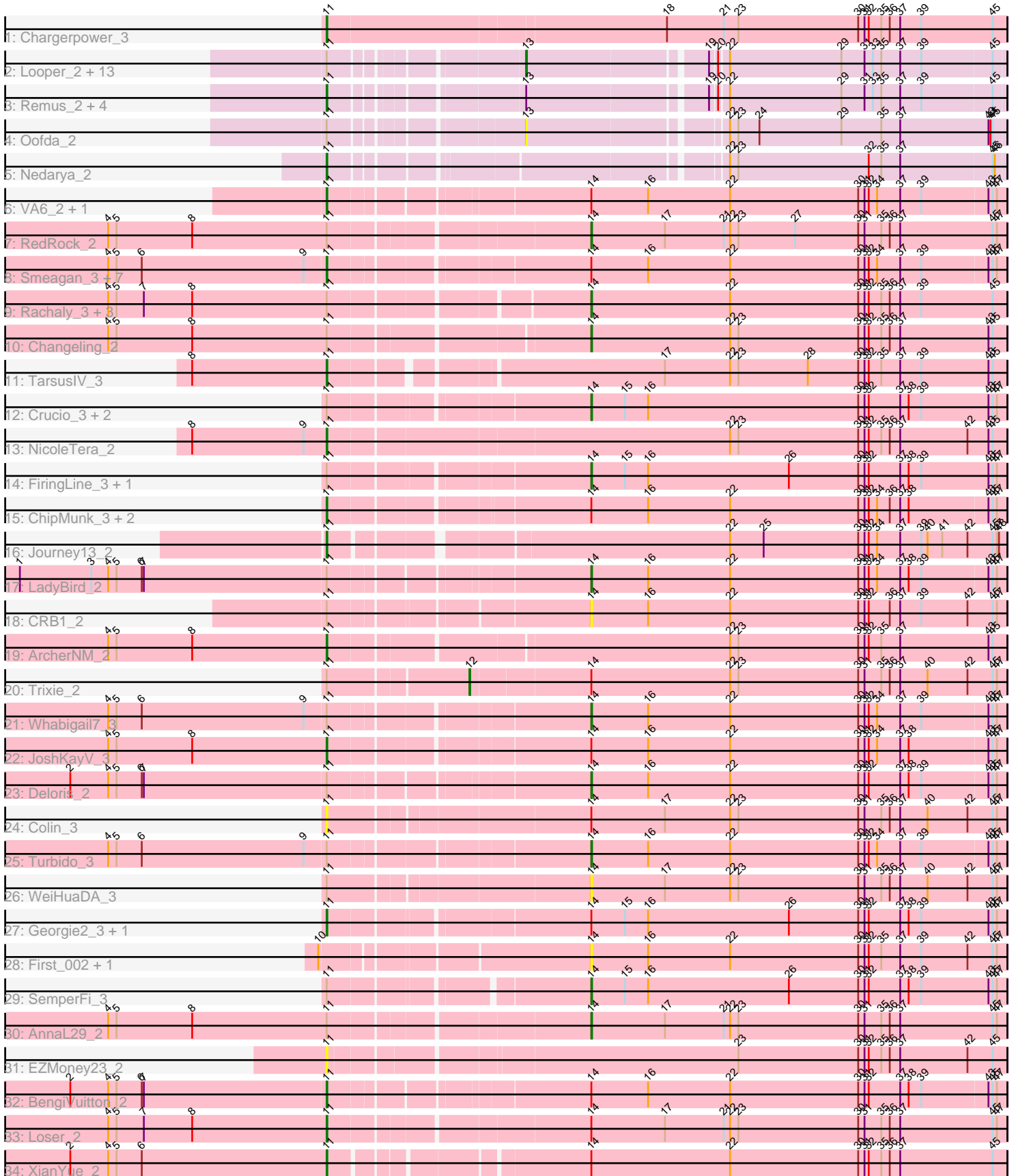


Pham 165036



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 165036 Report

This analysis was run 07/09/24 on database version 566.

Pham number 165036 has 69 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_3
- Track 2 : Looper_2, ReMo_2, DekHockey33_2, Boohoo_2, Switzerland_2, Battleship_3, Anaysia_2, Soups_2, Rosalind_2, LastResort_2, Waits_2, MinecraftSteve_3, Epsocamisio_2, KatherineG_2
- Track 3 : Remus_2, Strosahl_2, ShayRa_3, JSwag_2, Nebulosus_2
- Track 4 : Oofda_2
- Track 5 : Nedarya_2
- Track 6 : VA6_2, AN3_2
- Track 7 : RedRock_2
- Track 8 : Smeagan_3, Buggy_3, Agape74_3, Leviathan_3, Dignity_3, LilTurb_3, Jerm_3, AbbyPaige_3
- Track 9 : Rachaly_3, Lokk_3, Miko_3, BobSwaget_3
- Track 10 : Changeling_2
- Track 11 : TarsusIV_3
- Track 12 : Crucio_3, SweetiePie_3, Power_3
- Track 13 : NicoleTera_2
- Track 14 : FiringLine_3, SnapTap_3
- Track 15 : ChipMunk_3, KingCyrus_3, EvilGenius_3
- Track 16 : Journey13_2
- Track 17 : LadyBird_2
- Track 18 : CRB1_2
- Track 19 : ArcherNM_2
- Track 20 : Trixie_2
- Track 21 : Whabigail7_3
- Track 22 : JoshKayV_3
- Track 23 : Deloris_2
- Track 24 : Colin_3
- Track 25 : Turbido_3
- Track 26 : WeiHuaDA_3
- Track 27 : Georgie2_3, QueenBeesly_3
- Track 28 : First_002, 20ES_2
- Track 29 : SemperFi_3
- Track 30 : AnnaL29_2
- Track 31 : EZMoney23_2
- Track 32 : BengiVuitton_2
- Track 33 : Loser_2
- Track 34 : XianYue_2

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

The start number called the most often in the published annotations is 11, it was called in 30 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AN3_2, AbbyPaige_3, Agape74_3, ArcherNM_2, BengiVuitton_2, Buggy_3, Chargerpower_3, ChipMunk_3, Colin_3, Dignity_3, EZMoney23_2, EvilGenius_3, Georgie2_3, JSwag_2, Jerm_3, JoshKayV_3, Journey13_2, KingCyrus_3, Leviathan_3, LilTurb_3, Loser_2, Nebulosus_2, Nedarya_2, NicoleTera_2, QueenBeesly_3, Remus_2, ShayRa_3, Smeagan_3, Strosahl_2, TarsusIV_3, VA6_2, XianYue_2,

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

- Anaysia_2, AnnaL29_2, Battleship_3, BobSwaget_3, Boohoo_2, CRB1_2, Changeling_2, Crucio_3, DekHockey33_2, Deloris_2, Epsocamisio_2, FiringLine_3, KatherineG_2, LadyBird_2, LastResort_2, Loko_3, Looper_2, Miko_3, MinecraftSteve_3, Oofda_2, Power_3, Rachaly_3, ReMo_2, RedRock_2, Rosalind_2, SemperFi_3, SnapTap_3, Soups_2, SweetiePie_3, Switzerland_2, Trixie_2, Turbido_3, Waits_2, WeiHuaDA_3, Whabigail7_3,

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

- 20ES_2, First_002,

Summary by start number:

Start 11:

- Found in 67 of 69 (97.1%) of genes in pham
- Manual Annotations of this start: 30 of 62
- Called 47.8% of time when present
- Phage (with cluster) where this start called: AN3_2 (A2), AbbyPaige_3 (A2), Agape74_3 (A2), ArcherNM_2 (A2), BengiVuitton_2 (A2), Buggy_3 (A2), Chargerpower_3 (A), ChipMunk_3 (A2), Colin_3 (A2), Dignity_3 (A2), EZMoney23_2 (A2), EvilGenius_3 (A2), Georgie2_3 (A2), JSwag_2 (A15), Jerm_3 (A2), JoshKayV_3 (A2), Journey13_2 (A2), KingCyrus_3 (A2), Leviathan_3 (A2), LilTurb_3 (A2), Loser_2 (A2), Nebulosus_2 (A15), Nedarya_2 (A15), NicoleTera_2 (A2), QueenBeesly_3 (A2), Remus_2 (A15), ShayRa_3 (A15), Smeagan_3 (A2), Strosahl_2 (A15), TarsusIV_3 (A2), VA6_2 (A2), XianYue_2 (A2),

Start 12:

- Found in 1 of 69 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trixie_2 (A2),

Start 13:

- Found in 20 of 69 (29.0%) of genes in pham
- Manual Annotations of this start: 14 of 62
- Called 75.0% of time when present

- Phage (with cluster) where this start called: Anaysia_2 (A15), Battleship_3 (A15), Boohoo_2 (A15), DekHockey33_2 (A15), Epsocamisio_2 (A15), KatherineG_2 (A15), LastResort_2 (A15), Looper_2 (A15), MinecraftSteve_3 (A15), Oofda_2 (A15), ReMo_2 (A15), Rosalind_2 (A15), Soups_2 (A15), Switzerland_2 (A15), Waits_2 (A15),

Start 14:

- Found in 42 of 69 (60.9%) of genes in pham
- Manual Annotations of this start: 17 of 62
- Called 50.0% of time when present
- Phage (with cluster) where this start called: 20ES_2 (A2), AnnaL29_2 (A2), BobSwaget_3 (A2), CRB1_2 (A2), Changeling_2 (A2), Crucio_3 (A2), Deloris_2 (A2), FiringLine_3 (A2), First_002 (A2), LadyBird_2 (A2), Lolk_3 (A2), Miko_3 (A2), Power_3 (A2), Rachaly_3 (A2), RedRock_2 (A2), SemperFi_3 (A2), SnapTap_3 (A2), SweetiePie_3 (A2), Turbido_3 (A2), WeiHuaDA_3 (A2), Whabigail7_3 (A2),

Summary by clusters:

There are 3 clusters represented in this pham: A15, A, A2,

Info for manual annotations of cluster A:

- Start number 11 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A15:

- Start number 11 was manually annotated 6 times for cluster A15.
- Start number 13 was manually annotated 14 times for cluster A15.

Info for manual annotations of cluster A2:

- Start number 11 was manually annotated 23 times for cluster A2.
- Start number 12 was manually annotated 1 time for cluster A2.
- Start number 14 was manually annotated 17 times for cluster A2.

Gene Information:

Gene: 20ES_2 Start: 1591, Stop: 2184, Start Num: 14

Candidate Starts for 20ES_2:

(10, 1240), (Start: 14 @1591 has 17 MA's), (16, 1672), (22, 1789), (30, 1972), (31, 1981), (32, 1987), (35, 2005), (37, 2032), (39, 2062), (42, 2128), (45, 2164), (47, 2170),

Gene: AN3_2 Start: 1236, Stop: 2165, Start Num: 11

Candidate Starts for AN3_2:

(Start: 11 @1236 has 30 MA's), (Start: 14 @1575 has 17 MA's), (16, 1656), (22, 1773), (30, 1956), (31, 1965), (32, 1971), (34, 1983), (37, 2016), (39, 2046), (43, 2139), (45, 2145), (47, 2151),

Gene: AbbyPaige_3 Start: 1310, Stop: 2239, Start Num: 11

Candidate Starts for AbbyPaige_3:

(4, 1001), (5, 1013), (6, 1049), (9, 1280), (Start: 11 @1310 has 30 MA's), (Start: 14 @1649 has 17 MA's), (16, 1730), (22, 1847), (30, 2030), (31, 2039), (32, 2045), (34, 2057), (37, 2090), (39, 2120), (43, 2213), (45, 2219), (47, 2225),

Gene: Agape74_3 Start: 1310, Stop: 2239, Start Num: 11

Candidate Starts for Agape74_3:

(4, 1001), (5, 1013), (6, 1049), (9, 1280), (Start: 11 @1310 has 30 MA's), (Start: 14 @1649 has 17 MA's), (16, 1730), (22, 1847), (30, 2030), (31, 2039), (32, 2045), (34, 2057), (37, 2090), (39, 2120), (43, 2213), (45, 2219), (47, 2225),

Gene: Anaysia_2 Start: 1335, Stop: 1985, Start Num: 13

Candidate Starts for Anaysia_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: AnnaL29_2 Start: 1386, Stop: 1979, Start Num: 14

Candidate Starts for AnnaL29_2:

(4, 729), (5, 741), (8, 849), (Start: 11 @1041 has 30 MA's), (Start: 14 @1386 has 17 MA's), (17, 1491), (21, 1575), (22, 1584), (23, 1596), (30, 1767), (31, 1776), (35, 1800), (36, 1812), (37, 1827), (45, 1959), (47, 1965),

Gene: ArcherNM_2 Start: 1062, Stop: 2000, Start Num: 11

Candidate Starts for ArcherNM_2:

(4, 750), (5, 762), (8, 870), (Start: 11 @1062 has 30 MA's), (22, 1605), (23, 1617), (30, 1788), (31, 1797), (32, 1803), (35, 1821), (37, 1848), (43, 1974), (45, 1980),

Gene: Battleship_3 Start: 1482, Stop: 2132, Start Num: 13

Candidate Starts for Battleship_3:

(Start: 11 @1245 has 30 MA's), (Start: 13 @1482 has 14 MA's), (19, 1722), (20, 1731), (22, 1743), (29, 1902), (31, 1935), (33, 1947), (35, 1959), (37, 1986), (39, 2016), (45, 2115),

Gene: BengiVuitton_2 Start: 1100, Stop: 2026, Start Num: 11

Candidate Starts for BengiVuitton_2:

(2, 737), (4, 791), (5, 803), (6, 839), (7, 842), (Start: 11 @1100 has 30 MA's), (Start: 14 @1436 has 17 MA's), (16, 1517), (22, 1634), (30, 1817), (31, 1826), (32, 1832), (37, 1877), (38, 1889), (39, 1907), (43, 2000), (45, 2006), (47, 2012),

Gene: BobSwaget_3 Start: 1631, Stop: 2224, Start Num: 14

Candidate Starts for BobSwaget_3:

(4, 980), (5, 992), (7, 1031), (8, 1100), (Start: 11 @1292 has 30 MA's), (Start: 14 @1631 has 17 MA's), (22, 1829), (30, 2012), (31, 2021), (32, 2027), (35, 2045), (36, 2057), (37, 2072), (39, 2102), (45, 2204),

Gene: Boohoo_2 Start: 1335, Stop: 1985, Start Num: 13

Candidate Starts for Boohoo_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: Buggy_3 Start: 1321, Stop: 2250, Start Num: 11

Candidate Starts for Buggy_3:

(4, 1012), (5, 1024), (6, 1060), (9, 1291), (Start: 11 @1321 has 30 MA's), (Start: 14 @1660 has 17 MA's), (16, 1741), (22, 1858), (30, 2041), (31, 2050), (32, 2056), (34, 2068), (37, 2101), (39, 2131), (43, 2224), (45, 2230), (47, 2236),

Gene: CRB1_2 Start: 1584, Stop: 2177, Start Num: 14

Candidate Starts for CRB1_2:

(Start: 11 @1245 has 30 MA's), (Start: 14 @1584 has 17 MA's), (16, 1665), (22, 1782), (30, 1965), (31, 1974), (32, 1980), (36, 2010), (37, 2025), (39, 2055), (42, 2121), (45, 2157), (47, 2163),

Gene: Changeling_2 Start: 1407, Stop: 2000, Start Num: 14

Candidate Starts for Changeling_2:

(4, 750), (5, 762), (8, 870), (Start: 11 @1062 has 30 MA's), (Start: 14 @1407 has 17 MA's), (22, 1605), (23, 1617), (30, 1788), (31, 1797), (32, 1803), (35, 1821), (36, 1833), (37, 1848), (43, 1974), (45, 1980),

Gene: Chargerpower_3 Start: 1175, Stop: 2131, Start Num: 11

Candidate Starts for Chargerpower_3:

(Start: 11 @1175 has 30 MA's), (18, 1646), (21, 1727), (23, 1748), (30, 1919), (31, 1928), (32, 1934), (35, 1952), (36, 1964), (37, 1979), (39, 2009), (45, 2111),

Gene: ChipMunk_3 Start: 1331, Stop: 2260, Start Num: 11

Candidate Starts for ChipMunk_3:

(Start: 11 @1331 has 30 MA's), (Start: 14 @1670 has 17 MA's), (16, 1751), (22, 1868), (30, 2051), (31, 2060), (32, 2066), (34, 2078), (36, 2096), (37, 2111), (38, 2123), (43, 2234), (45, 2240), (47, 2246),

Gene: Colin_3 Start: 1197, Stop: 2141, Start Num: 11

Candidate Starts for Colin_3:

(Start: 11 @1197 has 30 MA's), (Start: 14 @1548 has 17 MA's), (17, 1653), (22, 1746), (23, 1758), (30, 1929), (31, 1938), (35, 1962), (36, 1974), (37, 1989), (40, 2028), (42, 2085), (45, 2121), (47, 2127),

Gene: Crucio_3 Start: 1675, Stop: 2268, Start Num: 14

Candidate Starts for Crucio_3:

(Start: 11 @1336 has 30 MA's), (Start: 14 @1675 has 17 MA's), (15, 1723), (16, 1756), (30, 2056), (31, 2065), (32, 2071), (37, 2116), (38, 2128), (39, 2146), (43, 2242), (45, 2248), (47, 2254),

Gene: DekHockey33_2 Start: 1482, Stop: 2132, Start Num: 13

Candidate Starts for DekHockey33_2:

(Start: 11 @1245 has 30 MA's), (Start: 13 @1482 has 14 MA's), (19, 1722), (20, 1731), (22, 1743), (29, 1902), (31, 1935), (33, 1947), (35, 1959), (37, 1986), (39, 2016), (45, 2115),

Gene: Deloris_2 Start: 1436, Stop: 2026, Start Num: 14

Candidate Starts for Deloris_2:

(2, 737), (4, 791), (5, 803), (6, 839), (7, 842), (Start: 11 @1100 has 30 MA's), (Start: 14 @1436 has 17 MA's), (16, 1517), (22, 1634), (30, 1817), (31, 1826), (32, 1832), (37, 1877), (38, 1889), (39, 1907), (43, 2000), (45, 2006), (47, 2012),

Gene: Dignity_3 Start: 1322, Stop: 2248, Start Num: 11

Candidate Starts for Dignity_3:

(4, 1013), (5, 1025), (6, 1061), (9, 1292), (Start: 11 @1322 has 30 MA's), (Start: 14 @1658 has 17 MA's), (16, 1739), (22, 1856), (30, 2039), (31, 2048), (32, 2054), (34, 2066), (37, 2099), (39, 2129), (43, 2222), (45, 2228), (47, 2234),

Gene: EZMoney23_2 Start: 1067, Stop: 2002, Start Num: 11

Candidate Starts for EZMoney23_2:

(Start: 11 @1067 has 30 MA's), (23, 1619), (30, 1790), (31, 1799), (32, 1805), (35, 1823), (36, 1835), (37, 1850), (42, 1946), (45, 1982),

Gene: Epsocamisio_2 Start: 1335, Stop: 1985, Start Num: 13

Candidate Starts for Epsocamisio_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: EvilGenius_3 Start: 1331, Stop: 2260, Start Num: 11

Candidate Starts for EvilGenius_3:

(Start: 11 @1331 has 30 MA's), (Start: 14 @1670 has 17 MA's), (16, 1751), (22, 1868), (30, 2051), (31, 2060), (32, 2066), (34, 2078), (36, 2096), (37, 2111), (38, 2123), (43, 2234), (45, 2240), (47, 2246),

Gene: FiringLine_3 Start: 1676, Stop: 2269, Start Num: 14

Candidate Starts for FiringLine_3:

(Start: 11 @1337 has 30 MA's), (Start: 14 @1676 has 17 MA's), (15, 1724), (16, 1757), (26, 1958), (30, 2057), (31, 2066), (32, 2072), (37, 2117), (38, 2129), (39, 2147), (43, 2243), (45, 2249), (47, 2255),

Gene: First_002 Start: 1591, Stop: 2184, Start Num: 14

Candidate Starts for First_002:

(10, 1240), (Start: 14 @1591 has 17 MA's), (16, 1672), (22, 1789), (30, 1972), (31, 1981), (32, 1987), (35, 2005), (37, 2032), (39, 2062), (42, 2128), (45, 2164), (47, 2170),

Gene: Georgie2_3 Start: 1336, Stop: 2271, Start Num: 11

Candidate Starts for Georgie2_3:

(Start: 11 @1336 has 30 MA's), (Start: 14 @1678 has 17 MA's), (15, 1726), (16, 1759), (26, 1960), (30, 2059), (31, 2068), (32, 2074), (37, 2119), (38, 2131), (39, 2149), (43, 2245), (45, 2251), (47, 2257),

Gene: JSwag_2 Start: 1098, Stop: 1985, Start Num: 11

Candidate Starts for JSwag_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: Jerm_3 Start: 1320, Stop: 2249, Start Num: 11

Candidate Starts for Jerm_3:

(4, 1011), (5, 1023), (6, 1059), (9, 1290), (Start: 11 @1320 has 30 MA's), (Start: 14 @1659 has 17 MA's), (16, 1740), (22, 1857), (30, 2040), (31, 2049), (32, 2055), (34, 2067), (37, 2100), (39, 2130), (43, 2223), (45, 2229), (47, 2235),

Gene: JoshKayV_3 Start: 1332, Stop: 2264, Start Num: 11

Candidate Starts for JoshKayV_3:

(4, 1020), (5, 1032), (8, 1140), (Start: 11 @1332 has 30 MA's), (Start: 14 @1674 has 17 MA's), (16, 1755), (22, 1872), (30, 2055), (31, 2064), (32, 2070), (34, 2082), (37, 2115), (38, 2127), (43, 2238), (45, 2244), (47, 2250),

Gene: Journey13_2 Start: 1187, Stop: 2110, Start Num: 11

Candidate Starts for Journey13_2:

(Start: 11 @1187 has 30 MA's), (22, 1715), (25, 1763), (30, 1898), (31, 1907), (32, 1913), (34, 1925), (37, 1958), (39, 1988), (40, 1997), (41, 2018), (42, 2054), (45, 2090), (47, 2096), (48, 2099),

Gene: KatherineG_2 Start: 1482, Stop: 2132, Start Num: 13

Candidate Starts for KatherineG_2:

(Start: 11 @1245 has 30 MA's), (Start: 13 @1482 has 14 MA's), (19, 1722), (20, 1731), (22, 1743), (29, 1902), (31, 1935), (33, 1947), (35, 1959), (37, 1986), (39, 2016), (45, 2115),

Gene: KingCyrus_3 Start: 1332, Stop: 2249, Start Num: 11

Candidate Starts for KingCyrus_3:

(Start: 11 @1332 has 30 MA's), (Start: 14 @1659 has 17 MA's), (16, 1740), (22, 1857), (30, 2040), (31, 2049), (32, 2055), (34, 2067), (36, 2085), (37, 2100), (38, 2112), (43, 2223), (45, 2229), (47, 2235),

Gene: LadyBird_2 Start: 1574, Stop: 2164, Start Num: 14

Candidate Starts for LadyBird_2:

(1, 803), (3, 905), (4, 929), (5, 941), (6, 977), (7, 980), (Start: 11 @1238 has 30 MA's), (Start: 14 @1574 has 17 MA's), (16, 1655), (22, 1772), (30, 1955), (31, 1964), (32, 1970), (34, 1982), (37, 2015), (38, 2027), (39, 2045), (43, 2138), (45, 2144), (47, 2150),

Gene: LastResort_2 Start: 1335, Stop: 1985, Start Num: 13

Candidate Starts for LastResort_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: Leviathan_3 Start: 1322, Stop: 2248, Start Num: 11

Candidate Starts for Leviathan_3:

(4, 1013), (5, 1025), (6, 1061), (9, 1292), (Start: 11 @1322 has 30 MA's), (Start: 14 @1658 has 17 MA's), (16, 1739), (22, 1856), (30, 2039), (31, 2048), (32, 2054), (34, 2066), (37, 2099), (39, 2129), (43, 2222), (45, 2228), (47, 2234),

Gene: LilTurb_3 Start: 1320, Stop: 2249, Start Num: 11

Candidate Starts for LilTurb_3:

(4, 1011), (5, 1023), (6, 1059), (9, 1290), (Start: 11 @1320 has 30 MA's), (Start: 14 @1659 has 17 MA's), (16, 1740), (22, 1857), (30, 2040), (31, 2049), (32, 2055), (34, 2067), (37, 2100), (39, 2130), (43, 2223), (45, 2229), (47, 2235),

Gene: Lokk_3 Start: 1633, Stop: 2226, Start Num: 14

Candidate Starts for Lokk_3:

(4, 982), (5, 994), (7, 1033), (8, 1102), (Start: 11 @1294 has 30 MA's), (Start: 14 @1633 has 17 MA's), (22, 1831), (30, 2014), (31, 2023), (32, 2029), (35, 2047), (36, 2059), (37, 2074), (39, 2104), (45, 2206),

Gene: Looper_2 Start: 1335, Stop: 1985, Start Num: 13

Candidate Starts for Looper_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: Loser_2 Start: 1040, Stop: 1978, Start Num: 11

Candidate Starts for Loser_2:

(4, 728), (5, 740), (7, 779), (8, 848), (Start: 11 @1040 has 30 MA's), (Start: 14 @1385 has 17 MA's), (17, 1490), (21, 1574), (22, 1583), (23, 1595), (30, 1766), (31, 1775), (35, 1799), (36, 1811), (37, 1826), (45, 1958), (47, 1964),

Gene: Miko_3 Start: 1611, Stop: 2204, Start Num: 14

Candidate Starts for Miko_3:

(4, 960), (5, 972), (7, 1011), (8, 1080), (Start: 11 @1272 has 30 MA's), (Start: 14 @1611 has 17 MA's), (22, 1809), (30, 1992), (31, 2001), (32, 2007), (35, 2025), (36, 2037), (37, 2052), (39, 2082), (45, 2184),

Gene: MinecraftSteve_3 Start: 1482, Stop: 2132, Start Num: 13

Candidate Starts for MinecraftSteve_3:

(Start: 11 @1245 has 30 MA's), (Start: 13 @1482 has 14 MA's), (19, 1722), (20, 1731), (22, 1743), (29, 1902), (31, 1935), (33, 1947), (35, 1959), (37, 1986), (39, 2016), (45, 2115),

Gene: Nebulosus_2 Start: 1098, Stop: 1985, Start Num: 11

Candidate Starts for Nebulosus_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: Nedarya_2 Start: 1067, Stop: 1954, Start Num: 11

Candidate Starts for Nedarya_2:

(Start: 11 @1067 has 30 MA's), (22, 1565), (23, 1577), (32, 1763), (35, 1781), (37, 1808), (45, 1937), (46, 1940),

Gene: NicoleTera_2 Start: 1072, Stop: 2022, Start Num: 11

Candidate Starts for NicoleTera_2:

(8, 880), (9, 1039), (Start: 11 @1072 has 30 MA's), (22, 1627), (23, 1639), (30, 1810), (31, 1819), (32, 1825), (35, 1843), (36, 1855), (37, 1870), (42, 1966), (43, 1996), (45, 2002),

Gene: Oofda_2 Start: 1336, Stop: 1989, Start Num: 13

Candidate Starts for Oofda_2:

(Start: 11 @1099 has 30 MA's), (Start: 13 @1336 has 14 MA's), (22, 1597), (23, 1609), (24, 1639), (29, 1756), (35, 1813), (37, 1840), (43, 1966), (44, 1969), (45, 1972),

Gene: Power_3 Start: 1675, Stop: 2268, Start Num: 14

Candidate Starts for Power_3:

(Start: 11 @1336 has 30 MA's), (Start: 14 @1675 has 17 MA's), (15, 1723), (16, 1756), (30, 2056), (31, 2065), (32, 2071), (37, 2116), (38, 2128), (39, 2146), (43, 2242), (45, 2248), (47, 2254),

Gene: QueenBeesly_3 Start: 1337, Stop: 2269, Start Num: 11

Candidate Starts for QueenBeesly_3:

(Start: 11 @1337 has 30 MA's), (Start: 14 @1676 has 17 MA's), (15, 1724), (16, 1757), (26, 1958), (30, 2057), (31, 2066), (32, 2072), (37, 2117), (38, 2129), (39, 2147), (43, 2243), (45, 2249), (47, 2255),

Gene: Rachaly_3 Start: 1631, Stop: 2224, Start Num: 14

Candidate Starts for Rachaly_3:

(4, 980), (5, 992), (7, 1031), (8, 1100), (Start: 11 @1292 has 30 MA's), (Start: 14 @1631 has 17 MA's), (22, 1829), (30, 2012), (31, 2021), (32, 2027), (35, 2045), (36, 2057), (37, 2072), (39, 2102), (45, 2204),

Gene: ReMo_2 Start: 1335, Stop: 1985, Start Num: 13

Candidate Starts for ReMo_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: RedRock_2 Start: 1386, Stop: 1979, Start Num: 14

Candidate Starts for RedRock_2:

(4, 729), (5, 741), (8, 849), (Start: 11 @1041 has 30 MA's), (Start: 14 @1386 has 17 MA's), (17, 1491), (21, 1575), (22, 1584), (23, 1596), (27, 1677), (30, 1767), (31, 1776), (35, 1800), (36, 1812), (37, 1827), (45, 1959), (47, 1965),

Gene: Remus_2 Start: 1098, Stop: 1985, Start Num: 11

Candidate Starts for Remus_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: Rosalind_2 Start: 1482, Stop: 2132, Start Num: 13

Candidate Starts for Rosalind_2:

(Start: 11 @1245 has 30 MA's), (Start: 13 @1482 has 14 MA's), (19, 1722), (20, 1731), (22, 1743), (29, 1902), (31, 1935), (33, 1947), (35, 1959), (37, 1986), (39, 2016), (45, 2115),

Gene: SemperFi_3 Start: 1670, Stop: 2263, Start Num: 14

Candidate Starts for SemperFi_3:

(Start: 11 @1337 has 30 MA's), (Start: 14 @1670 has 17 MA's), (15, 1718), (16, 1751), (26, 1952), (30, 2051), (31, 2060), (32, 2066), (37, 2111), (38, 2123), (39, 2141), (43, 2237), (45, 2243), (47, 2249),

Gene: ShayRa_3 Start: 1245, Stop: 2132, Start Num: 11

Candidate Starts for ShayRa_3:

(Start: 11 @1245 has 30 MA's), (Start: 13 @1482 has 14 MA's), (19, 1722), (20, 1731), (22, 1743), (29, 1902), (31, 1935), (33, 1947), (35, 1959), (37, 1986), (39, 2016), (45, 2115),

Gene: Smeagan_3 Start: 1322, Stop: 2251, Start Num: 11

Candidate Starts for Smeagan_3:

(4, 1013), (5, 1025), (6, 1061), (9, 1292), (Start: 11 @1322 has 30 MA's), (Start: 14 @1661 has 17 MA's), (16, 1742), (22, 1859), (30, 2042), (31, 2051), (32, 2057), (34, 2069), (37, 2102), (39, 2132), (43, 2225), (45, 2231), (47, 2237),

Gene: SnapTap_3 Start: 1675, Stop: 2268, Start Num: 14

Candidate Starts for SnapTap_3:

(Start: 11 @1336 has 30 MA's), (Start: 14 @1675 has 17 MA's), (15, 1723), (16, 1756), (26, 1957), (30, 2056), (31, 2065), (32, 2071), (37, 2116), (38, 2128), (39, 2146), (43, 2242), (45, 2248), (47, 2254),

Gene: Soups_2 Start: 1482, Stop: 2132, Start Num: 13

Candidate Starts for Soups_2:

(Start: 11 @1245 has 30 MA's), (Start: 13 @1482 has 14 MA's), (19, 1722), (20, 1731), (22, 1743), (29, 1902), (31, 1935), (33, 1947), (35, 1959), (37, 1986), (39, 2016), (45, 2115),

Gene: Strosahl_2 Start: 1098, Stop: 1985, Start Num: 11

Candidate Starts for Strosahl_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: SweetiePie_3 Start: 1676, Stop: 2269, Start Num: 14

Candidate Starts for SweetiePie_3:

(Start: 11 @1337 has 30 MA's), (Start: 14 @1676 has 17 MA's), (15, 1724), (16, 1757), (30, 2057), (31, 2066), (32, 2072), (37, 2117), (38, 2129), (39, 2147), (43, 2243), (45, 2249), (47, 2255),

Gene: Switzerland_2 Start: 1482, Stop: 2132, Start Num: 13

Candidate Starts for Switzerland_2:

(Start: 11 @1245 has 30 MA's), (Start: 13 @1482 has 14 MA's), (19, 1722), (20, 1731), (22, 1743), (29, 1902), (31, 1935), (33, 1947), (35, 1959), (37, 1986), (39, 2016), (45, 2115),

Gene: TarsusIV_3 Start: 1331, Stop: 2254, Start Num: 11

Candidate Starts for TarsusIV_3:

(8, 1139), (Start: 11 @1331 has 30 MA's), (17, 1766), (22, 1859), (23, 1871), (28, 1970), (30, 2042), (31, 2051), (32, 2057), (35, 2075), (37, 2102), (39, 2132), (43, 2228), (45, 2234),

Gene: Trixie_2 Start: 1367, Stop: 2125, Start Num: 12

Candidate Starts for Trixie_2:

(Start: 11 @1178 has 30 MA's), (Start: 12 @1367 has 1 MA's), (Start: 14 @1532 has 17 MA's), (22, 1730), (23, 1742), (30, 1913), (31, 1922), (35, 1946), (36, 1958), (37, 1973), (40, 2012), (42, 2069), (45, 2105), (47, 2111),

Gene: Turbido_3 Start: 1662, Stop: 2252, Start Num: 14

Candidate Starts for Turbido_3:

(4, 1011), (5, 1023), (6, 1059), (9, 1290), (Start: 11 @1320 has 30 MA's), (Start: 14 @1662 has 17 MA's), (16, 1743), (22, 1860), (30, 2043), (31, 2052), (32, 2058), (34, 2070), (37, 2103), (39, 2133), (43, 2226), (45, 2232), (47, 2238),

Gene: VA6_2 Start: 1236, Stop: 2165, Start Num: 11

Candidate Starts for VA6_2:

(Start: 11 @1236 has 30 MA's), (Start: 14 @1575 has 17 MA's), (16, 1656), (22, 1773), (30, 1956), (31, 1965), (32, 1971), (34, 1983), (37, 2016), (39, 2046), (43, 2139), (45, 2145), (47, 2151),

Gene: Waits_2 Start: 1335, Stop: 1985, Start Num: 13

Candidate Starts for Waits_2:

(Start: 11 @1098 has 30 MA's), (Start: 13 @1335 has 14 MA's), (19, 1575), (20, 1584), (22, 1596), (29, 1755), (31, 1788), (33, 1800), (35, 1812), (37, 1839), (39, 1869), (45, 1968),

Gene: WeiHuaDA_3 Start: 1666, Stop: 2259, Start Num: 14

Candidate Starts for WeiHuaDA_3:

(Start: 11 @1315 has 30 MA's), (Start: 14 @1666 has 17 MA's), (17, 1771), (22, 1864), (23, 1876), (30, 2047), (31, 2056), (35, 2080), (36, 2092), (37, 2107), (40, 2146), (42, 2203), (45, 2239), (47, 2245),

Gene: Whabigail7_3 Start: 1659, Stop: 2249, Start Num: 14

Candidate Starts for Whabigail7_3:

(4, 1011), (5, 1023), (6, 1059), (9, 1290), (Start: 11 @1320 has 30 MA's), (Start: 14 @1659 has 17 MA's), (16, 1740), (22, 1857), (30, 2040), (31, 2049), (32, 2055), (34, 2067), (37, 2100), (39, 2130), (43, 2223), (45, 2229), (47, 2235),

Gene: XianYue_2 Start: 1178, Stop: 2098, Start Num: 11

Candidate Starts for XianYue_2:

(2, 812), (4, 866), (5, 878), (6, 914), (Start: 11 @1178 has 30 MA's), (Start: 14 @1505 has 17 MA's), (22, 1703), (30, 1886), (31, 1895), (32, 1901), (35, 1919), (36, 1931), (37, 1946), (45, 2078),