Zoomed Pham 291070

1: AreFloNak_3 + 3
2: DevitoJr_3 + 5
3: Niktson_3 + 1
4: Hemma_4
5: Gordon_4
6: Brunswick_3
7: Acai_3
8: Loretta_3 + 1
9: MediumFry_4
10: Caterpillar_4
11: Truckee_3 + 1
12: BarbieDoll_4 + 2
13: Muglass_3 + 3
14: Altjira_3 + 7
15: Tenney120_4 + 1
16: Mardi_4
17: Leathea_4
18: TrixiePhattel_4
19: PoeMe_4
20: Powelldog_3
21: HerbBucket_4 + 17
22: Sprinkle_3
23: Onestar_3
24: RustyBoy_3 + 1
25: Sporto_3
26: Koji_24 + 1
27: Pherbot_24 + 1
28: Lucky3_24 + 3
29: PrincePhergus_24 + 2
30: BouleyBill_24
31: Kauala_24
32: Theresita_24
33: ChickenKing_24
34: Cheetoh_25
35: GaeCeo_25

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 291070 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291070 has 84 members, 22 are drafts.

Phages represented in each track:
• Track 1 : AreFloNak_3, CastorTray_4, Nivinsha_3, Tatanka_3
• Track 2 : DevitoJr_3, Darby_3, ScienceWizSam_4, Breylor17_3, Trustiboi_3, Synepsis_3
• Track 3 : Niktson_3, ElephantMan_3
• Track 4 : Hemma_4
• Track 5 : Gordon_4
• Track 6 : Brunswick_3
• Track 7 : Acai_3
• Track 8 : Loretta_3, Ingrid_3
• Track 9 : MediumFry_4
• Track 10 : Caterpillar_4
• Track 11 : Truckee_3, Makai_3
• Track 12 : BarbieDoll_4, Kinny_4, Renaldo_5
• Track 13 : Muglass_3, Barbonzobean_4, Biscute_3, Lewando_4
• Track 14 : Altjira_3, Stardrop_5, Argan_3, Uzumaki_4, Zeina_4, GantcherGoblin_3, Navi1117_4, Phaila_4
• Track 15 : Tenney120_4, KevinMinion_3
• Track 16 : Mardi_4
• Track 17 : Leathea_4
• Track 18 : TrixiePhattel_4
• Track 19 : PoeMe_4
• Track 20 : Powelldog_3
• Track 21 : HerbBucket_4, Jeremy4pt0_4, Spain_4, MrAaronian_4, Raunak_4, Linda_4, Boog_4, StarLord_4, ProfFrink_4, Djungelskog_4, BronxBay_4, Michelle_4, Sloopyjoe_4, Salk_4, Shiba_4, Stayer_4, Egad_4, DoctorPepper_4
• Track 22 : Sprinkle_3
• Track 23 : Onestar_3
• Track 24 : RustyBoy_3, Natasha_3
• Track 25 : Sporto_3
• Track 26 : Koji_24, RenegadeRaider_25
• Track 27 : Pherbot_24, Bustleton_24
• Track 28 : Lucky3_24, Guetzie_24, SirVictor_24, Golden_24
• Track 29 : PrincePhergus_24, Sinatra_24, Jingles_24
• Track 30 : BouleyBill_24
• Track 31 : Kauala_24
• Track 32 : Theresita_24
• Track 33 : ChickenKing_24

• Track 34 : Cheeto1_25
• Track 35 : GaeCeo_25

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

The start number called the most often in the published annotations is 17, it was called in 58 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acai_3, Altjira_3, AreFloNak_3, Argan_3, BarbieDoll_4, Barbonzobean_4, Biscute_3, Boog_4, BouleyBill_24, Breylor17_3, BronxBay_4, Brunswick_3, Bustleton_24, CastorTray_4, Caterpillar_4, Cheeto1_25, ChickenKing_24, Darby_3, DevitoJr_3, Djungelskog_4, DoctorPepper_4, Egad_4, ElephantMan_3, GaeCeo_25, GantcherGoblin_3, Gordon_4, Hemma_4, HerbBucket_4, Ingrid_3, Jeremy4pt0_4, Jingles_24, Kauala_24, KevinMinion_3, Kinny_4, Koji_24, Leathea_4, Lewando_4, Linda_4, Loretta_3, Makai_3, Mardi_4, MediumFry_4, Michelle_4, MrAaronian_4, Muglass_3, Natasha_3, Navi1117_4, Niktson_3, Nivinsha_3, Onestar_3, Phaila_4, Pherbot_24, PoeMe_4, Powelldog_3, PrincePhergus_24, ProfFrink_4, Raunak_4, Renaldo_5, RenegadeRaider_25, RustyBoy_3, Salk_4, ScienceWizSam_4, Shiba_4, Sinatra_24, Sloopyjoe_4, Spain_4, Sporto_3, Sprinkle_3, StarLord_4, Stardrop_5, Stayer_4, Synepsis_3, Tatanka_3, Tenney120_4, Theresita_24, TrixiePhattel_4, Truckee_3, Trustiboi_3, Uzumaki_4, Zeina_4,

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

Genes that do not have the "Most Annotated" start:
• Golden_24, Guetzie_24, Lucky3_24, SirVictor_24,

Summary by start number:

Start 17:
• Found in 80 of 84 (95.2%) of genes in pham
• Manual Annotations of this start: 58 of 62
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acai_3 (AU1), Altjira_3 (AU6), AreFloNak_3 (AU1), Argan_3 (AU6), BarbieDoll_4 (AU6), Barbonzobean_4 (AU6), Biscute_3 (AU6), Boog_4 (AW), BouleyBill_24 (EA4), Breylor17_3 (AU1), BronxBay_4 (AW), Brunswick_3 (AU1), Bustleton_24 (EA4), CastorTray_4 (AU1), Caterpillar_4 (AU4), Cheeto1_25 (EA9), ChickenKing_24 (EA9), Darby_3 (AU1), DevitoJr_3 (AU1), Djungelskog_4 (AW), DoctorPepper_4 (AW), Egad_4 (AW), ElephantMan_3 (AU1), GaeCeo_25 (EA9), GantcherGoblin_3 (AU6), Gordon_4 (AU1), Hemma_4 (AU1), HerbBucket_4 (AW), Ingrid_3 (AU3), Jeremy4pt0_4 (AW), Jingles_24 (EA4), Kauala_24 (EA4), KevinMinion_3 (AU6), Kinny_4 (AU6), Koji_24 (EA4), Leathea_4 (AU6), Lewando_4 (AU6), Linda_4 (AW), Loretta_3 (AU3), Makai_3 (AU5), Mardi_4 (AU6), MediumFry_4 (AU4), Michelle_4 (AW), MrAaronian_4 (AW), Muglass_3 (AU6), Natasha_3 (AW), Navi1117_4 (AU6), Niktson_3 (AU1), Nivinsha_3 (AU1), Onestar_3 (AW), Phaila_4 (AU6), Pherbot_24 (EA4), PoeMe_4 (AU6), Powelldog_3 (AW), PrincePhergus_24 (EA4), ProfFrink_4 (AW), Raunak_4 (AW), Renaldo_5 (AU6), RenegadeRaider_25 (EA4), RustyBoy_3 (AW), Salk_4 (AW),

ScienceWizSam_4 (AU1), Shiba_4 (AW), Sinatra_24 (EA4), Sloopyjoe_4 (AW), Spain_4 (AW), Sporto_3 (AW), Sprinkle_3 (AW), StarLord_4 (AW), Stardrop_5 (AU6), Stayer_4 (AW), Synepsis_3 (AU1), Tatanka_3 (AU1), Tenney120_4 (AU6), Theresita_24 (EA7), TrixiePhattel_4 (AU6), Truckee_3 (AU5), Trustiboi_3 (AU1), Uzumaki_4 (AU6), Zeina_4 (AU6),

Start 18:
• Found in 4 of 84 (4.8%) of genes in pham
• Manual Annotations of this start: 4 of 62
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Golden_24 (EA4), Guetzie_24 (EA4), Lucky3_24 (EA4), SirVictor_24 (EA4),

Summary by clusters:

There are 9 clusters represented in this pham: AU1, EA9, AU3, AU5, AU4, AW, AU6, EA4, EA7,

Info for manual annotations of cluster AU1:
•Start number 17 was manually annotated 12 times for cluster AU1.

Info for manual annotations of cluster AU3:
•Start number 17 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU4:
•Start number 17 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:
•Start number 17 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:
•Start number 17 was manually annotated 11 times for cluster AU6.

Info for manual annotations of cluster AW:
•Start number 17 was manually annotated 18 times for cluster AW.

Info for manual annotations of cluster EA4:
•Start number 17 was manually annotated 7 times for cluster EA4.
•Start number 18 was manually annotated 4 times for cluster EA4.

Info for manual annotations of cluster EA7:
•Start number 17 was manually annotated 1 time for cluster EA7.

Info for manual annotations of cluster EA9:
•Start number 17 was manually annotated 3 times for cluster EA9.

Gene Information:

Gene: Acai_3 Start: 1549, Stop: 2673, Start Num: 17
Candidate Starts for Acai_3:
(Start: 17 @1549 has 58 MA's), (31, 1807), (40, 2011), (62, 2326), (70, 2422),

Gene: Altjira_3 Start: 1423, Stop: 2403, Start Num: 17
Candidate Starts for Altjira_3:
(Start: 17 @1423 has 58 MA's), (27, 1594), (40, 1894), (43, 1924), (57, 2122), (71, 2332),

Gene: AreFloNak_3 Start: 1412, Stop: 2536, Start Num: 17
Candidate Starts for AreFloNak_3:
(Start: 17 @1412 has 58 MA's), (31, 1670), (34, 1727), (40, 1874), (69, 2282), (70, 2285),

Gene: Argan_3 Start: 1237, Stop: 2217, Start Num: 17
Candidate Starts for Argan_3:
(Start: 17 @1237 has 58 MA's), (27, 1408), (40, 1708), (43, 1738), (57, 1936), (71, 2146),

Gene: BarbieDoll_4 Start: 1531, Stop: 2511, Start Num: 17
Candidate Starts for BarbieDoll_4:
(11, 1432), (12, 1444), (13, 1450), (Start: 17 @1531 has 58 MA's), (27, 1702), (40, 2002), (43, 2032), (57, 2230), (64, 2347), (71, 2440),

Gene: Barbonzobean_4 Start: 1227, Stop: 2207, Start Num: 17
Candidate Starts for Barbonzobean_4:
(11, 1128), (12, 1140), (13, 1146), (Start: 17 @1227 has 58 MA's), (27, 1398), (40, 1698), (43, 1728), (64, 2043), (71, 2136),

Gene: Biscute_3 Start: 1227, Stop: 2207, Start Num: 17
Candidate Starts for Biscute_3:
(11, 1128), (12, 1140), (13, 1146), (Start: 17 @1227 has 58 MA's), (27, 1398), (40, 1698), (43, 1728), (64, 2043), (71, 2136),

Gene: Boog_4 Start: 1440, Stop: 2573, Start Num: 17
Candidate Starts for Boog_4:
(Start: 17 @1440 has 58 MA's), (25, 1566), (31, 1701), (33, 1722), (40, 1905),

Gene: BouleyBill_24 Start: 18629, Stop: 19621, Start Num: 17
Candidate Starts for BouleyBill_24:
(Start: 17 @18629 has 58 MA's), (24, 18758), (26, 18791), (28, 18830), (35, 18971), (37, 19031), (38, 19073), (55, 19286), (58, 19337), (63, 19424), (66, 19487), (69, 19508), (74, 19595),

Gene: Breylor17_3 Start: 1537, Stop: 2661, Start Num: 17
Candidate Starts for Breylor17_3:
(Start: 17 @1537 has 58 MA's), (29, 1726), (31, 1795), (34, 1852), (40, 1999), (69, 2407), (70, 2410),

Gene: BronxBay_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for BronxBay_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Brunswick_3 Start: 1546, Stop: 2670, Start Num: 17
Candidate Starts for Brunswick_3:
(Start: 17 @1546 has 58 MA's), (31, 1804), (32, 1816), (40, 2008), (62, 2323), (65, 2389), (70, 2419), (76, 2539),

Gene: Bustleton_24 Start: 18617, Stop: 19621, Start Num: 17
Candidate Starts for Bustleton_24:

(Start: 17 @18617 has 58 MA's), (24, 18746), (26, 18779), (35, 18959), (38, 19061), (55, 19274), (58, 19337), (63, 19424),

Gene: CastorTray_4 Start: 1391, Stop: 2515, Start Num: 17
Candidate Starts for CastorTray_4:
(Start: 17 @1391 has 58 MA's), (31, 1649), (34, 1706), (40, 1853), (69, 2261), (70, 2264),

Gene: Caterpillar_4 Start: 1620, Stop: 2729, Start Num: 17
Candidate Starts for Caterpillar_4:
(Start: 17 @1620 has 58 MA's), (25, 1746), (31, 1881), (36, 1983), (40, 2085), (47, 2160), (50, 2199), (70, 2493),

Gene: Cheeto1_25 Start: 18442, Stop: 19443, Start Num: 17
Candidate Starts for Cheeto1_25:
(1, 17788), (2, 17794), (3, 17803), (4, 17809), (5, 17905), (6, 17908), (7, 17941), (10, 18280), (14, 18370), (Start: 17 @18442 has 58 MA's), (24, 18571), (26, 18604), (29, 18652), (35, 18784), (37, 18844), (38, 18886), (54, 19111), (55, 19114), (58, 19168), (61, 19216), (73, 19405), (74, 19417),

Gene: ChickenKing_24 Start: 18340, Stop: 19338, Start Num: 17
Candidate Starts for ChickenKing_24:
(8, 18061), (9, 18088), (10, 18178), (14, 18268), (Start: 17 @18340 has 58 MA's), (24, 18469), (26, 18502), (29, 18550), (35, 18682), (37, 18742), (38, 18784), (51, 18946), (54, 19006), (55, 19009), (58, 19063), (61, 19111), (73, 19300), (74, 19312),

Gene: Darby_3 Start: 1394, Stop: 2518, Start Num: 17
Candidate Starts for Darby_3:
(Start: 17 @1394 has 58 MA's), (29, 1583), (31, 1652), (34, 1709), (40, 1856), (69, 2264), (70, 2267),

Gene: DevitoJr_3 Start: 1536, Stop: 2660, Start Num: 17
Candidate Starts for DevitoJr_3:
(Start: 17 @1536 has 58 MA's), (29, 1725), (31, 1794), (34, 1851), (40, 1998), (69, 2406), (70, 2409),

Gene: Djungelskog_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Djungelskog_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: DoctorPepper_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for DoctorPepper_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Egad_4 Start: 1440, Stop: 2573, Start Num: 17
Candidate Starts for Egad_4:
(Start: 17 @1440 has 58 MA's), (25, 1566), (31, 1701), (33, 1722), (40, 1905),

Gene: ElephantMan_3 Start: 1549, Stop: 2673, Start Num: 17
Candidate Starts for ElephantMan_3:
(Start: 17 @1549 has 58 MA's), (31, 1807), (40, 2011), (62, 2326), (65, 2392), (70, 2422), (76, 2542),

Gene: GaeCeo_25 Start: 18513, Stop: 19511, Start Num: 17
Candidate Starts for GaeCeo_25:
(10, 18351), (14, 18441), (Start: 17 @18513 has 58 MA's), (24, 18642), (26, 18675), (29, 18723), (35, 18855), (37, 18915), (38, 18957), (51, 19119), (54, 19179), (55, 19182), (58, 19236), (73, 19473), (74, 19485),

Gene: GantcherGoblin_3 Start: 1237, Stop: 2217, Start Num: 17
Candidate Starts for GantcherGoblin_3:
(Start: 17 @1237 has 58 MA's), (27, 1408), (40, 1708), (43, 1738), (57, 1936), (71, 2146),

Gene: Golden_24 Start: 18704, Stop: 19696, Start Num: 18
Candidate Starts for Golden_24:
(16, 18686), (Start: 18 @18704 has 4 MA's), (20, 18734), (24, 18830), (26, 18863), (29, 18911), (30, 18968), (35, 19043), (37, 19103), (38, 19145), (55, 19358), (58, 19412), (63, 19499), (64, 19511), (66, 19562), (69, 19583), (74, 19670),

Gene: Gordon_4 Start: 2678, Stop: 3787, Start Num: 17
Candidate Starts for Gordon_4:
(Start: 17 @2678 has 58 MA's), (34, 2993), (40, 3140), (42, 3158), (56, 3353), (70, 3551), (75, 3659),

Gene: Guetzie_24 Start: 18692, Stop: 19684, Start Num: 18
Candidate Starts for Guetzie_24:
(16, 18674), (Start: 18 @18692 has 4 MA's), (20, 18722), (24, 18818), (26, 18851), (29, 18899), (30, 18956), (35, 19031), (37, 19091), (38, 19133), (55, 19346), (58, 19400), (63, 19487), (64, 19499), (66, 19550), (69, 19571), (74, 19658),

Gene: Hemma_4 Start: 1180, Stop: 2295, Start Num: 17
Candidate Starts for Hemma_4:
(Start: 17 @1180 has 58 MA's), (40, 1639), (74, 2122), (79, 2275),

Gene: HerbBucket_4 Start: 1440, Stop: 2573, Start Num: 17
Candidate Starts for HerbBucket_4:
(Start: 17 @1440 has 58 MA's), (25, 1566), (31, 1701), (33, 1722), (40, 1905),

Gene: Ingrid_3 Start: 1418, Stop: 2536, Start Num: 17
Candidate Starts for Ingrid_3:
(Start: 17 @1418 has 58 MA's), (25, 1544), (31, 1679), (36, 1781), (40, 1883), (52, 2033), (62, 2195), (64, 2219), (74, 2366), (77, 2414),

Gene: Jeremy4pt0_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Jeremy4pt0_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Jingles_24 Start: 18630, Stop: 19625, Start Num: 17
Candidate Starts for Jingles_24:
(Start: 17 @18630 has 58 MA's), (24, 18759), (26, 18792), (28, 18831), (35, 18972), (38, 19074), (55, 19287), (58, 19341), (63, 19428), (66, 19491), (69, 19512), (74, 19599),

Gene: Kauala_24 Start: 18628, Stop: 19623, Start Num: 17
Candidate Starts for Kauala_24:
(Start: 17 @18628 has 58 MA's), (24, 18757), (26, 18790), (28, 18829), (35, 18970), (37, 19030), (38, 19072), (39, 19075), (48, 19168), (55, 19285), (58, 19339), (63, 19426), (69, 19510), (74, 19597),

Gene: KevinMinion_3 Start: 1393, Stop: 2373, Start Num: 17
Candidate Starts for KevinMinion_3:
(Start: 17 @1393 has 58 MA's), (27, 1564), (40, 1864), (43, 1894), (71, 2302),

Gene: Kinny_4 Start: 1531, Stop: 2511, Start Num: 17

Candidate Starts for Kinny_4:
(11, 1432), (12, 1444), (13, 1450), (Start: 17 @1531 has 58 MA's), (27, 1702), (40, 2002), (43, 2032), (57, 2230), (64, 2347), (71, 2440),

Gene: Koji_24 Start: 18752, Stop: 19747, Start Num: 17
Candidate Starts for Koji_24:
(Start: 17 @18752 has 58 MA's), (24, 18881), (26, 18914), (35, 19094), (38, 19196), (55, 19409), (58, 19463), (63, 19550), (66, 19613), (69, 19634), (74, 19721),

Gene: Leathea_4 Start: 1424, Stop: 2404, Start Num: 17
Candidate Starts for Leathea_4:
(12, 1337), (Start: 17 @1424 has 58 MA's), (25, 1550), (43, 1922), (44, 1937), (73, 2366),

Gene: Lewando_4 Start: 1530, Stop: 2510, Start Num: 17
Candidate Starts for Lewando_4:
(11, 1431), (12, 1443), (13, 1449), (Start: 17 @1530 has 58 MA's), (27, 1701), (40, 2001), (43, 2031), (64, 2346), (71, 2439),

Gene: Linda_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Linda_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Loretta_3 Start: 1418, Stop: 2536, Start Num: 17
Candidate Starts for Loretta_3:
(Start: 17 @1418 has 58 MA's), (25, 1544), (31, 1679), (36, 1781), (40, 1883), (52, 2033), (62, 2195), (64, 2219), (74, 2366), (77, 2414),

Gene: Lucky3_24 Start: 18704, Stop: 19696, Start Num: 18
Candidate Starts for Lucky3_24:
(16, 18686), (Start: 18 @18704 has 4 MA's), (20, 18734), (24, 18830), (26, 18863), (29, 18911), (30, 18968), (35, 19043), (37, 19103), (38, 19145), (55, 19358), (58, 19412), (63, 19499), (64, 19511), (66, 19562), (69, 19583), (74, 19670),

Gene: Makai_3 Start: 1476, Stop: 2600, Start Num: 17
Candidate Starts for Makai_3:
(15, 1437), (Start: 17 @1476 has 58 MA's), (31, 1734), (40, 1938),

Gene: Mardi_4 Start: 1542, Stop: 2525, Start Num: 17
Candidate Starts for Mardi_4:
(Start: 17 @1542 has 58 MA's), (27, 1713), (40, 2013), (43, 2043), (44, 2058),

Gene: MediumFry_4 Start: 1649, Stop: 2758, Start Num: 17
Candidate Starts for MediumFry_4:
(Start: 17 @1649 has 58 MA's), (25, 1775), (31, 1910), (36, 2012), (40, 2114), (50, 2228), (70, 2522),

Gene: Michelle_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Michelle_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: MrAaronian_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for MrAaronian_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Muglass_3 Start: 1227, Stop: 2207, Start Num: 17
Candidate Starts for Muglass_3:
(11, 1128), (12, 1140), (13, 1146), (Start: 17 @1227 has 58 MA's), (27, 1398), (40, 1698), (43, 1728), (64, 2043), (71, 2136),

Gene: Natasha_3 Start: 1414, Stop: 2385, Start Num: 17
Candidate Starts for Natasha_3:
(Start: 17 @1414 has 58 MA's), (27, 1585), (40, 1885), (58, 2128), (67, 2275),

Gene: Navi1117_4 Start: 1632, Stop: 2612, Start Num: 17
Candidate Starts for Navi1117_4:
(Start: 17 @1632 has 58 MA's), (27, 1803), (40, 2103), (43, 2133), (57, 2331), (71, 2541),

Gene: Niktson_3 Start: 1549, Stop: 2673, Start Num: 17
Candidate Starts for Niktson_3:
(Start: 17 @1549 has 58 MA's), (31, 1807), (40, 2011), (62, 2326), (65, 2392), (70, 2422), (76, 2542),

Gene: Nivinsha_3 Start: 1412, Stop: 2536, Start Num: 17
Candidate Starts for Nivinsha_3:
(Start: 17 @1412 has 58 MA's), (31, 1670), (34, 1727), (40, 1874), (69, 2282), (70, 2285),

Gene: Onestar_3 Start: 1451, Stop: 2590, Start Num: 17
Candidate Starts for Onestar_3:
(Start: 17 @1451 has 58 MA's), (27, 1622), (40, 1922),

Gene: Phaila_4 Start: 1506, Stop: 2486, Start Num: 17
Candidate Starts for Phaila_4:
(Start: 17 @1506 has 58 MA's), (27, 1677), (40, 1977), (43, 2007), (57, 2205), (71, 2415),

Gene: Pherbot_24 Start: 18616, Stop: 19620, Start Num: 17
Candidate Starts for Pherbot_24:
(Start: 17 @18616 has 58 MA's), (24, 18745), (26, 18778), (35, 18958), (38, 19060), (55, 19273), (58, 19336), (63, 19423),

Gene: PoeMe_4 Start: 1540, Stop: 2520, Start Num: 17
Candidate Starts for PoeMe_4:
(Start: 17 @1540 has 58 MA's), (27, 1711), (40, 2011), (43, 2041), (57, 2239), (63, 2344), (71, 2449),

Gene: Powelldog_3 Start: 1471, Stop: 2301, Start Num: 17
Candidate Starts for Powelldog_3:
(12, 1384), (13, 1390), (Start: 17 @1471 has 58 MA's), (21, 1552), (40, 1942),

Gene: PrincePhergus_24 Start: 18622, Stop: 19617, Start Num: 17
Candidate Starts for PrincePhergus_24:
(Start: 17 @18622 has 58 MA's), (24, 18751), (26, 18784), (28, 18823), (35, 18964), (38, 19066), (55, 19279), (58, 19333), (63, 19420), (66, 19483), (69, 19504), (74, 19591),

Gene: ProfFrink_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for ProfFrink_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Raunak_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Raunak_4:

(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Renaldo_5 Start: 1531, Stop: 2511, Start Num: 17
Candidate Starts for Renaldo_5:
(11, 1432), (12, 1444), (13, 1450), (Start: 17 @1531 has 58 MA's), (27, 1702), (40, 2002), (43, 2032), (57, 2230), (64, 2347), (71, 2440),

Gene: RenegadeRaider_25 Start: 18621, Stop: 19613, Start Num: 17
Candidate Starts for RenegadeRaider_25:
(Start: 17 @18621 has 58 MA's), (24, 18750), (26, 18783), (35, 18963), (38, 19065), (55, 19278), (58, 19329), (63, 19416), (66, 19479), (69, 19500), (74, 19587),

Gene: RustyBoy_3 Start: 1414, Stop: 2385, Start Num: 17
Candidate Starts for RustyBoy_3:
(Start: 17 @1414 has 58 MA's), (27, 1585), (40, 1885), (58, 2128), (67, 2275),

Gene: Salk_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Salk_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: ScienceWizSam_4 Start: 1367, Stop: 2491, Start Num: 17
Candidate Starts for ScienceWizSam_4:
(Start: 17 @1367 has 58 MA's), (29, 1556), (31, 1625), (34, 1682), (40, 1829), (69, 2237), (70, 2240),

Gene: Shiba_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Shiba_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Sinatra_24 Start: 18619, Stop: 19614, Start Num: 17
Candidate Starts for Sinatra_24:
(Start: 17 @18619 has 58 MA's), (24, 18748), (26, 18781), (28, 18820), (35, 18961), (38, 19063), (55, 19276), (58, 19330), (63, 19417), (66, 19480), (69, 19501), (74, 19588),

Gene: SirVictor_24 Start: 18692, Stop: 19684, Start Num: 18
Candidate Starts for SirVictor_24:
(16, 18674), (Start: 18 @18692 has 4 MA's), (20, 18722), (24, 18818), (26, 18851), (29, 18899), (30, 18956), (35, 19031), (37, 19091), (38, 19133), (55, 19346), (58, 19400), (63, 19487), (64, 19499), (66, 19550), (69, 19571), (74, 19658),

Gene: Sloopyjoe_4 Start: 1440, Stop: 2573, Start Num: 17
Candidate Starts for Sloopyjoe_4:
(Start: 17 @1440 has 58 MA's), (25, 1566), (31, 1701), (33, 1722), (40, 1905),

Gene: Spain_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Spain_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Sporto_3 Start: 1392, Stop: 2516, Start Num: 17
Candidate Starts for Sporto_3:
(Start: 17 @1392 has 58 MA's), (22, 1476), (25, 1518), (31, 1653), (40, 1857), (45, 1923), (78, 2463),

Gene: Sprinkle_3 Start: 1419, Stop: 2543, Start Num: 17
Candidate Starts for Sprinkle_3:

(Start: 17 @1419 has 58 MA's), (25, 1545), (33, 1701), (40, 1884), (47, 1962), (49, 1977), (53, 2052), (60, 2148), (68, 2286), (72, 2343), (79, 2523), (80, 2535),

Gene: StarLord_4 Start: 1440, Stop: 2573, Start Num: 17
Candidate Starts for StarLord_4:
(Start: 17 @1440 has 58 MA's), (25, 1566), (31, 1701), (33, 1722), (40, 1905),

Gene: Stardrop_5 Start: 1540, Stop: 2520, Start Num: 17
Candidate Starts for Stardrop_5:
(Start: 17 @1540 has 58 MA's), (27, 1711), (40, 2011), (43, 2041), (57, 2239), (71, 2449),

Gene: Stayer_4 Start: 1439, Stop: 2572, Start Num: 17
Candidate Starts for Stayer_4:
(Start: 17 @1439 has 58 MA's), (25, 1565), (31, 1700), (33, 1721), (40, 1904),

Gene: Synepsis_3 Start: 1535, Stop: 2659, Start Num: 17
Candidate Starts for Synepsis_3:
(Start: 17 @1535 has 58 MA's), (29, 1724), (31, 1793), (34, 1850), (40, 1997), (69, 2405), (70, 2408),

Gene: Tatanka_3 Start: 1475, Stop: 2599, Start Num: 17
Candidate Starts for Tatanka_3:
(Start: 17 @1475 has 58 MA's), (31, 1733), (34, 1790), (40, 1937), (69, 2345), (70, 2348),

Gene: Tenney120_4 Start: 1520, Stop: 2500, Start Num: 17
Candidate Starts for Tenney120_4:
(Start: 17 @1520 has 58 MA's), (27, 1691), (40, 1991), (43, 2021), (71, 2429),

Gene: Theresita_24 Start: 18223, Stop: 19221, Start Num: 17
Candidate Starts for Theresita_24:
(Start: 17 @18223 has 58 MA's), (23, 18310), (24, 18352), (26, 18385), (35, 18565), (37, 18625), (38, 18667), (39, 18670), (41, 18691), (46, 18769), (55, 18889), (59, 18949), (64, 19036), (69, 19108), (74, 19195),

Gene: TrixiePhattel_4 Start: 1473, Stop: 2447, Start Num: 17
Candidate Starts for TrixiePhattel_4:
(Start: 17 @1473 has 58 MA's), (19, 1488), (31, 1740), (40, 1944), (43, 1974), (50, 2064),

Gene: Truckee_3 Start: 1423, Stop: 2547, Start Num: 17
Candidate Starts for Truckee_3:
(15, 1384), (Start: 17 @1423 has 58 MA's), (31, 1681), (40, 1885),

Gene: Trustiboi_3 Start: 1556, Stop: 2680, Start Num: 17
Candidate Starts for Trustiboi_3:
(Start: 17 @1556 has 58 MA's), (29, 1745), (31, 1814), (34, 1871), (40, 2018), (69, 2426), (70, 2429),

Gene: Uzumaki_4 Start: 1520, Stop: 2500, Start Num: 17
Candidate Starts for Uzumaki_4:
(Start: 17 @1520 has 58 MA's), (27, 1691), (40, 1991), (43, 2021), (57, 2219), (71, 2429),

Gene: Zeina_4 Start: 1530, Stop: 2510, Start Num: 17
Candidate Starts for Zeina_4:
(Start: 17 @1530 has 58 MA's), (27, 1701), (40, 2001), (43, 2031), (57, 2229), (71, 2439),