 21094), (149, 21124), (173, 21274), (176, 21313), (183, 21358), (188, 21376), (192, 21400), (199, 21457), (207, 21517), (211, 21553), (219, 21583), (223, 21604),

Gene: RSchmailzl\_26 Start: 20661, Stop: 21758, Start Num: 23

Candidate Starts for RSchmailzl\_26:

(Start: 23 @20661 has 35 MA's), (24, 20679), (Start: 46 @20784 has 7 MA's), (92, 20982), (115, 21114), (118, 21123), (119, 21135), (121, 21141), (129, 21177), (145, 21237), (173, 21417), (176, 21456), (183, 21501), (188, 21519), (192, 21543), (199, 21600), (207, 21660), (211, 21696), (219, 21726), (223, 21747),

Gene: RedBaron\_26 Start: 20561, Stop: 21658, Start Num: 23

Candidate Starts for RedBaron\_26:

(Start: 23 @20561 has 35 MA's), (24, 20579), (Start: 46 @20684 has 7 MA's), (92, 20882), (115, 21014), (118, 21023), (121, 21041), (129, 21077), (145, 21137), (173, 21317), (176, 21356), (183, 21401), (188, 21419), (192, 21443), (199, 21500), (207, 21560), (211, 21596), (219, 21626), (223, 21647),

Gene: RogerDodger\_36 Start: 29082, Stop: 30254, Start Num: 9

Candidate Starts for RogerDodger\_36:

(Start: 9 @29082 has 15 MA's), (25, 29223), (29, 29241), (60, 29376), (74, 29442), (100, 29529), (115, 29631), (149, 29736), (168, 29862), (169, 29868), (184, 29976), (188, 29994), (222, 30219),

Gene: Samman98\_26 Start: 22025, Stop: 23065, Start Num: 33

Candidate Starts for Samman98\_26:

(Start: 33 @22025 has 18 MA's), (51, 22094), (54, 22100), (100, 22280), (115, 22382), (120, 22406), (121, 22409), (123, 22418), (138, 22505), (160, 22610), (167, 22649), (168, 22673), (175, 22718), (180, 22766), (182, 22775), (184, 22787), (186, 22802), (204, 22925), (210, 22982),

Gene: Sapo\_25 Start: 21383, Stop: 22177, Start Num: 67

Candidate Starts for Sapo\_25:

(Start: 67 @21383 has 1 MA's), (76, 21425), (85, 21461), (108, 21551), (120, 21626), (121, 21629), (156, 21722), (177, 21878), (183, 21917), (205, 22055), (208, 22085), (209, 22094), (219, 22142),

Gene: Sekhmet\_26 Start: 22385, Stop: 23425, Start Num: 33

Candidate Starts for Sekhmet\_26:

(Start: 33 @22385 has 18 MA's), (51, 22454), (54, 22460), (100, 22640), (115, 22742), (120, 22766), (121, 22769), (123, 22778), (138, 22865), (160, 22970), (167, 23009), (168, 23033), (175, 23078),

(180, 23126), (182, 23135), (184, 23147), (186, 23162), (204, 23285), (210, 23342),

Gene: SheckWes\_25 Start: 20283, Stop: 21275, Start Num: 46

Candidate Starts for SheckWes\_25:

(Start: 46 @20283 has 7 MA's), (83, 20430), (94, 20472), (99, 20481), (102, 20499), (109, 20556), (115, 20589), (124, 20628), (140, 20718), (144, 20727), (156, 20796), (161, 20820), (168, 20880), (178, 20955), (188, 21015), (189, 21018), (204, 21135), (208, 21168), (213, 21204), (222, 21240), (223, 21246), (224, 21258),

Gene: Shinji\_33 Start: 28194, Stop: 29366, Start Num: 9

Candidate Starts for Shinji\_33:

(Start: 9 @28194 has 15 MA's), (25, 28335), (29, 28353), (60, 28488), (74, 28554), (79, 28572), (93, 28623), (100, 28641), (115, 28743), (149, 28848), (168, 28974), (169, 28980), (184, 29088), (188, 29106), (222, 29331),

Gene: Shlim410\_26 Start: 22619, Stop: 23656, Start Num: 33

Candidate Starts for Shlim410\_26:

(Start: 33 @22619 has 18 MA's), (51, 22688), (54, 22694), (100, 22874), (105, 22895), (115, 22976), (121, 23003), (136, 23096), (160, 23204), (168, 23267), (178, 23342), (210, 23573),

Gene: SketchMex\_24 Start: 20168, Stop: 21265, Start Num: 23

Candidate Starts for SketchMex\_24:

(16, 20099), (Start: 23 @20168 has 35 MA's), (24, 20186), (Start: 46 @20291 has 7 MA's), (94, 20498), (112, 20603), (115, 20621), (118, 20630), (130, 20684), (145, 20744), (166, 20873), (173, 20924), (183, 21008), (188, 21026), (193, 21059), (200, 21110), (201, 21122), (216, 21218), (223, 21254),

Gene: Socotra\_26 Start: 20517, Stop: 21614, Start Num: 23

Candidate Starts for Socotra\_26:

(Start: 23 @20517 has 35 MA's), (24, 20535), (Start: 46 @20640 has 7 MA's), (92, 20838), (112, 20952), (115, 20970), (118, 20979), (121, 20997), (129, 21033), (145, 21093), (149, 21123), (173, 21273), (176, 21312), (183, 21357), (188, 21375), (192, 21399), (199, 21456), (207, 21516), (211, 21552), (219, 21582), (223, 21603),

Gene: Sopespian\_25 Start: 20518, Stop: 21615, Start Num: 23

Candidate Starts for Sopespian\_25:

(Start: 23 @20518 has 35 MA's), (24, 20536), (Start: 46 @20641 has 7 MA's), (92, 20839), (115, 20971), (118, 20980), (121, 20998), (129, 21034), (145, 21094), (149, 21124), (173, 21274), (176, 21313), (183, 21358), (188, 21376), (192, 21400), (199, 21457), (207, 21517), (211, 21553), (219, 21583), (223, 21604),

Gene: Splinter\_29 Start: 22610, Stop: 23578, Start Num: 39

Candidate Starts for Splinter\_29:

(15, 22433), (32, 22577), (36, 22601), (Start: 39 @22610 has 3 MA's), (Start: 43 @22625 has 3 MA's), (80, 22796), (82, 22805), (99, 22865), (112, 22958), (115, 22976), (123, 23012), (124, 23015), (134, 23030), (162, 23138), (164, 23150), (171, 23216), (175, 23249), (183, 23312), (191, 23354), (192, 23360), (194, 23387), (195, 23390), (197, 23408), (198, 23411), (203, 23450), (205, 23456), (208, 23489), (223, 23567),

Gene: Starburst\_26 Start: 20518, Stop: 21615, Start Num: 23

Candidate Starts for Starburst\_26:

(Start: 23 @20518 has 35 MA's), (24, 20536), (Start: 46 @20641 has 7 MA's), (92, 20839), (112, 20953), (115, 20971), (118, 20980), (121, 20998), (129, 21034), (145, 21094), (149, 21124), (173, 21274), (176, 21313), (183, 21358), (188, 21376), (192, 21400), (199, 21457), (207, 21517), (211,

21553), (219, 21583), (223, 21604),

Gene: SteamedHams\_27 Start: 20181, Stop: 21269, Start Num: 23

Candidate Starts for SteamedHams\_27:

(22, 20178), (Start: 23 @20181 has 35 MA's), (24, 20199), (Start: 46 @20304 has 7 MA's), (73, 20427), (112, 20616), (115, 20634), (118, 20643), (119, 20655), (147, 20766), (156, 20820), (160, 20841), (173, 20928), (183, 21012), (188, 21030), (193, 21063), (201, 21126), (203, 21144), (204, 21147), (205, 21150), (211, 21207), (223, 21258),

Gene: SummitAcademy\_25 Start: 20359, Stop: 21351, Start Num: 46

Candidate Starts for SummitAcademy\_25:

(Start: 46 @20359 has 7 MA's), (83, 20506), (99, 20557), (102, 20575), (109, 20632), (115, 20665), (140, 20794), (144, 20803), (156, 20872), (161, 20896), (168, 20956), (178, 21031), (188, 21091), (189, 21094), (204, 21211), (208, 21244), (213, 21280), (222, 21316), (223, 21322), (224, 21334),

Gene: Survivors\_27 Start: 21337, Stop: 22437, Start Num: 23

Candidate Starts for Survivors\_27:

(Start: 23 @21337 has 35 MA's), (24, 21355), (Start: 46 @21460 has 7 MA's), (77, 21598), (97, 21676), (100, 21688), (104, 21703), (112, 21772), (115, 21790), (120, 21814), (156, 21982), (183, 22174), (186, 22195), (188, 22198), (193, 22231), (201, 22294), (203, 22312), (205, 22318), (223, 22426),

Gene: TZGordon\_31 Start: 22485, Stop: 23432, Start Num: 43

Candidate Starts for TZGordon\_31:

(Start: 43 @22485 has 3 MA's), (80, 22656), (99, 22725), (112, 22818), (115, 22836), (155, 22968), (158, 22983), (164, 23010), (171, 23073), (175, 23106), (179, 23139), (182, 23163), (198, 23268), (205, 23313), (208, 23343), (212, 23370), (214, 23379), (223, 23421),

Gene: TinaLin\_31 Start: 22732, Stop: 23730, Start Num: 42

Candidate Starts for TinaLin\_31:

(41, 22729), (Start: 42 @22732 has 3 MA's), (75, 22879), (80, 22900), (94, 22957), (99, 22969), (115, 23080), (155, 23263), (168, 23356), (174, 23392), (175, 23401), (191, 23506), (192, 23512), (194, 23539), (195, 23542), (211, 23668), (217, 23686), (218, 23695), (223, 23719),

Gene: Toast\_29 Start: 23615, Stop: 24595, Start Num: 52

Candidate Starts for Toast\_29:

(37, 23555), (Start: 52 @23615 has 8 MA's), (Start: 78 @23726 has 1 MA's), (105, 23822), (109, 23870), (115, 23903), (121, 23930), (133, 23999), (136, 24023), (138, 24026), (156, 24116), (159, 24134), (160, 24137), (168, 24200), (178, 24275), (202, 24431), (210, 24506), (225, 24578), (226, 24587),

Gene: Tolls\_27 Start: 20184, Stop: 21263, Start Num: 23

Candidate Starts for Tolls\_27:

(22, 20181), (Start: 23 @20184 has 35 MA's), (24, 20202), (Start: 46 @20307 has 7 MA's), (73, 20430), (100, 20535), (112, 20619), (115, 20637), (120, 20661), (143, 20742), (147, 20760), (156, 20814), (173, 20922), (183, 21006), (188, 21024), (193, 21057), (201, 21120), (203, 21138), (204, 21141), (205, 21144), (211, 21201),

Gene: Troje\_25 Start: 20150, Stop: 21247, Start Num: 23

Candidate Starts for Troje\_25:

(16, 20081), (Start: 23 @20150 has 35 MA's), (24, 20168), (Start: 46 @20273 has 7 MA's), (94, 20480), (112, 20585), (115, 20603), (118, 20612), (130, 20666), (145, 20726), (166, 20855), (173, 20906), (183, 20990), (188, 21008), (193, 21041), (200, 21092), (201, 21104), (216, 21200), (223, 21236),

Gene: Twinkle\_26 Start: 23678, Stop: 24715, Start Num: 33

Candidate Starts for Twinkle\_26:

(Start: 33 @23678 has 18 MA's), (51, 23747), (54, 23753), (100, 23933), (105, 23954), (115, 24035), (121, 24062), (136, 24155), (160, 24263), (168, 24326), (178, 24401), (210, 24632),

Gene: Twister6\_35 Start: 28645, Stop: 29817, Start Num: 9

Candidate Starts for Twister6\_35:

(Start: 9 @28645 has 15 MA's), (25, 28786), (29, 28804), (60, 28939), (74, 29005), (100, 29092), (115, 29194), (149, 29299), (168, 29425), (169, 29431), (184, 29539), (188, 29557), (222, 29782),

Gene: Typhonomachy\_25 Start: 20517, Stop: 21647, Start Num: 23

Candidate Starts for Typhonomachy\_25:

(Start: 23 @20517 has 35 MA's), (24, 20535), (Start: 46 @20640 has 7 MA's), (92, 20838), (112, 20952), (115, 20970), (118, 20979), (126, 21033), (141, 21114), (145, 21126), (150, 21159), (173, 21306), (176, 21345), (183, 21390), (188, 21408), (192, 21432), (199, 21489), (207, 21549), (211, 21585), (219, 21615), (223, 21636),

Gene: VanDeWege\_36 Start: 28981, Stop: 30153, Start Num: 9

Candidate Starts for VanDeWege\_36:

(Start: 9 @28981 has 15 MA's), (29, 29140), (60, 29275), (74, 29341), (100, 29428), (115, 29530), (149, 29635), (168, 29761), (169, 29767), (184, 29875), (188, 29893), (222, 30118),

Gene: Vendetta\_29 Start: 22610, Stop: 23578, Start Num: 39

Candidate Starts for Vendetta\_29:

(15, 22433), (32, 22577), (36, 22601), (Start: 39 @22610 has 3 MA's), (Start: 43 @22625 has 3 MA's), (82, 22805), (99, 22865), (112, 22958), (115, 22976), (123, 23012), (124, 23015), (134, 23030), (162, 23138), (164, 23150), (171, 23216), (175, 23249), (183, 23312), (191, 23354), (192, 23360), (194, 23387), (195, 23390), (197, 23408), (198, 23411), (203, 23450), (205, 23456), (208, 23489), (223, 23567),

Gene: Vine\_26 Start: 21286, Stop: 22272, Start Num: 46

Candidate Starts for Vine\_26:

(Start: 46 @21286 has 7 MA's), (94, 21475), (115, 21592), (140, 21721), (144, 21730), (156, 21799), (161, 21823), (168, 21883), (178, 21958), (188, 22018), (189, 22021), (208, 22168), (213, 22204), (222, 22240), (224, 22258),

Gene: Widow\_25 Start: 19674, Stop: 20909, Start Num: 14

Candidate Starts for Widow\_25:

(Start: 14 @19674 has 4 MA's), (27, 19785), (29, 19794), (30, 19803), (38, 19848), (50, 19893), (62, 19950), (70, 19980), (72, 19992), (87, 20055), (91, 20079), (103, 20124), (110, 20178), (113, 20193), (114, 20196), (117, 20211), (128, 20271), (145, 20367), (151, 20415), (152, 20418), (185, 20649), (196, 20724), (207, 20808), (221, 20883), (222, 20889),

Gene: William\_29 Start: 23441, Stop: 24427, Start Num: 52

Candidate Starts for William\_29:

(37, 23381), (Start: 52 @23441 has 8 MA's), (68, 23504), (Start: 78 @23552 has 1 MA's), (105, 23648), (115, 23729), (116, 23732), (121, 23756), (133, 23825), (138, 23852), (159, 23960), (160, 23963), (168, 24026), (171, 24038), (178, 24101), (192, 24182), (195, 24212), (210, 24332),

Gene: WinkNick\_26 Start: 22010, Stop: 23047, Start Num: 33

Candidate Starts for WinkNick\_26:

(10, 21839), (11, 21842), (Start: 33 @22010 has 18 MA's), (51, 22079), (54, 22085), (100, 22265), (105, 22286), (115, 22367), (121, 22394), (136, 22487), (160, 22595), (168, 22658), (178, 22733),

(210, 22964),

Gene: Wocket\_30 Start: 24063, Stop: 25040, Start Num: 52

Candidate Starts for Wocket\_30:

(37, 24003), (Start: 52 @24063 has 8 MA's), (71, 24144), (Start: 78 @24177 has 1 MA's), (86, 24204), (105, 24270), (111, 24327), (115, 24351), (159, 24582), (160, 24585), (168, 24648), (175, 24693), (184, 24762), (210, 24954), (222, 25005),

Gene: Wolfwood\_29 Start: 21481, Stop: 22581, Start Num: 23

Candidate Starts for Wolfwood\_29:

(Start: 23 @21481 has 35 MA's), (24, 21499), (Start: 46 @21604 has 7 MA's), (77, 21742), (97, 21820), (100, 21832), (112, 21916), (115, 21934), (120, 21958), (156, 22126), (183, 22318), (186, 22339), (188, 22342), (193, 22375), (201, 22438), (203, 22456), (205, 22462), (223, 22570),

Gene: Yarn\_24 Start: 20174, Stop: 21286, Start Num: 23

Candidate Starts for Yarn\_24:

(Start: 23 @20174 has 35 MA's), (24, 20192), (Start: 46 @20297 has 7 MA's), (73, 20420), (112, 20609), (115, 20627), (118, 20636), (119, 20648), (142, 20753), (156, 20837), (173, 20945), (183, 21029), (188, 21047), (193, 21080), (201, 21143), (203, 21161), (204, 21164), (205, 21167), (211, 21224),

Gene: Yucky\_25 Start: 21145, Stop: 22131, Start Num: 46

Candidate Starts for Yucky\_25:

(Start: 46 @21145 has 7 MA's), (94, 21334), (115, 21451), (120, 21475), (138, 21574), (141, 21580), (156, 21658), (157, 21661), (161, 21682), (168, 21742), (178, 21817), (183, 21850), (192, 21901), (204, 21994), (222, 22099), (224, 22117),

Gene: Yummy\_26 Start: 20064, Stop: 21200, Start Num: 23

Candidate Starts for Yummy\_26:

(16, 19995), (Start: 23 @20064 has 35 MA's), (24, 20082), (Start: 46 @20187 has 7 MA's), (112, 20499), (115, 20517), (118, 20526), (122, 20550), (127, 20577), (145, 20679), (166, 20808), (173, 20859), (175, 20880), (183, 20943), (188, 20961), (193, 20994), (201, 21057), (216, 21153),

Gene: YungMoney\_35 Start: 29700, Stop: 30950, Start Num: 9

Candidate Starts for YungMoney\_35:

(Start: 9 @29700 has 15 MA's), (21, 29814), (29, 29859), (31, 29880), (66, 30024), (74, 30060), (100, 30147), (115, 30249), (121, 30276), (133, 30357), (156, 30480), (157, 30483), (160, 30501), (169, 30570), (184, 30678),

Gene: Zareef\_27 Start: 21489, Stop: 22589, Start Num: 23

Candidate Starts for Zareef\_27:

(Start: 23 @21489 has 35 MA's), (24, 21507), (Start: 46 @21612 has 7 MA's), (77, 21750), (97, 21828), (100, 21840), (104, 21855), (112, 21924), (115, 21942), (120, 21966), (156, 22134), (183, 22326), (186, 22347), (188, 22350), (193, 22383), (201, 22446), (203, 22464), (205, 22470), (223, 22578),