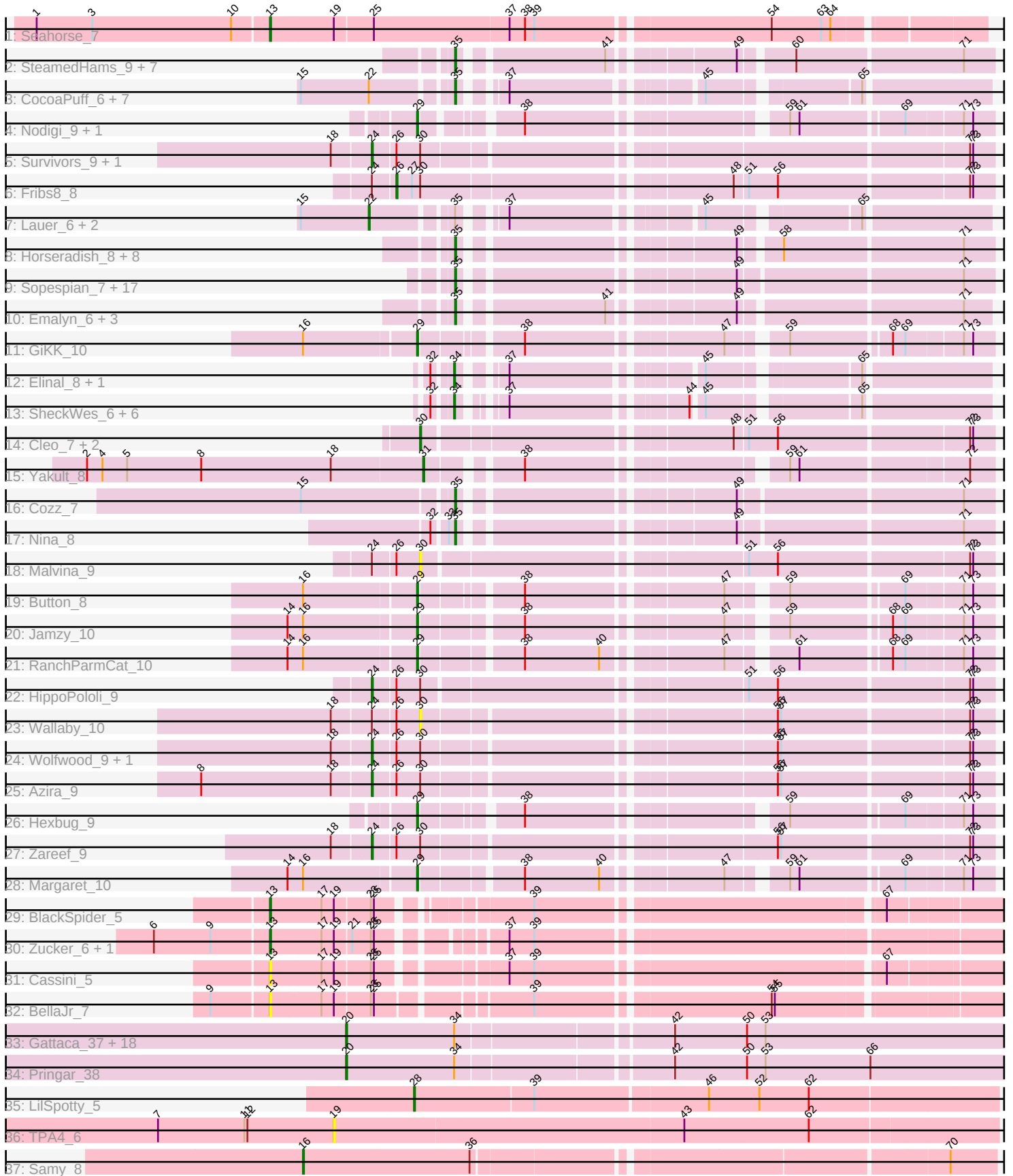


Pham 330658



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 330658 Report

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

Pham number 330658 has 112 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Seahorse_7
- Track 2 : SteamedHams_9, AndPeggy_6, CanesSauce_7, Tolls_9, CaramelLatte_7, BillDoor_9, Yarn_6, ChocoMunchkin_7
- Track 3 : CocoaPuff_6, Tarnish_7, Balloona_6, Bavilard_7, Vine_8, SummitAcademy_6, Yucky_7, PotPie_7
- Track 4 : Nodigi_9, Orla_9
- Track 5 : Survivors_9, Nibbles_9
- Track 6 : Fribs8_8
- Track 7 : Lauer_6, Feastonyeet_6, BigChungus_6
- Track 8 : Horseradish_8, Blondies_8, SweatNTears_9, Biskit_8, MScarn_9, Troje_7, SketchMex_6, Buttrmlkdreams_7, Yummy_8
- Track 9 : Sopespian_7, RSchmailzl_8, RADical_8, Socotra_8, RedBaron_9, Quasar_7, ChickenTender_9, Bubble_7, MunkgeeRoachy_7, Carsonalex_8, Agatha_7, Typhonmarchy_7, GoldHunter_7, PsychoKiller_7, Starburst_8, Burnsey_7, Elliott_7, Axym_7
- Track 10 : Emalyn_6, Amok_6, GTE2_05, AikoCarson_6
- Track 11 : GiKK_10
- Track 12 : Elinal_8, KayGee_7
- Track 13 : SheckWes_6, Mayweather_8, McDazzle_6, Pons_7, CherryonLim_8, ElJefes_6, MAnor_7
- Track 14 : Cleo_7, Gibbous_7, Dre3_7
- Track 15 : Yakult_8
- Track 16 : Cozz_7
- Track 17 : Nina_8
- Track 18 : Malvina_9
- Track 19 : Button_8
- Track 20 : Jamzy_10
- Track 21 : RanchParmCat_10
- Track 22 : HippoPololi_9
- Track 23 : Wallaby_10
- Track 24 : Wolfwood_9, MaVan_9
- Track 25 : Azira_9
- Track 26 : Hexbug_9
- Track 27 : Zareef_9
- Track 28 : Margaret_10
- Track 29 : BlackSpider_5
- Track 30 : Zucker_6, Bauer_7

- Track 31 : Cassini_5
- Track 32 : BellaJr_7
- Track 33 : Gattaca_37, RedRaider77_38, Corazon_36, GoongGoong_37, Raela_38, Tesla_37, FeliMaine_40, Lilbit_37, Beelzebub_42, LittleLaf_38, Huphlepuuff_40, JoieB_39, Marvin_36, VasuNzinga_38, MosMoris_36, Caprice_37, Clarkson_39, Poise_38, Blackbeetle_38
- Track 34 : Pringar_38
- Track 35 : LilSpotty_5
- Track 36 : TPA4_6
- Track 37 : Samy_8

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

The start number called the most often in the published annotations is 35, it was called in 37 of the 93 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_7, AikoCarson_6, Amok_6, AndPeggy_6, Axym_7, Balloona_6, Bavidard_7, BillDoor_9, Biskit_8, Blondies_8, Bubble_7, Burnsey_7, Buttrmlkdreams_7, CanesSauce_7, CaramelLatte_7, Carsonalex_8, ChickenTender_9, ChocoMunchkin_7, CocoaPuff_6, Cozz_7, Elliott_7, Emalyn_6, GTE2_05, GoldHunter_7, Horseradish_8, MScarn_9, MunkgeeRoachy_7, Nina_8, PotPie_7, PsychoKiller_7, Quasar_7, RADical_8, RSchmailzl_8, RedBaron_9, SketchMex_6, Socotra_8, Sopeesian_7, Starburst_8, SteamedHams_9, SummitAcademy_6, SweatNTears_9, Tarnish_7, Tolls_9, Troje_7, Typhonomachy_7, Vine_8, Yarn_6, Yucky_7, Yummy_8,

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

- BigChungus_6, Feastonyeet_6, Lauer_6,

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

- Azira_9, Bauer_7, Beelzebub_42, BellaJr_7, BlackSpider_5, Blackbeetle_38, Button_8, Caprice_37, Cassini_5, CherryonLim_8, Clarkson_39, Cleo_7, Corazon_36, Dre3_7, ElJefes_6, Elinal_8, FeliMaine_40, Fribs8_8, Gattaca_37, GiKK_10, Gibbous_7, GoongGoong_37, Hexbug_9, HippoPololi_9, Huphlepuuff_40, Jamzy_10, JoieB_39, KayGee_7, LilSpotty_5, Lilbit_37, LittleLaf_38, MAnor_7, MaVan_9, Malvina_9, Margaret_10, Marvin_36, Mayweather_8, McDazzle_6, MosMoris_36, Nibbles_9, Nodigi_9, Orla_9, Poise_38, Pons_7, Pringar_38, Raela_38, RanchParmCat_10, RedRaider77_38, Samy_8, Seahorse_7, SheckWes_6, Survivors_9, TPA4_6, Tesla_37, VasuNzinga_38, Wallaby_10, Wolfwood_9, Yakult_8, Zareef_9, Zucker_6,

Summary by start number:

Start 13:

- Found in 6 of 112 (5.4%) of genes in pham
- Manual Annotations of this start: 4 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bauer_7 (FN), BellaJr_7 (FN), BlackSpider_5 (FN), Cassini_5 (FN), Seahorse_7 (AY), Zucker_6 (FN),

Start 16:

- Found in 6 of 112 (5.4%) of genes in pham
- Manual Annotations of this start: 1 of 93
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Samy_8 (singleton),

Start 19:

- Found in 7 of 112 (6.2%) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: TPA4_6 (singleton),

Start 20:

- Found in 20 of 112 (17.9%) of genes in pham
- Manual Annotations of this start: 20 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beelzebub_42 (S), Blackbeetle_38 (S), Caprice_37 (S), Clarkson_39 (S), Corazon_36 (S), FeliMaine_40 (S), Gattaca_37 (S), GoongGoong_37 (S), Huphlepuuff_40 (S), JoieB_39 (S), Lilbit_37 (S), LittleLaf_38 (S), Marvin_36 (S), MosMoris_36 (S), Poise_38 (S), Pringar_38 (S), Raela_38 (S), RedRaider77_38 (S), Tesla_37 (S), VasuNzinga_38 (S),

Start 22:

- Found in 11 of 112 (9.8%) of genes in pham
- Manual Annotations of this start: 3 of 93
- Called 27.3% of time when present
- Phage (with cluster) where this start called: BigChungus_6 (CT), Feastonyeet_6 (CT), Lauer_6 (CT),

Start 24:

- Found in 10 of 112 (8.9%) of genes in pham
- Manual Annotations of this start: 7 of 93
- Called 70.0% of time when present
- Phage (with cluster) where this start called: Azira_9 (CT), HippoPololi_9 (CT), MaVan_9 (CT), Nibbles_9 (CT), Survivors_9 (CT), Wolfwood_9 (CT), Zareef_9 (CT),

Start 26:

- Found in 10 of 112 (8.9%) of genes in pham
- Manual Annotations of this start: 1 of 93
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Fribs8_8 (CT),

Start 28:

- Found in 1 of 112 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilSpotty_5 (singleton),

Start 29:

- Found in 8 of 112 (7.1%) of genes in pham
- Manual Annotations of this start: 8 of 93
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Button_8 (CT), GiKK_10 (CT), Hexbug_9 (CT), Jamzy_10 (CT), Margaret_10 (CT), Nodigi_9 (CT), Orla_9 (CT), RanchParmCat_10 (CT),

Start 30:

- Found in 13 of 112 (11.6%) of genes in pham
- Manual Annotations of this start: 3 of 93
- Called 38.5% of time when present
- Phage (with cluster) where this start called: Cleo_7 (CT), Dre3_7 (CT), Gibbous_7 (CT), Malvina_9 (CT), Wallaby_10 (CT),

Start 31:

- Found in 1 of 112 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yakult_8 (CT),

Start 34:

- Found in 29 of 112 (25.9%) of genes in pham
- Manual Annotations of this start: 7 of 93
- Called 31.0% of time when present
- Phage (with cluster) where this start called: CherryonLim_8 (CT), ElJefes_6 (CT), Elinal_8 (CT), KayGee_7 (CT), MAnor_7 (CT), Mayweather_8 (CT), McDazzle_6 (CT), Pons_7 (CT), SheckWes_6 (CT),

Start 35:

- Found in 52 of 112 (46.4%) of genes in pham
- Manual Annotations of this start: 37 of 93
- Called 94.2% of time when present
- Phage (with cluster) where this start called: Agatha_7 (CT), AikoCarson_6 (CT), Amok_6 (CT), AndPeggy_6 (CT), Axym_7 (CT), Balloona_6 (CT), Bavidard_7 (CT), BillDoor_9 (CT), Biskit_8 (CT), Blondies_8 (CT), Bubble_7 (CT), Burnsey_7 (CT), Buttrmlkdreams_7 (CT), CanesSauce_7 (CT), CaramelLatte_7 (CT), Carsonalex_8 (CT), ChickenTender_9 (CT), ChocoMunchkin_7 (CT), CocoaPuff_6 (CT), Cozz_7 (CT), Elliott_7 (CT), Emalyn_6 (CT), GTE2_05 (CT), GoldHunter_7 (CT), Horseradish_8 (CT), MScarn_9 (CT), MunkgeeRoachy_7 (CT), Nina_8 (CT), PotPie_7 (CT), PsychoKiller_7 (CT), Quasar_7 (CT), RADical_8 (CT), RSchmailzl_8 (CT), RedBaron_9 (CT), SketchMex_6 (CT), Socotra_8 (CT), Sopespian_7 (CT), Starburst_8 (CT), SteamedHams_9 (CT), SummitAcademy_6 (CT), SweatNTears_9 (CT), Tarnish_7 (CT), Tolls_9 (CT), Troje_7 (CT), Typhonomachy_7 (CT), Vine_8 (CT), Yarn_6 (CT), Yucky_7 (CT), Yummy_8 (CT),

Summary by clusters:

There are 5 clusters represented in this pham: AY, S, singleton, FN, CT,

Info for manual annotations of cluster AY:

- Start number 13 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster CT:

- Start number 22 was manually annotated 3 times for cluster CT.
- Start number 24 was manually annotated 7 times for cluster CT.
- Start number 26 was manually annotated 1 time for cluster CT.

- Start number 29 was manually annotated 8 times for cluster CT.
- Start number 30 was manually annotated 3 times for cluster CT.
- Start number 31 was manually annotated 1 time for cluster CT.
- Start number 34 was manually annotated 7 times for cluster CT.
- Start number 35 was manually annotated 37 times for cluster CT.

Info for manual annotations of cluster FN:

- Start number 13 was manually annotated 3 times for cluster FN.

Info for manual annotations of cluster S:

- Start number 20 was manually annotated 20 times for cluster S.

Gene Information:

Gene: Agatha_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Agatha_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: AikoCarson_6 Start: 4622, Stop: 5080, Start Num: 35

Candidate Starts for AikoCarson_6:

(Start: 35 @4622 has 37 MA's), (41, 4748), (49, 4853), (71, 5054),

Gene: Amok_6 Start: 4623, Stop: 5081, Start Num: 35

Candidate Starts for Amok_6:

(Start: 35 @4623 has 37 MA's), (41, 4749), (49, 4854), (71, 5055),

Gene: AndPeggy_6 Start: 4931, Stop: 5392, Start Num: 35

Candidate Starts for AndPeggy_6:

(Start: 35 @4931 has 37 MA's), (41, 5057), (49, 5162), (60, 5207), (71, 5363),

Gene: Axym_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Axym_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: Azira_9 Start: 5719, Stop: 6273, Start Num: 24

Candidate Starts for Azira_9:

(8, 5557), (18, 5683), (Start: 24 @5719 has 7 MA's), (Start: 26 @5740 has 1 MA's), (Start: 30 @5761 has 3 MA's), (56, 6073), (57, 6076), (72, 6250), (73, 6253),

Gene: Balloona_6 Start: 4637, Stop: 5071, Start Num: 35

Candidate Starts for Balloona_6:

(15, 4502), (Start: 22 @4568 has 3 MA's), (Start: 35 @4637 has 37 MA's), (37, 4667), (45, 4826), (65, 4955),

Gene: Bauer_7 Start: 5263, Stop: 5898, Start Num: 13

Candidate Starts for Bauer_7:

(6, 5155), (9, 5209), (Start: 13 @5263 has 4 MA's), (17, 5311), (19, 5323), (21, 5338), (23, 5356), (25, 5359), (37, 5455), (39, 5479),

Gene: Bavilard_7 Start: 5413, Stop: 5847, Start Num: 35

Candidate Starts for Bavilard_7:

(15, 5278), (Start: 22 @5344 has 3 MA's), (Start: 35 @5413 has 37 MA's), (37, 5443), (45, 5602), (65, 5731),

Gene: Beelzebub_42 Start: 15494, Stop: 16126, Start Num: 20

Candidate Starts for Beelzebub_42:

(Start: 20 @15494 has 20 MA's), (Start: 34 @15599 has 7 MA's), (42, 15794), (50, 15863), (53, 15881),

Gene: BellaJr_7 Start: 5317, Stop: 5961, Start Num: 13

Candidate Starts for BellaJr_7:

(9, 5263), (Start: 13 @5317 has 4 MA's), (17, 5365), (19, 5377), (23, 5410), (25, 5413), (39, 5545), (54, 5758), (55, 5761),

Gene: BigChungus_6 Start: 4593, Stop: 5096, Start Num: 22

Candidate Starts for BigChungus_6:

(15, 4527), (Start: 22 @4593 has 3 MA's), (Start: 35 @4662 has 37 MA's), (37, 4692), (45, 4851), (65, 4980),

Gene: BillDoor_9 Start: 4896, Stop: 5357, Start Num: 35

Candidate Starts for BillDoor_9:

(Start: 35 @4896 has 37 MA's), (41, 5022), (49, 5127), (60, 5172), (71, 5328),

Gene: Biskit_8 Start: 4888, Stop: 5349, Start Num: 35

Candidate Starts for Biskit_8:

(Start: 35 @4888 has 37 MA's), (49, 5119), (58, 5152), (71, 5320),

Gene: BlackSpider_5 Start: 4325, Stop: 4957, Start Num: 13

Candidate Starts for BlackSpider_5:

(Start: 13 @4325 has 4 MA's), (17, 4373), (19, 4385), (23, 4418), (25, 4421), (39, 4544), (67, 4856),

Gene: Blackbeetle_38 Start: 14513, Stop: 15145, Start Num: 20

Candidate Starts for Blackbeetle_38:

(Start: 20 @14513 has 20 MA's), (Start: 34 @14618 has 7 MA's), (42, 14813), (50, 14882), (53, 14900),

Gene: Blondies_8 Start: 4889, Stop: 5350, Start Num: 35

Candidate Starts for Blondies_8:

(Start: 35 @4889 has 37 MA's), (49, 5120), (58, 5153), (71, 5321),

Gene: Bubble_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Bubble_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: Burnsey_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Burnsey_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: Button_8 Start: 4950, Stop: 5435, Start Num: 29

Candidate Starts for Button_8:

(Start: 16 @4845 has 1 MA's), (Start: 29 @4950 has 8 MA's), (38, 5034), (47, 5208), (59, 5253), (69, 5355), (71, 5406), (73, 5415),

Gene: Buttrmlkdreams_7 Start: 4889, Stop: 5350, Start Num: 35

Candidate Starts for Buttrmlkdreams_7:

(Start: 35 @4889 has 37 MA's), (49, 5120), (58, 5153), (71, 5321),

Gene: CanesSauce_7 Start: 4931, Stop: 5392, Start Num: 35

Candidate Starts for CanesSauce_7:

(Start: 35 @4931 has 37 MA's), (41, 5057), (49, 5162), (60, 5207), (71, 5363),

Gene: Caprice_37 Start: 14583, Stop: 15215, Start Num: 20

Candidate Starts for Caprice_37:

(Start: 20 @14583 has 20 MA's), (Start: 34 @14688 has 7 MA's), (42, 14883), (50, 14952), (53, 14970),

Gene: CaramellLatte_7 Start: 4931, Stop: 5392, Start Num: 35

Candidate Starts for CaramellLatte_7:

(Start: 35 @4931 has 37 MA's), (41, 5057), (49, 5162), (60, 5207), (71, 5363),

Gene: Carsonalex_8 Start: 4951, Stop: 5415, Start Num: 35

Candidate Starts for Carsonalex_8:

(Start: 35 @4951 has 37 MA's), (49, 5182), (71, 5386),

Gene: Cassini_5 Start: 4290, Stop: 4931, Start Num: 13

Candidate Starts for Cassini_5:

(Start: 13 @4290 has 4 MA's), (17, 4338), (19, 4350), (23, 4383), (25, 4386), (37, 4491), (39, 4515), (67, 4827),

Gene: CherryonLim_8 Start: 5387, Stop: 5818, Start Num: 34

Candidate Starts for CherryonLim_8:

(32, 5372), (Start: 34 @5387 has 7 MA's), (37, 5414), (44, 5564), (45, 5573), (65, 5702),

Gene: ChickenTender_9 Start: 4942, Stop: 5406, Start Num: 35

Candidate Starts for ChickenTender_9:

(Start: 35 @4942 has 37 MA's), (49, 5173), (71, 5377),

Gene: ChocoMunchkin_7 Start: 4931, Stop: 5392, Start Num: 35

Candidate Starts for ChocoMunchkin_7:

(Start: 35 @4931 has 37 MA's), (41, 5057), (49, 5162), (60, 5207), (71, 5363),

Gene: Clarkson_39 Start: 15195, Stop: 15827, Start Num: 20

Candidate Starts for Clarkson_39:

(Start: 20 @15195 has 20 MA's), (Start: 34 @15300 has 7 MA's), (42, 15495), (50, 15564), (53, 15582),

Gene: Cleo_7 Start: 5059, Stop: 5571, Start Num: 30

Candidate Starts for Cleo_7:

(Start: 30 @5059 has 3 MA's), (48, 5332), (51, 5344), (56, 5371), (72, 5548), (73, 5551),

Gene: CocoaPuff_6 Start: 4637, Stop: 5071, Start Num: 35

Candidate Starts for CocoaPuff_6:

(15, 4502), (Start: 22 @4568 has 3 MA's), (Start: 35 @4637 has 37 MA's), (37, 4667), (45, 4826), (65, 4955),

Gene: Corazon_36 Start: 15148, Stop: 15780, Start Num: 20

Candidate Starts for Corazon_36:

(Start: 20 @15148 has 20 MA's), (Start: 34 @15253 has 7 MA's), (42, 15448), (50, 15517), (53, 15535),

Gene: Cozz_7 Start: 4895, Stop: 5359, Start Num: 35

Candidate Starts for Cozz_7:

(15, 4757), (Start: 35 @4895 has 37 MA's), (49, 5126), (71, 5330),

Gene: Dre3_7 Start: 5006, Stop: 5518, Start Num: 30

Candidate Starts for Dre3_7:

(Start: 30 @5006 has 3 MA's), (48, 5279), (51, 5291), (56, 5318), (72, 5495), (73, 5498),

Gene: ElJefes_6 Start: 5107, Stop: 5541, Start Num: 34

Candidate Starts for ElJefes_6:

(32, 5092), (Start: 34 @5107 has 7 MA's), (37, 5137), (44, 5287), (45, 5296), (65, 5425),

Gene: Elinal_8 Start: 4639, Stop: 5073, Start Num: 34

Candidate Starts for Elinal_8:

(32, 4624), (Start: 34 @4639 has 7 MA's), (37, 4669), (45, 4828), (65, 4957),

Gene: Elliott_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Elliott_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: Emalyn_6 Start: 4622, Stop: 5080, Start Num: 35

Candidate Starts for Emalyn_6:

(Start: 35 @4622 has 37 MA's), (41, 4748), (49, 4853), (71, 5054),

Gene: Feastonyeet_6 Start: 4593, Stop: 5096, Start Num: 22

Candidate Starts for Feastonyeet_6:

(15, 4527), (Start: 22 @4593 has 3 MA's), (Start: 35 @4662 has 37 MA's), (37, 4692), (45, 4851), (65, 4980),

Gene: FeliMaine_40 Start: 15196, Stop: 15828, Start Num: 20

Candidate Starts for FeliMaine_40:

(Start: 20 @15196 has 20 MA's), (Start: 34 @15301 has 7 MA's), (42, 15496), (50, 15565), (53, 15583),

Gene: Fribs8_8 Start: 5534, Stop: 6073, Start Num: 26

Candidate Starts for Fribs8_8:

(Start: 24 @5513 has 7 MA's), (Start: 26 @5534 has 1 MA's), (27, 5549), (Start: 30 @5555 has 3 MA's), (48, 5834), (51, 5846), (56, 5873), (72, 6050), (73, 6053),

Gene: GTE2_05 Start: 4581, Stop: 5042, Start Num: 35

Candidate Starts for GTE2_05:

(Start: 35 @4581 has 37 MA's), (41, 4707), (49, 4812), (71, 5013),

Gene: Gattaca_37 Start: 14375, Stop: 15007, Start Num: 20

Candidate Starts for Gattaca_37:

(Start: 20 @14375 has 20 MA's), (Start: 34 @14480 has 7 MA's), (42, 14675), (50, 14744), (53, 14762),

Gene: GiKK_10 Start: 5253, Stop: 5738, Start Num: 29

Candidate Starts for GiKK_10:

(Start: 16 @5148 has 1 MA's), (Start: 29 @5253 has 8 MA's), (38, 5337), (47, 5511), (59, 5556), (68, 5646), (69, 5658), (71, 5709), (73, 5718),

Gene: Gibbous_7 Start: 5006, Stop: 5518, Start Num: 30

Candidate Starts for Gibbous_7:

(Start: 30 @5006 has 3 MA's), (48, 5279), (51, 5291), (56, 5318), (72, 5495), (73, 5498),

Gene: GoldHunter_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for GoldHunter_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: GoongGoong_37 Start: 14415, Stop: 15047, Start Num: 20

Candidate Starts for GoongGoong_37:

(Start: 20 @14415 has 20 MA's), (Start: 34 @14520 has 7 MA's), (42, 14715), (50, 14784), (53, 14802),

Gene: Hexbug_9 Start: 5939, Stop: 6421, Start Num: 29

Candidate Starts for Hexbug_9:

(Start: 29 @5939 has 8 MA's), (38, 6020), (59, 6239), (69, 6341), (71, 6392), (73, 6401),

Gene: HippoPololi_9 Start: 5605, Stop: 6162, Start Num: 24

Candidate Starts for HippoPololi_9:

(Start: 24 @5605 has 7 MA's), (Start: 26 @5626 has 1 MA's), (Start: 30 @5647 has 3 MA's), (51, 5935), (56, 5962), (72, 6139), (73, 6142),

Gene: Horseradish_8 Start: 4795, Stop: 5256, Start Num: 35

Candidate Starts for Horseradish_8:

(Start: 35 @4795 has 37 MA's), (49, 5026), (58, 5059), (71, 5227),

Gene: Huphlebuff_40 Start: 15000, Stop: 15632, Start Num: 20

Candidate Starts for Huphlebuff_40:

(Start: 20 @15000 has 20 MA's), (Start: 34 @15105 has 7 MA's), (42, 15300), (50, 15369), (53, 15387),

Gene: Jamzy_10 Start: 5261, Stop: 5749, Start Num: 29

Candidate Starts for Jamzy_10:

(14, 5141), (Start: 16 @5156 has 1 MA's), (Start: 29 @5261 has 8 MA's), (38, 5348), (47, 5522), (59, 5567), (68, 5657), (69, 5669), (71, 5720), (73, 5729),

Gene: JoieB_39 Start: 15219, Stop: 15851, Start Num: 20

Candidate Starts for JoieB_39:

(Start: 20 @15219 has 20 MA's), (Start: 34 @15324 has 7 MA's), (42, 15519), (50, 15588), (53, 15606),

Gene: KayGee_7 Start: 4639, Stop: 5073, Start Num: 34

Candidate Starts for KayGee_7:

(32, 4624), (Start: 34 @4639 has 7 MA's), (37, 4669), (45, 4828), (65, 4957),

Gene: Lauer_6 Start: 4623, Stop: 5126, Start Num: 22

Candidate Starts for Lauer_6:

(15, 4557), (Start: 22 @4623 has 3 MA's), (Start: 35 @4692 has 37 MA's), (37, 4722), (45, 4881), (65, 5010),

Gene: LilSpotty_5 Start: 3945, Stop: 4496, Start Num: 28

Candidate Starts for LilSpotty_5:

(Start: 28 @3945 has 1 MA's), (39, 4059), (46, 4221), (52, 4269), (62, 4317),

Gene: Lilbit_37 Start: 15196, Stop: 15828, Start Num: 20

Candidate Starts for Lilbit_37:

(Start: 20 @15196 has 20 MA's), (Start: 34 @15301 has 7 MA's), (42, 15496), (50, 15565), (53, 15583),

Gene: LittleLaf_38 Start: 14925, Stop: 15557, Start Num: 20

Candidate Starts for LittleLaf_38:

(Start: 20 @14925 has 20 MA's), (Start: 34 @15030 has 7 MA's), (42, 15225), (50, 15294), (53, 15312),

Gene: MAnor_7 Start: 4636, Stop: 5067, Start Num: 34

Candidate Starts for MAnor_7:

(32, 4621), (Start: 34 @4636 has 7 MA's), (37, 4663), (44, 4813), (45, 4822), (65, 4951),

Gene: MScarn_9 Start: 4889, Stop: 5350, Start Num: 35

Candidate Starts for MScarn_9:

(Start: 35 @4889 has 37 MA's), (49, 5120), (58, 5153), (71, 5321),

Gene: MaVan_9 Start: 5719, Stop: 6273, Start Num: 24

Candidate Starts for MaVan_9:

(18, 5683), (Start: 24 @5719 has 7 MA's), (Start: 26 @5740 has 1 MA's), (Start: 30 @5761 has 3 MA's), (56, 6073), (57, 6076), (72, 6250), (73, 6253),

Gene: Malvina_9 Start: 5650, Stop: 6165, Start Num: 30

Candidate Starts for Malvina_9:

(Start: 24 @5608 has 7 MA's), (Start: 26 @5629 has 1 MA's), (Start: 30 @5650 has 3 MA's), (51, 5938), (56, 5965), (72, 6142), (73, 6145),

Gene: Margaret_10 Start: 5637, Stop: 6125, Start Num: 29

Candidate Starts for Margaret_10:

(14, 5517), (Start: 16 @5532 has 1 MA's), (Start: 29 @5637 has 8 MA's), (38, 5724), (40, 5796), (47, 5898), (59, 5943), (61, 5952), (69, 6045), (71, 6096), (73, 6105),

Gene: Marvin_36 Start: 15195, Stop: 15827, Start Num: 20

Candidate Starts for Marvin_36:

(Start: 20 @15195 has 20 MA's), (Start: 34 @15300 has 7 MA's), (42, 15495), (50, 15564), (53, 15582),

Gene: Mayweather_8 Start: 5257, Stop: 5688, Start Num: 34

Candidate Starts for Mayweather_8:

(32, 5242), (Start: 34 @5257 has 7 MA's), (37, 5284), (44, 5434), (45, 5443), (65, 5572),

Gene: McDazzle_6 Start: 5101, Stop: 5535, Start Num: 34

Candidate Starts for McDazzle_6:

(32, 5086), (Start: 34 @5101 has 7 MA's), (37, 5131), (44, 5281), (45, 5290), (65, 5419),

Gene: MosMoris_36 Start: 14375, Stop: 15007, Start Num: 20

Candidate Starts for MosMoris_36:

(Start: 20 @14375 has 20 MA's), (Start: 34 @14480 has 7 MA's), (42, 14675), (50, 14744), (53, 14762),

Gene: MunkgeeRoachy_7 Start: 4942, Stop: 5406, Start Num: 35

Candidate Starts for MunkgeeRoachy_7:

(Start: 35 @4942 has 37 MA's), (49, 5173), (71, 5377),

Gene: Nibbles_9 Start: 5719, Stop: 6273, Start Num: 24

Candidate Starts for Nibbles_9:

(18, 5683), (Start: 24 @5719 has 7 MA's), (Start: 26 @5740 has 1 MA's), (Start: 30 @5761 has 3 MA's), (72, 6250), (73, 6253),

Gene: Nina_8 Start: 5928, Stop: 6392, Start Num: 35

Candidate Starts for Nina_8:

(32, 5910), (33, 5922), (Start: 35 @5928 has 37 MA's), (49, 6159), (71, 6363),

Gene: Nodigi_9 Start: 5940, Stop: 6416, Start Num: 29

Candidate Starts for Nodigi_9:

(Start: 29 @5940 has 8 MA's), (38, 6015), (59, 6234), (61, 6243), (69, 6336), (71, 6387), (73, 6396),

Gene: Orla_9 Start: 5939, Stop: 6421, Start Num: 29

Candidate Starts for Orla_9:

(Start: 29 @5939 has 8 MA's), (38, 6020), (59, 6239), (61, 6248), (69, 6341), (71, 6392), (73, 6401),

Gene: Poise_38 Start: 14513, Stop: 15145, Start Num: 20

Candidate Starts for Poise_38:

(Start: 20 @14513 has 20 MA's), (Start: 34 @14618 has 7 MA's), (42, 14813), (50, 14882), (53, 14900),

Gene: Pons_7 Start: 4636, Stop: 5067, Start Num: 34

Candidate Starts for Pons_7:

(32, 4621), (Start: 34 @4636 has 7 MA's), (37, 4663), (44, 4813), (45, 4822), (65, 4951),

Gene: PotPie_7 Start: 5496, Stop: 5930, Start Num: 35

Candidate Starts for PotPie_7:

(15, 5361), (Start: 22 @5427 has 3 MA's), (Start: 35 @5496 has 37 MA's), (37, 5526), (45, 5685), (65, 5814),

Gene: Pringar_38 Start: 14825, Stop: 15457, Start Num: 20

Candidate Starts for Pringar_38:

(Start: 20 @14825 has 20 MA's), (Start: 34 @14930 has 7 MA's), (42, 15125), (50, 15194), (53, 15212), (66, 15314),

Gene: PsychoKiller_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for PsychoKiller_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: Quasar_7 Start: 5515, Stop: 5979, Start Num: 35

Candidate Starts for Quasar_7:

(Start: 35 @5515 has 37 MA's), (49, 5746), (71, 5950),

Gene: RADical_8 Start: 4895, Stop: 5359, Start Num: 35

Candidate Starts for RADical_8:

(Start: 35 @4895 has 37 MA's), (49, 5126), (71, 5330),

Gene: RSchmailzl_8 Start: 5035, Stop: 5499, Start Num: 35

Candidate Starts for RSchmailzl_8:

(Start: 35 @5035 has 37 MA's), (49, 5266), (71, 5470),

Gene: Raela_38 Start: 15068, Stop: 15700, Start Num: 20

Candidate Starts for Raela_38:

(Start: 20 @15068 has 20 MA's), (Start: 34 @15173 has 7 MA's), (42, 15368), (50, 15437), (53, 15455),

Gene: RanchParmCat_10 Start: 5637, Stop: 6125, Start Num: 29

Candidate Starts for RanchParmCat_10:

(14, 5517), (Start: 16 @5532 has 1 MA's), (Start: 29 @5637 has 8 MA's), (38, 5724), (40, 5796), (47, 5898), (61, 5952), (68, 6033), (69, 6045), (71, 6096), (73, 6105),

Gene: RedBaron_9 Start: 4939, Stop: 5403, Start Num: 35

Candidate Starts for RedBaron_9:

(Start: 35 @4939 has 37 MA's), (49, 5170), (71, 5374),

Gene: RedRaider77_38 Start: 14969, Stop: 15601, Start Num: 20

Candidate Starts for RedRaider77_38:

(Start: 20 @14969 has 20 MA's), (Start: 34 @15074 has 7 MA's), (42, 15269), (50, 15338), (53, 15356),

Gene: Samy_8 Start: 5872, Stop: 6504, Start Num: 16

Candidate Starts for Samy_8:

(Start: 16 @5872 has 1 MA's), (36, 6031), (70, 6460),

Gene: Seahorse_7 Start: 5084, Stop: 5734, Start Num: 13

Candidate Starts for Seahorse_7:

(1, 4862), (3, 4916), (10, 5051), (Start: 13 @5084 has 4 MA's), (19, 5144), (25, 5180), (37, 5309), (38, 5324), (39, 5333), (54, 5546), (63, 5594), (64, 5603),

Gene: SheckWes_6 Start: 4636, Stop: 5067, Start Num: 34

Candidate Starts for SheckWes_6:

(32, 4621), (Start: 34 @4636 has 7 MA's), (37, 4663), (44, 4813), (45, 4822), (65, 4951),

Gene: SketchMex_6 Start: 4888, Stop: 5349, Start Num: 35

Candidate Starts for SketchMex_6:

(Start: 35 @4888 has 37 MA's), (49, 5119), (58, 5152), (71, 5320),

Gene: Socotra_8 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Socotra_8:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: Sopespian_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Sopespian_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: Starburst_8 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Starburst_8:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: SteamedHams_9 Start: 4931, Stop: 5392, Start Num: 35

Candidate Starts for SteamedHams_9:

(Start: 35 @4931 has 37 MA's), (41, 5057), (49, 5162), (60, 5207), (71, 5363),

Gene: SummitAcademy_6 Start: 4711, Stop: 5145, Start Num: 35

Candidate Starts for SummitAcademy_6:

(15, 4576), (Start: 22 @4642 has 3 MA's), (Start: 35 @4711 has 37 MA's), (37, 4741), (45, 4900), (65, 5029),

Gene: Survivors_9 Start: 5573, Stop: 6127, Start Num: 24

Candidate Starts for Survivors_9:

(18, 5537), (Start: 24 @5573 has 7 MA's), (Start: 26 @5594 has 1 MA's), (Start: 30 @5615 has 3 MA's), (72, 6104), (73, 6107),

Gene: SweatNTears_9 Start: 5415, Stop: 5876, Start Num: 35

Candidate Starts for SweatNTears_9:

(Start: 35 @5415 has 37 MA's), (49, 5646), (58, 5679), (71, 5847),

Gene: TPA4_6 Start: 5313, Stop: 5945, Start Num: 19

Candidate Starts for TPA4_6:

(7, 5142), (11, 5226), (12, 5229), (19, 5313), (43, 5649), (62, 5769),

Gene: Tarnish_7 Start: 5010, Stop: 5444, Start Num: 35

Candidate Starts for Tarnish_7:

(15, 4875), (Start: 22 @4941 has 3 MA's), (Start: 35 @5010 has 37 MA's), (37, 5040), (45, 5199), (65, 5328),

Gene: Tesla_37 Start: 14818, Stop: 15450, Start Num: 20

Candidate Starts for Tesla_37:

(Start: 20 @14818 has 20 MA's), (Start: 34 @14923 has 7 MA's), (42, 15118), (50, 15187), (53, 15205),

Gene: Tolls_9 Start: 4935, Stop: 5396, Start Num: 35

Candidate Starts for Tolls_9:

(Start: 35 @4935 has 37 MA's), (41, 5061), (49, 5166), (60, 5211), (71, 5367),

Gene: Troje_7 Start: 4889, Stop: 5350, Start Num: 35

Candidate Starts for Troje_7:

(Start: 35 @4889 has 37 MA's), (49, 5120), (58, 5153), (71, 5321),

Gene: Typhonomachy_7 Start: 4894, Stop: 5358, Start Num: 35

Candidate Starts for Typhonomachy_7:

(Start: 35 @4894 has 37 MA's), (49, 5125), (71, 5329),

Gene: VasuNzinga_38 Start: 14402, Stop: 15034, Start Num: 20

Candidate Starts for VasuNzinga_38:

(Start: 20 @14402 has 20 MA's), (Start: 34 @14507 has 7 MA's), (42, 14702), (50, 14771), (53, 14789),

Gene: Vine_8 Start: 5635, Stop: 6069, Start Num: 35

Candidate Starts for Vine_8:

(15, 5500), (Start: 22 @5566 has 3 MA's), (Start: 35 @5635 has 37 MA's), (37, 5665), (45, 5824), (65, 5953),

Gene: Wallaby_10 Start: 5760, Stop: 6272, Start Num: 30

Candidate Starts for Wallaby_10:

(18, 5682), (Start: 24 @5718 has 7 MA's), (Start: 26 @5739 has 1 MA's), (Start: 30 @5760 has 3 MA's), (56, 6072), (57, 6075), (72, 6249), (73, 6252),

Gene: Wolfwood_9 Start: 5718, Stop: 6272, Start Num: 24

Candidate Starts for Wolfwood_9:

(18, 5682), (Start: 24 @5718 has 7 MA's), (Start: 26 @5739 has 1 MA's), (Start: 30 @5760 has 3 MA's), (56, 6072), (57, 6075), (72, 6249), (73, 6252),

Gene: Yakult_8 Start: 4830, Stop: 5309, Start Num: 31

Candidate Starts for Yakult_8:

(2, 4506), (4, 4521), (5, 4545), (8, 4617), (18, 4743), (Start: 31 @4830 has 1 MA's), (38, 4905), (59, 5124), (61, 5133), (72, 5286),

Gene: Yarn_6 Start: 4925, Stop: 5386, Start Num: 35

Candidate Starts for Yarn_6:

(Start: 35 @4925 has 37 MA's), (41, 5051), (49, 5156), (60, 5201), (71, 5357),

Gene: Yucky_7 Start: 5496, Stop: 5930, Start Num: 35

Candidate Starts for Yucky_7:

(15, 5361), (Start: 22 @5427 has 3 MA's), (Start: 35 @5496 has 37 MA's), (37, 5526), (45, 5685), (65, 5814),

Gene: Yummy_8 Start: 4795, Stop: 5256, Start Num: 35

Candidate Starts for Yummy_8:

(Start: 35 @4795 has 37 MA's), (49, 5026), (58, 5059), (71, 5227),

Gene: Zareef_9 Start: 5720, Stop: 6274, Start Num: 24

Candidate Starts for Zareef_9:

(18, 5684), (Start: 24 @5720 has 7 MA's), (Start: 26 @5741 has 1 MA's), (Start: 30 @5762 has 3 MA's), (56, 6074), (57, 6077), (72, 6251), (73, 6254),

Gene: Zucker_6 Start: 4575, Stop: 5210, Start Num: 13

Candidate Starts for Zucker_6:

(6, 4467), (9, 4521), (Start: 13 @4575 has 4 MA's), (17, 4623), (19, 4635), (21, 4650), (23, 4668), (25, 4671), (37, 4767), (39, 4791),