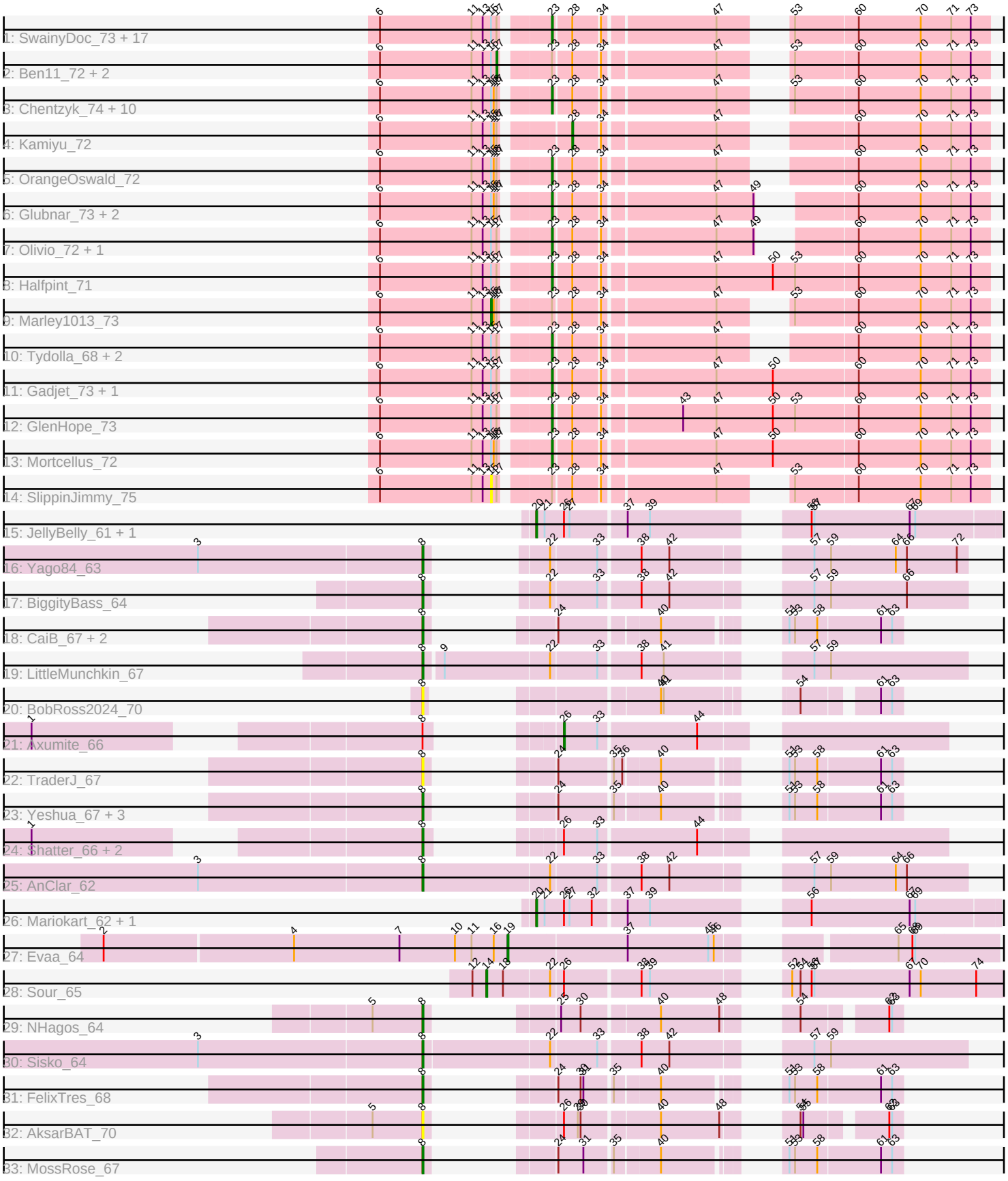
Pham 347544


1: SwainyDoc_73 + 17
2: Ben11_72 + 2
3: Chentzyk_74 + 10
4: Kamiyu_72
5: OrangeOswald_72
6: Glubnar_73 + 2
7: Olivio_72 + 1
8: Halfpint_71
9: Marley1013_73
10: Tydolla_68 + 2
11: Gadjet_73 + 1
12: GlenHope_73
13: Mortcellus_72
14: SlippinJimmy_75
15: JellyBelly_61 + 1
16: Yago84_63
17: BiggityBass_64
18: CaiB_67 + 2
19: LittleMunchkin_67
20: BobRoss2024_70
21: Axumite_66
22: TraderJ_67
23: Yeshua_67 + 3
24: Shatter_66 + 2
25: AnClar_62
26: Mariokart_62 + 1
27: Evaa_64
28: Sour_65
29: NHagos_64
30: Sisko_64
31: FelixTres_68
32: AksarBAT_70
33: MossRose_67

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 347544 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347544 has 77 members, 9 are drafts.

Phages represented in each track:
• Track 1 : SwainyDoc_73, Akoma_72, Corofin_72, Baloo_71, Athena_74, Chalmers_71, Daisy_71, HarveySr_71, Abinghost_72, RomaT_72, Casbah_72, Kronus_72, SynergyX_72, Jackstina_68, Neos5_72, Nozo_72, Shenandoah_71, ChaChing_72
• Track 2 : Ben11_72, Marlia_73, Devonte_71
• Track 3 : Chentzyk_74, Audrey_72, TinyTerror_73, Morty007_71, Phaedrus_67, Heathcliff_72, Pipefish_75, Phlyer_72, Bernardo_73, MmasiCarm_73, Yahalom_70
• Track 4 : Kamiyu_72
• Track 5 : OrangeOswald_72
• Track 6 : Glubnar_73, Rita1961_73, Phayeta_75
• Track 7 : Olivio_72, Yinz_72
• Track 8 : Halfpint_71
• Track 9 : Marley1013_73
• Track 10 : Tydolla_68, Obutu_74, Mulaychimus_73
• Track 11 : Gadjet_73, Gervas_73
• Track 12 : GlenHope_73
• Track 13 : Mortcellus_72
• Track 14 : SlippinJimmy_75
• Track 15 : JellyBelly_61, CharlottesWeb_62
• Track 16 : Yago84_63
• Track 17 : BiggityBass_64
• Track 18 : CaiB_67, CloverMinnie_66, Blackpen_66
• Track 19 : LittleMunchkin_67
• Track 20 : BobRoss2024_70
• Track 21 : Axumite_66
• Track 22 : TraderJ_67
• Track 23 : Yeshua_67, AnarQue_69, Wooper_68, MakoManhole_64
• Track 24 : Shatter_66, Fresco_66, Ligma_66
• Track 25 : AnClar_62
• Track 26 : Mariokart_62, Coco2012_62
• Track 27 : Evaa_64
• Track 28 : Sour_65
• Track 29 : NHagos_64
• Track 30 : Sisko_64
• Track 31 : FelixTres_68
• Track 32 : AksarBAT_70
• Track 33 : MossRose_67

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 42 of the 68 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abinghost_72, Akoma_72, Athena_74, Audrey_72, Baloo_71, Bernardo_73, Casbah_72, ChaChing_72, Chalmers_71, Chentzyk_74, Corofin_72, Daisy_71, Gadjet_73, Gervas_73, GlenHope_73, Glubnar_73, Halfpint_71, HarveySr_71, Heathcliff_72, Jackstina_68, Kronus_72, MmasiCarm_73, Mortcellus_72, Morty007_71, Mulaychimus_73, Neos5_72, Nozo_72, Obutu_74, Olivio_72, OrangeOswald_72, Phaedrus_67, Phayeta_75, Phlyer_72, Pipefish_75, Rita1961_73, RomaT_72, Shenandoah_71, SwainyDoc_73, SynergyX_72, TinyTerror_73, Tydolla_68, Yahalom_70, Yinz_72,

Genes that have the "Most Annotated" start but do not call it:
• Ben11_72, Devonte_71, Marley1013_73, Marlia_73, SlippinJimmy_75,

Genes that do not have the "Most Annotated" start:
• AksarBAT_70, AnClar_62, AnarQue_69, Axumite_66, BiggityBass_64, Blackpen_66, BobRoss2024_70, CaiB_67, CharlottesWeb_62, CloverMinnie_66, Coco2012_62, Evaa_64, FelixTres_68, Fresco_66, JellyBelly_61, Kamiyu_72, Ligma_66, LittleMunchkin_67, MakoManhole_64, Mariokart_62, MossRose_67, NHagos_64, Shatter_66, Sisko_64, Sour_65, TraderJ_67, Wooper_68, Yago84_63, Yeshua_67,

Summary by start number:

Start 8:
• Found in 22 of 77 (28.6%) of genes in pham
• Manual Annotations of this start: 17 of 68
• Called 95.5% of time when present
• Phage (with cluster) where this start called: AksarBAT_70 (DR), AnClar_62 (DR), AnarQue_69 (DR), BiggityBass_64 (DR), Blackpen_66 (DR), BobRoss2024_70 (DR), CaiB_67 (DR), CloverMinnie_66 (DR), FelixTres_68 (DR), Fresco_66 (DR), Ligma_66 (DR), LittleMunchkin_67 (DR), MakoManhole_64 (DR), MossRose_67 (DR), NHagos_64 (DR), Shatter_66 (DR), Sisko_64 (DR), TraderJ_67 (DR), Wooper_68 (DR), Yago84_63 (DR), Yeshua_67 (DR),

Start 14:
• Found in 1 of 77 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 68
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sour_65 (DR),

Start 15:
• Found in 49 of 77 (63.6%) of genes in pham
• Manual Annotations of this start: 1 of 68
• Called 4.1% of time when present

• Phage (with cluster) where this start called: Marley1013_73 (B3), SlippinJimmy_75 (B3),

Start 17:
• Found in 49 of 77 (63.6%) of genes in pham
• Manual Annotations of this start: 2 of 68
• Called 6.1% of time when present
• Phage (with cluster) where this start called: Ben11_72 (B3), Devonte_71 (B3), Marlia_73 (B3),

Start 19:
• Found in 1 of 77 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 68
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Evaa_64 (DR),

Start 20:
• Found in 4 of 77 (5.2%) of genes in pham
• Manual Annotations of this start: 2 of 68
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CharlottesWeb_62 (DR), Coco2012_62 (DR), JellyBelly_61 (DR), Mariokart_62 (DR),

Start 23:
• Found in 48 of 77 (62.3%) of genes in pham
• Manual Annotations of this start: 42 of 68
• Called 89.6% of time when present
• Phage (with cluster) where this start called: Abinghost_72 (B3), Akoma_72 (B3), Athena_74 (B3), Audrey_72 (B3), Baloo_71 (B3), Bernardo_73 (B3), Casbah_72 (B3), ChaChing_72 (B3), Chalmers_71 (B3), Chentzyk_74 (B3), Corofin_72 (B3), Daisy_71 (B3), Gadjet_73 (B3), Gervas_73 (B3), GlenHope_73 (B3), Glubnar_73 (B3), Halfpint_71 (B3), HarveySr_71 (B3), Heathcliff_72 (B3), Jackstina_68 (B3), Kronus_72 (B3), MmasiCarm_73 (B3), Mortcellus_72 (B3), Morty007_71 (B3), Mulaychimus_73 (B3), Neos5_72 (B3), Nozo_72 (B3), Obutu_74 (B3), Olivio_72 (B3), OrangeOswald_72 (B3), Phaedrus_67 (B3), Phayeta_75 (B3), Phlyer_72 (B3), Pipefish_75 (B3), Rita1961_73 (B3), RomaT_72 (B3), Shenandoah_71 (B3), SwainyDoc_73 (B3), SynergyX_72 (B3), TinyTerror_73 (B3), Tydolla_68 (B3), Yahalom_70 (B3), Yinz_72 (B3),

Start 26:
• Found in 10 of 77 (13.0%) of genes in pham
• Manual Annotations of this start: 1 of 68
• Called 10.0% of time when present
• Phage (with cluster) where this start called: Axumite_66 (DR),

Start 28:
• Found in 49 of 77 (63.6%) of genes in pham
• Manual Annotations of this start: 1 of 68
• Called 2.0% of time when present
• Phage (with cluster) where this start called: Kamiyu_72 (B3),

Summary by clusters:

There are 2 clusters represented in this pham: DR, B3,

Info for manual annotations of cluster B3:
•Start number 15 was manually annotated 1 time for cluster B3.
•Start number 17 was manually annotated 2 times for cluster B3.
•Start number 23 was manually annotated 42 times for cluster B3.
•Start number 28 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster DR:
•Start number 8 was manually annotated 17 times for cluster DR.
•Start number 14 was manually annotated 1 time for cluster DR.
•Start number 19 was manually annotated 1 time for cluster DR.
•Start number 20 was manually annotated 2 times for cluster DR.
•Start number 26 was manually annotated 1 time for cluster DR.

Gene Information:

Gene: Abinghost_72 Start: 58483, Stop: 58887, Start Num: 23
Candidate Starts for Abinghost_72:
(6, 58312), (11, 58411), (13, 58423), (Start: 15 @58432 has 1 MA's), (Start: 17 @58438 has 2 MA's), (Start: 23 @58483 has 42 MA's), (Start: 28 @58501 has 1 MA's), (34, 58528), (47, 58642), (53, 58681), (60, 58747), (70, 58813), (71, 58846), (73, 58867),

Gene: Akoma_72 Start: 58523, Stop: 58927, Start Num: 23
Candidate Starts for Akoma_72:
(6, 58352), (11, 58451), (13, 58463), (Start: 15 @58472 has 1 MA's), (Start: 17 @58478 has 2 MA's), (Start: 23 @58523 has 42 MA's), (Start: 28 @58541 has 1 MA's), (34, 58568), (47, 58682), (53, 58721), (60, 58787), (70, 58853), (71, 58886), (73, 58907),

Gene: AksarBAT_70 Start: 53846, Stop: 54190, Start Num: 8
Candidate Starts for AksarBAT_70:
(5, 53792), (Start: 8 @53846 has 17 MA's), (Start: 26 @53900 has 1 MA's), (29, 53915), (30, 53918), (40, 53996), (48, 54059), (54, 54098), (55, 54101), (62, 54176), (63, 54179),

Gene: AnClar_62 Start: 53383, Stop: 53910, Start Num: 8
Candidate Starts for AnClar_62:
(3, 53143), (Start: 8 @53383 has 17 MA's), (22, 53518), (33, 53566), (38, 53608), (42, 53638), (57, 53746), (59, 53764), (64, 53833), (66, 53845),

Gene: AnarQue_69 Start: 53977, Stop: 54324, Start Num: 8
Candidate Starts for AnarQue_69:
(Start: 8 @53977 has 17 MA's), (24, 54025), (35, 54079), (40, 54124), (51, 54205), (53, 54211), (58, 54235), (61, 54301), (63, 54313),

Gene: Athena_74 Start: 59258, Stop: 59662, Start Num: 23
Candidate Starts for Athena_74:
(6, 59087), (11, 59186), (13, 59198), (Start: 15 @59207 has 1 MA's), (Start: 17 @59213 has 2 MA's), (Start: 23 @59258 has 42 MA's), (Start: 28 @59276 has 1 MA's), (34, 59303), (47, 59417), (53, 59456), (60, 59522), (70, 59588), (71, 59621), (73, 59642),

Gene: Audrey_72 Start: 58522, Stop: 58926, Start Num: 23

Candidate Starts for Audrey_72:
(6, 58351), (11, 58450), (13, 58462), (Start: 15 @58471 has 1 MA's), (16, 58474), (Start: 17 @58477 has 2 MA's), (Start: 23 @58522 has 42 MA's), (Start: 28 @58540 has 1 MA's), (34, 58567), (47, 58681), (53, 58720), (60, 58786), (70, 58852), (71, 58885), (73, 58906),

Gene: Axumite_66 Start: 52194, Stop: 52562, Start Num: 26
Candidate Starts for Axumite_66:
(1, 51795), (Start: 8 @52140 has 17 MA's), (Start: 26 @52194 has 1 MA's), (33, 52230), (44, 52332),

Gene: Baloo_71 Start: 58355, Stop: 58759, Start Num: 23
Candidate Starts for Baloo_71:
(6, 58184), (11, 58283), (13, 58295), (Start: 15 @58304 has 1 MA's), (Start: 17 @58310 has 2 MA's), (Start: 23 @58355 has 42 MA's), (Start: 28 @58373 has 1 MA's), (34, 58400), (47, 58514), (53, 58553), (60, 58619), (70, 58685), (71, 58718), (73, 58739),

Gene: Ben11_72 Start: 58695, Stop: 59144, Start Num: 17
Candidate Starts for Ben11_72:
(6, 58569), (11, 58668), (13, 58680), (Start: 15 @58689 has 1 MA's), (Start: 17 @58695 has 2 MA's), (Start: 23 @58740 has 42 MA's), (Start: 28 @58758 has 1 MA's), (34, 58785), (47, 58899), (53, 58938), (60, 59004), (70, 59070), (71, 59103), (73, 59124),

Gene: Bernardo_73 Start: 58721, Stop: 59125, Start Num: 23
Candidate Starts for Bernardo_73:
(6, 58550), (11, 58649), (13, 58661), (Start: 15 @58670 has 1 MA's), (16, 58673), (Start: 17 @58676 has 2 MA's), (Start: 23 @58721 has 42 MA's), (Start: 28 @58739 has 1 MA's), (34, 58766), (47, 58880), (53, 58919), (60, 58985), (70, 59051), (71, 59084), (73, 59105),

Gene: BiggityBass_64 Start: 53929, Stop: 54360, Start Num: 8
Candidate Starts for BiggityBass_64:
(Start: 8 @53929 has 17 MA's), (22, 53968), (33, 54016), (38, 54058), (42, 54088), (57, 54196), (59, 54214), (66, 54295),

Gene: Blackpen_66 Start: 52431, Stop: 52778, Start Num: 8
Candidate Starts for Blackpen_66:
(Start: 8 @52431 has 17 MA's), (24, 52479), (40, 52578), (51, 52659), (53, 52665), (58, 52689), (61, 52755), (63, 52767),

Gene: BobRoss2024_70 Start: 53605, Stop: 53940, Start Num: 8
Candidate Starts for BobRoss2024_70:
(Start: 8 @53605 has 17 MA's), (40, 53752), (41, 53755), (54, 53848), (61, 53917), (63, 53929),

Gene: CaiB_67 Start: 53776, Stop: 54123, Start Num: 8
Candidate Starts for CaiB_67:
(Start: 8 @53776 has 17 MA's), (24, 53824), (40, 53923), (51, 54004), (53, 54010), (58, 54034), (61, 54100), (63, 54112),

Gene: Casbah_72 Start: 58842, Stop: 59246, Start Num: 23
Candidate Starts for Casbah_72:
(6, 58671), (11, 58770), (13, 58782), (Start: 15 @58791 has 1 MA's), (Start: 17 @58797 has 2 MA's), (Start: 23 @58842 has 42 MA's), (Start: 28 @58860 has 1 MA's), (34, 58887), (47, 59001), (53, 59040), (60, 59106), (70, 59172), (71, 59205), (73, 59226),

Gene: ChaChing_72 Start: 58540, Stop: 58944, Start Num: 23

Candidate Starts for ChaChing_72:
(6, 58369), (11, 58468), (13, 58480), (Start: 15 @58489 has 1 MA's), (Start: 17 @58495 has 2 MA's), (Start: 23 @58540 has 42 MA's), (Start: 28 @58558 has 1 MA's), (34, 58585), (47, 58699), (53, 58738), (60, 58804), (70, 58870), (71, 58903), (73, 58924),

Gene: Chalmers_71 Start: 58973, Stop: 59377, Start Num: 23
Candidate Starts for Chalmers_71:
(6, 58802), (11, 58901), (13, 58913), (Start: 15 @58922 has 1 MA's), (Start: 17 @58928 has 2 MA's), (Start: 23 @58973 has 42 MA's), (Start: 28 @58991 has 1 MA's), (34, 59018), (47, 59132), (53, 59171), (60, 59237), (70, 59303), (71, 59336), (73, 59357),

Gene: CharlottesWeb_62 Start: 50751, Stop: 51290, Start Num: 20
Candidate Starts for CharlottesWeb_62:
(Start: 20 @50751 has 2 MA's), (21, 50760), (Start: 26 @50781 has 1 MA's), (27, 50787), (37, 50844), (39, 50868), (56, 50997), (57, 51000), (67, 51102), (69, 51108),

Gene: Chentzyk_74 Start: 59473, Stop: 59877, Start Num: 23
Candidate Starts for Chentzyk_74:
(6, 59302), (11, 59401), (13, 59413), (Start: 15 @59422 has 1 MA's), (16, 59425), (Start: 17 @59428 has 2 MA's), (Start: 23 @59473 has 42 MA's), (Start: 28 @59491 has 1 MA's), (34, 59518), (47, 59632), (53, 59671), (60, 59737), (70, 59803), (71, 59836), (73, 59857),

Gene: CloverMinnie_66 Start: 52939, Stop: 53286, Start Num: 8
Candidate Starts for CloverMinnie_66:
(Start: 8 @52939 has 17 MA's), (24, 52987), (40, 53086), (51, 53167), (53, 53173), (58, 53197), (61, 53263), (63, 53275),

Gene: Coco2012_62 Start: 50742, Stop: 51281, Start Num: 20
Candidate Starts for Coco2012_62:
(Start: 20 @50742 has 2 MA's), (21, 50751), (Start: 26 @50772 has 1 MA's), (27, 50778), (32, 50802), (37, 50835), (39, 50859), (56, 50988), (67, 51093), (69, 51099),

Gene: Corofin_72 Start: 58553, Stop: 58957, Start Num: 23
Candidate Starts for Corofin_72:
(6, 58382), (11, 58481), (13, 58493), (Start: 15 @58502 has 1 MA's), (Start: 17 @58508 has 2 MA's), (Start: 23 @58553 has 42 MA's), (Start: 28 @58571 has 1 MA's), (34, 58598), (47, 58712), (53, 58751), (60, 58817), (70, 58883), (71, 58916), (73, 58937),

Gene: Daisy_71 Start: 58086, Stop: 58490, Start Num: 23
Candidate Starts for Daisy_71:
(6, 57915), (11, 58014), (13, 58026), (Start: 15 @58035 has 1 MA's), (Start: 17 @58041 has 2 MA's), (Start: 23 @58086 has 42 MA's), (Start: 28 @58104 has 1 MA's), (34, 58131), (47, 58245), (53, 58284), (60, 58350), (70, 58416), (71, 58449), (73, 58470),

Gene: Devonte_71 Start: 58120, Stop: 58569, Start Num: 17
Candidate Starts for Devonte_71:
(6, 57994), (11, 58093), (13, 58105), (Start: 15 @58114 has 1 MA's), (Start: 17 @58120 has 2 MA's), (Start: 23 @58165 has 42 MA's), (Start: 28 @58183 has 1 MA's), (34, 58210), (47, 58324), (53, 58363), (60, 58429), (70, 58495), (71, 58528), (73, 58549),

Gene: Evaa_64 Start: 51047, Stop: 51514, Start Num: 19
Candidate Starts for Evaa_64:

(2, 50615), (4, 50816), (7, 50930), (10, 50990), (11, 51008), (16, 51032), (Start: 19 @51047 has 1 MA's), (37, 51173), (45, 51260), (46, 51266), (65, 51407), (68, 51422), (69, 51425),

Gene: FelixTres_68 Start: 53231, Stop: 53578, Start Num: 8
Candidate Starts for FelixTres_68:
(Start: 8 @53231 has 17 MA's), (24, 53279), (30, 53303), (31, 53306), (35, 53333), (40, 53378), (51, 53459), (53, 53465), (58, 53489), (61, 53555), (63, 53567),

Gene: Fresco_66 Start: 52146, Stop: 52568, Start Num: 8
Candidate Starts for Fresco_66:
(1, 51801), (Start: 8 @52146 has 17 MA's), (Start: 26 @52200 has 1 MA's), (33, 52236), (44, 52338),

Gene: Gadjet_73 Start: 58853, Stop: 59302, Start Num: 23
Candidate Starts for Gadjet_73:
(6, 58682), (11, 58781), (13, 58793), (Start: 15 @58802 has 1 MA's), (Start: 17 @58808 has 2 MA's), (Start: 23 @58853 has 42 MA's), (Start: 28 @58871 has 1 MA's), (34, 58898), (47, 59012), (50, 59072), (60, 59162), (70, 59228), (71, 59261), (73, 59282),

Gene: Gervas_73 Start: 58947, Stop: 59396, Start Num: 23
Candidate Starts for Gervas_73:
(6, 58776), (11, 58875), (13, 58887), (Start: 15 @58896 has 1 MA's), (Start: 17 @58902 has 2 MA's), (Start: 23 @58947 has 42 MA's), (Start: 28 @58965 has 1 MA's), (34, 58992), (47, 59106), (50, 59166), (60, 59256), (70, 59322), (71, 59355), (73, 59376),

Gene: GlenHope_73 Start: 58513, Stop: 58962, Start Num: 23
Candidate Starts for GlenHope_73:
(6, 58342), (11, 58441), (13, 58453), (Start: 15 @58462 has 1 MA's), (Start: 17 @58468 has 2 MA's), (Start: 23 @58513 has 42 MA's), (Start: 28 @58531 has 1 MA's), (34, 58558), (43, 58636), (47, 58672), (50, 58732), (53, 58756), (60, 58822), (70, 58888), (71, 58921), (73, 58942),

Gene: Glubnar_73 Start: 58419, Stop: 58823, Start Num: 23
Candidate Starts for Glubnar_73:
(6, 58248), (11, 58347), (13, 58359), (Start: 15 @58368 has 1 MA's), (16, 58371), (Start: 17 @58374 has 2 MA's), (Start: 23 @58419 has 42 MA's), (Start: 28 @58437 has 1 MA's), (34, 58464), (47, 58578), (49, 58617), (60, 58683), (70, 58749), (71, 58782), (73, 58803),

Gene: Halfpint_71 Start: 58264, Stop: 58713, Start Num: 23
Candidate Starts for Halfpint_71:
(6, 58093), (11, 58192), (13, 58204), (Start: 15 @58213 has 1 MA's), (Start: 17 @58219 has 2 MA's), (Start: 23 @58264 has 42 MA's), (Start: 28 @58282 has 1 MA's), (34, 58309), (47, 58423), (50, 58483), (53, 58507), (60, 58573), (70, 58639), (71, 58672), (73, 58693),

Gene: HarveySr_71 Start: 58069, Stop: 58473, Start Num: 23
Candidate Starts for HarveySr_71:
(6, 57898), (11, 57997), (13, 58009), (Start: 15 @58018 has 1 MA's), (Start: 17 @58024 has 2 MA's), (Start: 23 @58069 has 42 MA's), (Start: 28 @58087 has 1 MA's), (34, 58114), (47, 58228), (53, 58267), (60, 58333), (70, 58399), (71, 58432), (73, 58453),

Gene: Heathcliff_72 Start: 58480, Stop: 58884, Start Num: 23
Candidate Starts for Heathcliff_72:
(6, 58309), (11, 58408), (13, 58420), (Start: 15 @58429 has 1 MA's), (16, 58432), (Start: 17 @58435 has 2 MA's), (Start: 23 @58480 has 42 MA's), (Start: 28 @58498 has 1 MA's), (34, 58525), (47, 58639), (53, 58678), (60, 58744), (70, 58810), (71, 58843), (73, 58864),

Gene: Jackstina_68 Start: 58405, Stop: 58809, Start Num: 23
Candidate Starts for Jackstina_68:
(6, 58234), (11, 58333), (13, 58345), (Start: 15 @58354 has 1 MA's), (Start: 17 @58360 has 2 MA's), (Start: 23 @58405 has 42 MA's), (Start: 28 @58423 has 1 MA's), (34, 58450), (47, 58564), (53, 58603), (60, 58669), (70, 58735), (71, 58768), (73, 58789),

Gene: JellyBelly_61 Start: 50747, Stop: 51286, Start Num: 20
Candidate Starts for JellyBelly_61:
(Start: 20 @50747 has 2 MA's), (21, 50756), (Start: 26 @50777 has 1 MA's), (27, 50783), (37, 50840), (39, 50864), (56, 50993), (57, 50996), (67, 51098), (69, 51104),

Gene: Kamiyu_72 Start: 58500, Stop: 58886, Start Num: 28
Candidate Starts for Kamiyu_72:
(6, 58311), (11, 58410), (13, 58422), (Start: 15 @58431 has 1 MA's), (16, 58434), (Start: 17 @58437 has 2 MA's), (Start: 28 @58500 has 1 MA's), (34, 58527), (47, 58641), (60, 58746), (70, 58812), (71, 58845), (73, 58866),

Gene: Kronus_72 Start: 59578, Stop: 59982, Start Num: 23
Candidate Starts for Kronus_72:
(6, 59407), (11, 59506), (13, 59518), (Start: 15 @59527 has 1 MA's), (Start: 17 @59533 has 2 MA's), (Start: 23 @59578 has 42 MA's), (Start: 28 @59596 has 1 MA's), (34, 59623), (47, 59737), (53, 59776), (60, 59842), (70, 59908), (71, 59941), (73, 59962),

Gene: Ligma_66 Start: 52140, Stop: 52562, Start Num: 8
Candidate Starts for Ligma_66:
(1, 51795), (Start: 8 @52140 has 17 MA's), (Start: 26 @52194 has 1 MA's), (33, 52230), (44, 52332),

Gene: LittleMunchkin_67 Start: 55005, Stop: 55526, Start Num: 8
Candidate Starts for LittleMunchkin_67:
(Start: 8 @55005 has 17 MA's), (9, 55023), (22, 55134), (33, 55182), (38, 55224), (41, 55248), (57, 55362), (59, 55380),

Gene: MakoManhole_64 Start: 52279, Stop: 52626, Start Num: 8
Candidate Starts for MakoManhole_64:
(Start: 8 @52279 has 17 MA's), (24, 52327), (35, 52381), (40, 52426), (51, 52507), (53, 52513), (58, 52537), (61, 52603), (63, 52615),

Gene: Mariokart_62 Start: 51036, Stop: 51575, Start Num: 20
Candidate Starts for Mariokart_62:
(Start: 20 @51036 has 2 MA's), (21, 51045), (Start: 26 @51066 has 1 MA's), (27, 51072), (32, 51096), (37, 51129), (39, 51153), (56, 51282), (67, 51387), (69, 51393),

Gene: Marley1013_73 Start: 59379, Stop: 59834, Start Num: 15
Candidate Starts for Marley1013_73:
(6, 59259), (11, 59358), (13, 59370), (Start: 15 @59379 has 1 MA's), (16, 59382), (Start: 17 @59385 has 2 MA's), (Start: 23 @59430 has 42 MA's), (Start: 28 @59448 has 1 MA's), (34, 59475), (47, 59589), (53, 59628), (60, 59694), (70, 59760), (71, 59793), (73, 59814),

Gene: Marlia_73 Start: 58906, Stop: 59355, Start Num: 17
Candidate Starts for Marlia_73:
(6, 58780), (11, 58879), (13, 58891), (Start: 15 @58900 has 1 MA's), (Start: 17 @58906 has 2 MA's), (Start: 23 @58951 has 42 MA's), (Start: 28 @58969 has 1 MA's), (34, 58996), (47, 59110), (53,

59149), (60, 59215), (70, 59281), (71, 59314), (73, 59335),

Gene: MmasiCarm_73 Start: 58933, Stop: 59337, Start Num: 23
Candidate Starts for MmasiCarm_73:
(6, 58762), (11, 58861), (13, 58873), (Start: 15 @58882 has 1 MA's), (16, 58885), (Start: 17 @58888 has 2 MA's), (Start: 23 @58933 has 42 MA's), (Start: 28 @58951 has 1 MA's), (34, 58978), (47, 59092), (53, 59131), (60, 59197), (70, 59263), (71, 59296), (73, 59317),

Gene: Mortcellus_72 Start: 59595, Stop: 60044, Start Num: 23
Candidate Starts for Mortcellus_72:
(6, 59424), (11, 59523), (13, 59535), (Start: 15 @59544 has 1 MA's), (16, 59547), (Start: 17 @59550 has 2 MA's), (Start: 23 @59595 has 42 MA's), (Start: 28 @59613 has 1 MA's), (34, 59640), (47, 59754), (50, 59814), (60, 59904), (70, 59970), (71, 60003), (73, 60024),

Gene: Morty007_71 Start: 59430, Stop: 59834, Start Num: 23
Candidate Starts for Morty007_71:
(6, 59259), (11, 59358), (13, 59370), (Start: 15 @59379 has 1 MA's), (16, 59382), (Start: 17 @59385 has 2 MA's), (Start: 23 @59430 has 42 MA's), (Start: 28 @59448 has 1 MA's), (34, 59475), (47, 59589), (53, 59628), (60, 59694), (70, 59760), (71, 59793), (73, 59814),

Gene: MossRose_67 Start: 53239, Stop: 53586, Start Num: 8
Candidate Starts for MossRose_67:
(Start: 8 @53239 has 17 MA's), (24, 53287), (31, 53314), (35, 53341), (40, 53386), (51, 53467), (53, 53473), (58, 53497), (61, 53563), (63, 53575),

Gene: Mulaychimus_73 Start: 58950, Stop: 59354, Start Num: 23
Candidate Starts for Mulaychimus_73:
(6, 58779), (11, 58878), (13, 58890), (Start: 15 @58899 has 1 MA's), (Start: 17 @58905 has 2 MA's), (Start: 23 @58950 has 42 MA's), (Start: 28 @58968 has 1 MA's), (34, 58995), (47, 59109), (60, 59214), (70, 59280), (71, 59313), (73, 59334),

Gene: NHagos_64 Start: 51738, Stop: 52082, Start Num: 8
Candidate Starts for NHagos_64:
(5, 51684), (Start: 8 @51738 has 17 MA's), (25, 51789), (30, 51810), (40, 51888), (48, 51951), (54, 51990), (62, 52068), (63, 52071),

Gene: Neos5_72 Start: 58892, Stop: 59296, Start Num: 23
Candidate Starts for Neos5_72:
(6, 58721), (11, 58820), (13, 58832), (Start: 15 @58841 has 1 MA's), (Start: 17 @58847 has 2 MA's), (Start: 23 @58892 has 42 MA's), (Start: 28 @58910 has 1 MA's), (34, 58937), (47, 59051), (53, 59090), (60, 59156), (70, 59222), (71, 59255), (73, 59276),

Gene: Nozo_72 Start: 59289, Stop: 59693, Start Num: 23
Candidate Starts for Nozo_72:
(6, 59118), (11, 59217), (13, 59229), (Start: 15 @59238 has 1 MA's), (Start: 17 @59244 has 2 MA's), (Start: 23 @59289 has 42 MA's), (Start: 28 @59307 has 1 MA's), (34, 59334), (47, 59448), (53, 59487), (60, 59553), (70, 59619), (71, 59652), (73, 59673),

Gene: Obutu_74 Start: 59112, Stop: 59516, Start Num: 23
Candidate Starts for Obutu_74:
(6, 58941), (11, 59040), (13, 59052), (Start: 15 @59061 has 1 MA's), (Start: 17 @59067 has 2 MA's), (Start: 23 @59112 has 42 MA's), (Start: 28 @59130 has 1 MA's), (34, 59157), (47, 59271), (60, 59376), (70, 59442), (71, 59475), (73, 59496),

Gene: Olivio_72 Start: 58745, Stop: 59149, Start Num: 23
Candidate Starts for Olivio_72:
(6, 58574), (11, 58673), (13, 58685), (Start: 15 @58694 has 1 MA's), (Start: 17 @58700 has 2 MA's), (Start: 23 @58745 has 42 MA's), (Start: 28 @58763 has 1 MA's), (34, 58790), (47, 58904), (49, 58943), (60, 59009), (70, 59075), (71, 59108), (73, 59129),

Gene: OrangeOswald_72 Start: 58530, Stop: 58934, Start Num: 23
Candidate Starts for OrangeOswald_72:
(6, 58359), (11, 58458), (13, 58470), (Start: 15 @58479 has 1 MA's), (16, 58482), (Start: 17 @58485 has 2 MA's), (Start: 23 @58530 has 42 MA's), (Start: 28 @58548 has 1 MA's), (34, 58575), (47, 58689), (60, 58794), (70, 58860), (71, 58893), (73, 58914),

Gene: Phaedrus_67 Start: 57955, Stop: 58359, Start Num: 23
Candidate Starts for Phaedrus_67:
(6, 57784), (11, 57883), (13, 57895), (Start: 15 @57904 has 1 MA's), (16, 57907), (Start: 17 @57910 has 2 MA's), (Start: 23 @57955 has 42 MA's), (Start: 28 @57973 has 1 MA's), (34, 58000), (47, 58114), (53, 58153), (60, 58219), (70, 58285), (71, 58318), (73, 58339),

Gene: Phayeta_75 Start: 59016, Stop: 59420, Start Num: 23
Candidate Starts for Phayeta_75:
(6, 58845), (11, 58944), (13, 58956), (Start: 15 @58965 has 1 MA's), (16, 58968), (Start: 17 @58971 has 2 MA's), (Start: 23 @59016 has 42 MA's), (Start: 28 @59034 has 1 MA's), (34, 59061), (47, 59175), (49, 59214), (60, 59280), (70, 59346), (71, 59379), (73, 59400),

Gene: Phlyer_72 Start: 59238, Stop: 59642, Start Num: 23
Candidate Starts for Phlyer_72:
(6, 59067), (11, 59166), (13, 59178), (Start: 15 @59187 has 1 MA's), (16, 59190), (Start: 17 @59193 has 2 MA's), (Start: 23 @59238 has 42 MA's), (Start: 28 @59256 has 1 MA's), (34, 59283), (47, 59397), (53, 59436), (60, 59502), (70, 59568), (71, 59601), (73, 59622),

Gene: Pipefish_75 Start: 59649, Stop: 60053, Start Num: 23
Candidate Starts for Pipefish_75:
(6, 59478), (11, 59577), (13, 59589), (Start: 15 @59598 has 1 MA's), (16, 59601), (Start: 17 @59604 has 2 MA's), (Start: 23 @59649 has 42 MA's), (Start: 28 @59667 has 1 MA's), (34, 59694), (47, 59808), (53, 59847), (60, 59913), (70, 59979), (71, 60012), (73, 60033),

Gene: Rita1961_73 Start: 58888, Stop: 59292, Start Num: 23
Candidate Starts for Rita1961_73:
(6, 58717), (11, 58816), (13, 58828), (Start: 15 @58837 has 1 MA's), (16, 58840), (Start: 17 @58843 has 2 MA's), (Start: 23 @58888 has 42 MA's), (Start: 28 @58906 has 1 MA's), (34, 58933), (47, 59047), (49, 59086), (60, 59152), (70, 59218), (71, 59251), (73, 59272),

Gene: RomaT_72 Start: 59089, Stop: 59493, Start Num: 23
Candidate Starts for RomaT_72:
(6, 58918), (11, 59017), (13, 59029), (Start: 15 @59038 has 1 MA's), (Start: 17 @59044 has 2 MA's), (Start: 23 @59089 has 42 MA's), (Start: 28 @59107 has 1 MA's), (34, 59134), (47, 59248), (53, 59287), (60, 59353), (70, 59419), (71, 59452), (73, 59473),

Gene: Shatter_66 Start: 52140, Stop: 52562, Start Num: 8
Candidate Starts for Shatter_66:
(1, 51795), (Start: 8 @52140 has 17 MA's), (Start: 26 @52194 has 1 MA's), (33, 52230), (44, 52332),

Gene: Shenandoah_71 Start: 58147, Stop: 58551, Start Num: 23
Candidate Starts for Shenandoah_71:
(6, 57976), (11, 58075), (13, 58087), (Start: 15 @58096 has 1 MA's), (Start: 17 @58102 has 2 MA's), (Start: 23 @58147 has 42 MA's), (Start: 28 @58165 has 1 MA's), (34, 58192), (47, 58306), (53, 58345), (60, 58411), (70, 58477), (71, 58510), (73, 58531),

Gene: Sisko_64 Start: 52451, Stop: 52975, Start Num: 8
Candidate Starts for Sisko_64:
(3, 52211), (Start: 8 @52451 has 17 MA's), (22, 52583), (33, 52631), (38, 52673), (42, 52703), (57, 52811), (59, 52829),

Gene: SlippinJimmy_75 Start: 59862, Stop: 60317, Start Num: 15
Candidate Starts for SlippinJimmy_75:
(6, 59742), (11, 59841), (13, 59853), (Start: 15 @59862 has 1 MA's), (Start: 17 @59868 has 2 MA's), (Start: 23 @59913 has 42 MA's), (Start: 28 @59931 has 1 MA's), (34, 59958), (47, 60072), (53, 60111), (60, 60177), (70, 60243), (71, 60276), (73, 60297),

Gene: Sour_65 Start: 54385, Stop: 54999, Start Num: 14
Candidate Starts for Sour_65:
(12, 54370), (Start: 14 @54385 has 1 MA's), (18, 54403), (22, 54451), (Start: 26 @54463 has 1 MA's), (38, 54541), (39, 54550), (52, 54655), (54, 54664), (56, 54676), (57, 54679), (67, 54781), (70, 54793), (74, 54853),

Gene: SwainyDoc_73 Start: 58911, Stop: 59315, Start Num: 23
Candidate Starts for SwainyDoc_73:
(6, 58740), (11, 58839), (13, 58851), (Start: 15 @58860 has 1 MA's), (Start: 17 @58866 has 2 MA's), (Start: 23 @58911 has 42 MA's), (Start: 28 @58929 has 1 MA's), (34, 58956), (47, 59070), (53, 59109), (60, 59175), (70, 59241), (71, 59274), (73, 59295),

Gene: SynergyX_72 Start: 58527, Stop: 58931, Start Num: 23
Candidate Starts for SynergyX_72:
(6, 58356), (11, 58455), (13, 58467), (Start: 15 @58476 has 1 MA's), (Start: 17 @58482 has 2 MA's), (Start: 23 @58527 has 42 MA's), (Start: 28 @58545 has 1 MA's), (34, 58572), (47, 58686), (53, 58725), (60, 58791), (70, 58857), (71, 58890), (73, 58911),

Gene: TinyTerror_73 Start: 58949, Stop: 59353, Start Num: 23
Candidate Starts for TinyTerror_73:
(6, 58778), (11, 58877), (13, 58889), (Start: 15 @58898 has 1 MA's), (16, 58901), (Start: 17 @58904 has 2 MA's), (Start: 23 @58949 has 42 MA's), (Start: 28 @58967 has 1 MA's), (34, 58994), (47, 59108), (53, 59147), (60, 59213), (70, 59279), (71, 59312), (73, 59333),

Gene: TraderJ_67 Start: 53365, Stop: 53712, Start Num: 8
Candidate Starts for TraderJ_67:
(Start: 8 @53365 has 17 MA's), (24, 53413), (35, 53467), (36, 53476), (40, 53512), (51, 53593), (53, 53599), (58, 53623), (61, 53689), (63, 53701),

Gene: Tydolla_68 Start: 58518, Stop: 58922, Start Num: 23
Candidate Starts for Tydolla_68:
(6, 58347), (11, 58446), (13, 58458), (Start: 15 @58467 has 1 MA's), (Start: 17 @58473 has 2 MA's), (Start: 23 @58518 has 42 MA's), (Start: 28 @58536 has 1 MA's), (34, 58563), (47, 58677), (60, 58782), (70, 58848), (71, 58881), (73, 58902),

Gene: Wooper_68 Start: 53310, Stop: 53657, Start Num: 8

Candidate Starts for Wooper_68:
(Start: 8 @53310 has 17 MA's), (24, 53358), (35, 53412), (40, 53457), (51, 53538), (53, 53544), (58, 53568), (61, 53634), (63, 53646),

Gene: Yago84_63 Start: 51936, Stop: 52367, Start Num: 8
Candidate Starts for Yago84_63:
(3, 51696), (Start: 8 @51936 has 17 MA's), (22, 51975), (33, 52023), (38, 52065), (42, 52095), (57, 52203), (59, 52221), (64, 52290), (66, 52302), (72, 52356),

Gene: Yahalom_70 Start: 58332, Stop: 58736, Start Num: 23
Candidate Starts for Yahalom_70:
(6, 58161), (11, 58260), (13, 58272), (Start: 15 @58281 has 1 MA's), (16, 58284), (Start: 17 @58287 has 2 MA's), (Start: 23 @58332 has 42 MA's), (Start: 28 @58350 has 1 MA's), (34, 58377), (47, 58491), (53, 58530), (60, 58596), (70, 58662), (71, 58695), (73, 58716),

Gene: Yeshua_67 Start: 53287, Stop: 53634, Start Num: 8
Candidate Starts for Yeshua_67:
(Start: 8 @53287 has 17 MA's), (24, 53335), (35, 53389), (40, 53434), (51, 53515), (53, 53521), (58, 53545), (61, 53611), (63, 53623),

Gene: Yinz_72 Start: 58397, Stop: 58801, Start Num: 23
Candidate Starts for Yinz_72:
(6, 58226), (11, 58325), (13, 58337), (Start: 15 @58346 has 1 MA's), (Start: 17 @58352 has 2 MA's), (Start: 23 @58397 has 42 MA's), (Start: 28 @58415 has 1 MA's), (34, 58442), (47, 58556), (49, 58595), (60, 58661), (70, 58727), (71, 58760), (73, 58781),