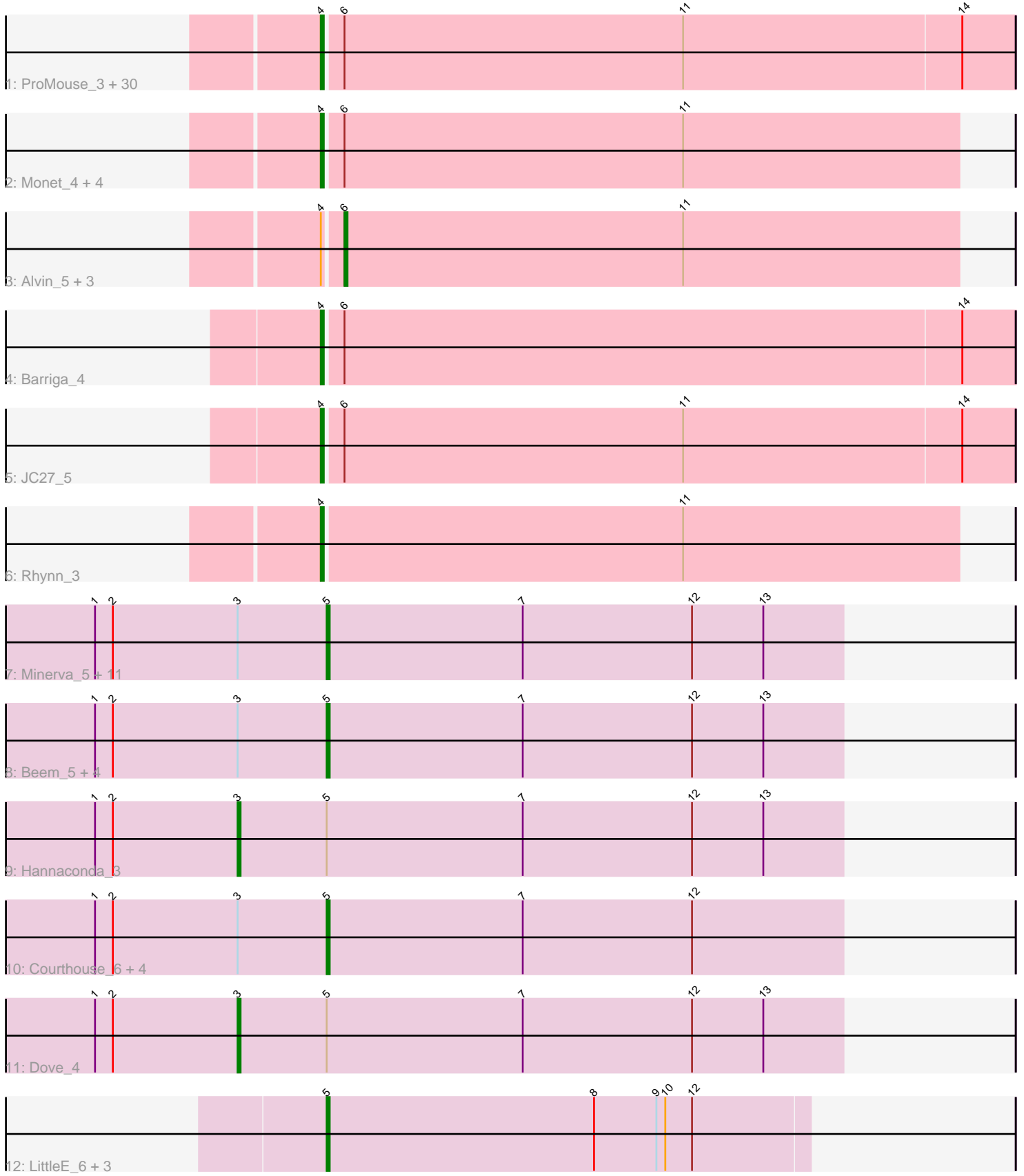


Pham 196506



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 196506 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196506 has 71 members, 2 are drafts.

Phages represented in each track:

- Track 1 : ProMouse_3, Trouble_3, CactusRose_3, HarryOW_5, Beatrix_3, Carlyle_5, BaconJack_4, DD5_4, Bigfoot_3, StrongArm_3, Maroc7_3, Nhonho_4, Marsha_4, Dulcie_3, Bexan_3, SkiPole_5, LilBib_3, GrecoEtereo_5, Pinto_5, Ciao_4, Mryolo_3, Lockley_4, Dexes_5, Nerujay_4, Paraselene_3, Target_4, Applejack_4, Zeuska_3, Michley_4, Fascinus_3, Peterson_4
- Track 2 : Monet_4, Licorice_6, Turj99_3, TheloniousMonk_4, Zeeculate_3
- Track 3 : Alvin_5, Treddle_4, Edtherson_4, Lesedi_3
- Track 4 : Barriga_4
- Track 5 : JC27_5
- Track 6 : Rhynn_3
- Track 7 : Minerva_5, Bombitas_4, Kalah2_6, Odette_4, Pound_5, ThreeRngTarjay_5, Phoebus_5, EricMillard_5, Schatzie_4, Yeet_4, NihilNomen_5, Dallas_4
- Track 8 : Beem_5, Redno2_5, Halley_5, Bobby_6, Ejimix_6
- Track 9 : Hannaconda_3
- Track 10 : Courthouse_6, Ariel_5, JuicyJay_6, Zelink_5, Superphikiman_6
- Track 11 : Dove_4
- Track 12 : LittleE_6, Wanda_6, Omega_8, Klein_6

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

The start number called the most often in the published annotations is 4, it was called in 38 of the 69 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Applejack_4, BaconJack_4, Barriga_4, Beatrix_3, Bexan_3, Bigfoot_3, CactusRose_3, Carlyle_5, Ciao_4, DD5_4, Dexes_5, Dulcie_3, Fascinus_3, GrecoEtereo_5, HarryOW_5, JC27_5, Licorice_6, LilBib_3, Lockley_4, Maroc7_3, Marsha_4, Michley_4, Monet_4, Mryolo_3, Nerujay_4, Nhonho_4, Paraselene_3, Peterson_4, Pinto_5, ProMouse_3, Rhynn_3, SkiPole_5, StrongArm_3, Target_4, TheloniousMonk_4, Trouble_3, Turj99_3, Zeeculate_3, Zeuska_3,

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

- Alvin_5, Edtherson_4, Lesedi_3, Treddle_4,

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

• Ariel_5, Beem_5, Bobby_6, Bombitas_4, Courthouse_6, Dallas_4, Dove_4, Ejimix_6, EricMillard_5, Halley_5, Hannaconda_3, JuicyJay_6, Kalah2_6, Klein_6, LittleE_6, Minerva_5, NihilNomen_5, Odette_4, Omega_8, Phoebus_5, Pound_5, Redno2_5, Schatzie_4, Superphikiman_6, ThreeRngTarjay_5, Wanda_6, Yeet_4, Zelink_5,

Summary by start number:

Start 3:

- Found in 24 of 71 (33.8%) of genes in pham
- Manual Annotations of this start: 2 of 69
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Dove_4 (J), Hannaconda_3 (J),

Start 4:

- Found in 43 of 71 (60.6%) of genes in pham
- Manual Annotations of this start: 38 of 69
- Called 90.7% of time when present
- Phage (with cluster) where this start called: Applejack_4 (A1), BaconJack_4 (A1), Barriga_4 (A1), Beatrix_3 (A1), Bexan_3 (A1), Bigfoot_3 (A1), CactusRose_3 (A1), Carlyle_5 (A1), Ciao_4 (A1), DD5_4 (A1), Dexes_5 (A1), Dulcie_3 (A1), Fascinus_3 (A1), GrecoEtereo_5 (A1), HarryOW_5 (A1), JC27_5 (A1), Licorice_6 (A1), LilBib_3 (A1), Lockley_4 (A1), Maroc7_3 (A1), Marsha_4 (A1), Michley_4 (A1), Monet_4 (A1), Mryolo_3 (A1), Nerujay_4 (A1), Nhonho_4 (A1), Paraselene_3 (A1), Peterson_4 (A1), Pinto_5 (A1), ProMouse_3 (A1), Rhynn_3 (A1), SkiPole_5 (A1), StrongArm_3 (A1), Target_4 (A1), TheloniousMonk_4 (A1), Trouble_3 (A1), Turj99_3 (A1), Zeeculate_3 (A1), Zeuska_3 (A1),

Start 5:

- Found in 28 of 71 (39.4%) of genes in pham
- Manual Annotations of this start: 25 of 69
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Ariel_5 (J), Beem_5 (J), Bobby_6 (J), Bombitas_4 (J), Courthouse_6 (J), Dallas_4 (J), Ejimix_6 (J), EricMillard_5 (J), Halley_5 (J), JuicyJay_6 (J), Kalah2_6 (J), Klein_6 (J), LittleE_6 (J), Minerva_5 (J), NihilNomen_5 (J), Odette_4 (J), Omega_8 (J), Phoebus_5 (J), Pound_5 (J), Redno2_5 (J), Schatzie_4 (J), Superphikiman_6 (J), ThreeRngTarjay_5 (J), Wanda_6 (J), Yeet_4 (J), Zelink_5 (J),

Start 6:

- Found in 42 of 71 (59.2%) of genes in pham
- Manual Annotations of this start: 4 of 69
- Called 9.5% of time when present
- Phage (with cluster) where this start called: Alvin_5 (A1), Edtherson_4 (A1), Lesedi_3 (A1), Treddle_4 (A1),

Summary by clusters:

There are 2 clusters represented in this pham: A1, J,

Info for manual annotations of cluster A1:

- Start number 4 was manually annotated 38 times for cluster A1.
- Start number 6 was manually annotated 4 times for cluster A1.

Info for manual annotations of cluster J:

- Start number 3 was manually annotated 2 times for cluster J.
- Start number 5 was manually annotated 25 times for cluster J.

Gene Information:

Gene: Alvin_5 Start: 2099, Stop: 2305, Start Num: 6

Candidate Starts for Alvin_5:

(Start: 4 @2093 has 38 MA's), (Start: 6 @2099 has 4 MA's), (11, 2213),

Gene: Applejack_4 Start: 1684, Stop: 1914, Start Num: 4

Candidate Starts for Applejack_4:

(Start: 4 @1684 has 38 MA's), (Start: 6 @1690 has 4 MA's), (11, 1804), (14, 1897),

Gene: Ariel_5 Start: 2046, Stop: 2219, Start Num: 5

Candidate Starts for Ariel_5:

(1, 1968), (2, 1974), (Start: 3 @2016 has 2 MA's), (Start: 5 @2046 has 25 MA's), (7, 2112), (12, 2169),

Gene: BaconJack_4 Start: 1630, Stop: 1860, Start Num: 4

Candidate Starts for BaconJack_4:

(Start: 4 @1630 has 38 MA's), (Start: 6 @1636 has 4 MA's), (11, 1750), (14, 1843),

Gene: Barriga_4 Start: 1643, Stop: 1873, Start Num: 4

Candidate Starts for Barriga_4:

(Start: 4 @1643 has 38 MA's), (Start: 6 @1649 has 4 MA's), (14, 1856),

Gene: Beatrix_3 Start: 1483, Stop: 1713, Start Num: 4

Candidate Starts for Beatrix_3:

(Start: 4 @1483 has 38 MA's), (Start: 6 @1489 has 4 MA's), (11, 1603), (14, 1696),

Gene: Beem_5 Start: 2011, Stop: 2184, Start Num: 5

Candidate Starts for Beem_5:

(1, 1933), (2, 1939), (Start: 3 @1981 has 2 MA's), (Start: 5 @2011 has 25 MA's), (7, 2077), (12, 2134), (13, 2158),

Gene: Bexan_3 Start: 1483, Stop: 1713, Start Num: 4

Candidate Starts for Bexan_3:

(Start: 4 @1483 has 38 MA's), (Start: 6 @1489 has 4 MA's), (11, 1603), (14, 1696),

Gene: Bigfoot_3 Start: 1542, Stop: 1772, Start Num: 4

Candidate Starts for Bigfoot_3:

(Start: 4 @1542 has 38 MA's), (Start: 6 @1548 has 4 MA's), (11, 1662), (14, 1755),

Gene: Bobby_6 Start: 2746, Stop: 2919, Start Num: 5

Candidate Starts for Bobby_6:

(1, 2668), (2, 2674), (Start: 3 @2716 has 2 MA's), (Start: 5 @2746 has 25 MA's), (7, 2812), (12, 2869), (13, 2893),

Gene: Bombitas_4 Start: 1550, Stop: 1723, Start Num: 5

Candidate Starts for Bombitas_4:

(1, 1472), (2, 1478), (Start: 3 @1520 has 2 MA's), (Start: 5 @1550 has 25 MA's), (7, 1616), (12, 1673), (13, 1697),

Gene: CactusRose_3 Start: 1541, Stop: 1771, Start Num: 4

Candidate Starts for CactusRose_3:

(Start: 4 @1541 has 38 MA's), (Start: 6 @1547 has 4 MA's), (11, 1661), (14, 1754),

Gene: Carlyle_5 Start: 1922, Stop: 2152, Start Num: 4

Candidate Starts for Carlyle_5:

(Start: 4 @1922 has 38 MA's), (Start: 6 @1928 has 4 MA's), (11, 2042), (14, 2135),

Gene: Ciao_4 Start: 1773, Stop: 2003, Start Num: 4

Candidate Starts for Ciao_4:

(Start: 4 @1773 has 38 MA's), (Start: 6 @1779 has 4 MA's), (11, 1893), (14, 1986),

Gene: Courthouse_6 Start: 2845, Stop: 3018, Start Num: 5

Candidate Starts for Courthouse_6:

(1, 2767), (2, 2773), (Start: 3 @2815 has 2 MA's), (Start: 5 @2845 has 25 MA's), (7, 2911), (12, 2968),

Gene: DD5_4 Start: 1675, Stop: 1905, Start Num: 4

Candidate Starts for DD5_4:

(Start: 4 @1675 has 38 MA's), (Start: 6 @1681 has 4 MA's), (11, 1795), (14, 1888),

Gene: Dallas_4 Start: 1550, Stop: 1723, Start Num: 5

Candidate Starts for Dallas_4:

(1, 1472), (2, 1478), (Start: 3 @1520 has 2 MA's), (Start: 5 @1550 has 25 MA's), (7, 1616), (12, 1673), (13, 1697),

Gene: Dexes_5 Start: 2353, Stop: 2583, Start Num: 4

Candidate Starts for Dexes_5:

(Start: 4 @2353 has 38 MA's), (Start: 6 @2359 has 4 MA's), (11, 2473), (14, 2566),

Gene: Dove_4 Start: 1519, Stop: 1722, Start Num: 3

Candidate Starts for Dove_4:

(1, 1471), (2, 1477), (Start: 3 @1519 has 2 MA's), (Start: 5 @1549 has 25 MA's), (7, 1615), (12, 1672), (13, 1696),

Gene: Dulcie_3 Start: 1476, Stop: 1706, Start Num: 4

Candidate Starts for Dulcie_3:

(Start: 4 @1476 has 38 MA's), (Start: 6 @1482 has 4 MA's), (11, 1596), (14, 1689),

Gene: Edtherson_4 Start: 1699, Stop: 1905, Start Num: 6

Candidate Starts for Edtherson_4:

(Start: 4 @1693 has 38 MA's), (Start: 6 @1699 has 4 MA's), (11, 1813),

Gene: Ejimix_6 Start: 2761, Stop: 2934, Start Num: 5

Candidate Starts for Ejimix_6:

(1, 2683), (2, 2689), (Start: 3 @2731 has 2 MA's), (Start: 5 @2761 has 25 MA's), (7, 2827), (12, 2884), (13, 2908),

Gene: EricMillard_5 Start: 2296, Stop: 2469, Start Num: 5

Candidate Starts for EricMillard_5:

(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 5 @2296 has 25 MA's), (7, 2362), (12, 2419), (13, 2443),

Gene: Fascinus_3 Start: 1543, Stop: 1773, Start Num: 4

Candidate Starts for Fascinus_3:

(Start: 4 @1543 has 38 MA's), (Start: 6 @1549 has 4 MA's), (11, 1663), (14, 1756),

Gene: GrecoEtereo_5 Start: 2002, Stop: 2232, Start Num: 4

Candidate Starts for GrecoEtereo_5:

(Start: 4 @2002 has 38 MA's), (Start: 6 @2008 has 4 MA's), (11, 2122), (14, 2215),

Gene: Halley_5 Start: 2011, Stop: 2184, Start Num: 5

Candidate Starts for Halley_5:

(1, 1933), (2, 1939), (Start: 3 @1981 has 2 MA's), (Start: 5 @2011 has 25 MA's), (7, 2077), (12, 2134), (13, 2158),

Gene: Hannaconda_3 Start: 1495, Stop: 1698, Start Num: 3

Candidate Starts for Hannaconda_3:

(1, 1447), (2, 1453), (Start: 3 @1495 has 2 MA's), (Start: 5 @1525 has 25 MA's), (7, 1591), (12, 1648), (13, 1672),

Gene: HarryOW_5 Start: 2002, Stop: 2232, Start Num: 4

Candidate Starts for HarryOW_5:

(Start: 4 @2002 has 38 MA's), (Start: 6 @2008 has 4 MA's), (11, 2122), (14, 2215),

Gene: JC27_5 Start: 2189, Stop: 2419, Start Num: 4

Candidate Starts for JC27_5:

(Start: 4 @2189 has 38 MA's), (Start: 6 @2195 has 4 MA's), (11, 2309), (14, 2402),

Gene: JuicyJay_6 Start: 2844, Stop: 3017, Start Num: 5

Candidate Starts for JuicyJay_6:

(1, 2766), (2, 2772), (Start: 3 @2814 has 2 MA's), (Start: 5 @2844 has 25 MA's), (7, 2910), (12, 2967),

Gene: Kalah2_6 Start: 2840, Stop: 3013, Start Num: 5

Candidate Starts for Kalah2_6:

(1, 2762), (2, 2768), (Start: 3 @2810 has 2 MA's), (Start: 5 @2840 has 25 MA's), (7, 2906), (12, 2963), (13, 2987),

Gene: Klein_6 Start: 2837, Stop: 2998, Start Num: 5

Candidate Starts for Klein_6:

(Start: 5 @2837 has 25 MA's), (8, 2927), (9, 2948), (10, 2951), (12, 2960),

Gene: Lesedi_3 Start: 1548, Stop: 1754, Start Num: 6

Candidate Starts for Lesedi_3:

(Start: 4 @1542 has 38 MA's), (Start: 6 @1548 has 4 MA's), (11, 1662),

Gene: Licorice_6 Start: 2404, Stop: 2616, Start Num: 4

Candidate Starts for Licorice_6:

(Start: 4 @2404 has 38 MA's), (Start: 6 @2410 has 4 MA's), (11, 2524),

Gene: LilBib_3 Start: 1543, Stop: 1773, Start Num: 4

Candidate Starts for LilBib_3:

(Start: 4 @1543 has 38 MA's), (Start: 6 @1549 has 4 MA's), (11, 1663), (14, 1756),

Gene: LittleE_6 Start: 2404, Stop: 2565, Start Num: 5

Candidate Starts for LittleE_6:

(Start: 5 @2404 has 25 MA's), (8, 2494), (9, 2515), (10, 2518), (12, 2527),

Gene: Lockley_4 Start: 1675, Stop: 1905, Start Num: 4

Candidate Starts for Lockley_4:

(Start: 4 @1675 has 38 MA's), (Start: 6 @1681 has 4 MA's), (11, 1795), (14, 1888),

Gene: Maroc7_3 Start: 1544, Stop: 1774, Start Num: 4

Candidate Starts for Maroc7_3:

(Start: 4 @1544 has 38 MA's), (Start: 6 @1550 has 4 MA's), (11, 1664), (14, 1757),

Gene: Marsha_4 Start: 1997, Stop: 2227, Start Num: 4

Candidate Starts for Marsha_4:

(Start: 4 @1997 has 38 MA's), (Start: 6 @2003 has 4 MA's), (11, 2117), (14, 2210),

Gene: Michley_4 Start: 1706, Stop: 1936, Start Num: 4

Candidate Starts for Michley_4:

(Start: 4 @1706 has 38 MA's), (Start: 6 @1712 has 4 MA's), (11, 1826), (14, 1919),

Gene: Minerva_5 Start: 2300, Stop: 2473, Start Num: 5

Candidate Starts for Minerva_5:

(1, 2222), (2, 2228), (Start: 3 @2270 has 2 MA's), (Start: 5 @2300 has 25 MA's), (7, 2366), (12, 2423), (13, 2447),

Gene: Monet_4 Start: 1693, Stop: 1905, Start Num: 4

Candidate Starts for Monet_4:

(Start: 4 @1693 has 38 MA's), (Start: 6 @1699 has 4 MA's), (11, 1813),

Gene: Mryolo_3 Start: 1543, Stop: 1773, Start Num: 4

Candidate Starts for Mryolo_3:

(Start: 4 @1543 has 38 MA's), (Start: 6 @1549 has 4 MA's), (11, 1663), (14, 1756),

Gene: Nerujay_4 Start: 1618, Stop: 1848, Start Num: 4

Candidate Starts for Nerujay_4:

(Start: 4 @1618 has 38 MA's), (Start: 6 @1624 has 4 MA's), (11, 1738), (14, 1831),

Gene: Nhonho_4 Start: 1631, Stop: 1861, Start Num: 4

Candidate Starts for Nhonho_4:

(Start: 4 @1631 has 38 MA's), (Start: 6 @1637 has 4 MA's), (11, 1751), (14, 1844),

Gene: NihilNomen_5 Start: 2300, Stop: 2473, Start Num: 5

Candidate Starts for NihilNomen_5:

(1, 2222), (2, 2228), (Start: 3 @2270 has 2 MA's), (Start: 5 @2300 has 25 MA's), (7, 2366), (12, 2423), (13, 2447),

Gene: Odette_4 Start: 1549, Stop: 1722, Start Num: 5

Candidate Starts for Odette_4:

(1, 1471), (2, 1477), (Start: 3 @1519 has 2 MA's), (Start: 5 @1549 has 25 MA's), (7, 1615), (12, 1672), (13, 1696),

Gene: Omega_8 Start: 3749, Stop: 3910, Start Num: 5
Candidate Starts for Omega_8:
(Start: 5 @3749 has 25 MA's), (8, 3839), (9, 3860), (10, 3863), (12, 3872),

Gene: Paraselene_3 Start: 1534, Stop: 1764, Start Num: 4
Candidate Starts for Paraselene_3:
(Start: 4 @1534 has 38 MA's), (Start: 6 @1540 has 4 MA's), (11, 1654), (14, 1747),

Gene: Peterson_4 Start: 2039, Stop: 2269, Start Num: 4
Candidate Starts for Peterson_4:
(Start: 4 @2039 has 38 MA's), (Start: 6 @2045 has 4 MA's), (11, 2159), (14, 2252),

Gene: Phoebus_5 Start: 2296, Stop: 2469, Start Num: 5
Candidate Starts for Phoebus_5:
(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 5 @2296 has 25 MA's), (7, 2362), (12, 2419),
(13, 2443),

Gene: Pinto_5 Start: 1918, Stop: 2148, Start Num: 4
Candidate Starts for Pinto_5:
(Start: 4 @1918 has 38 MA's), (Start: 6 @1924 has 4 MA's), (11, 2038), (14, 2131),

Gene: Pound_5 Start: 2296, Stop: 2469, Start Num: 5
Candidate Starts for Pound_5:
(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 5 @2296 has 25 MA's), (7, 2362), (12, 2419),
(13, 2443),

Gene: ProMouse_3 Start: 1531, Stop: 1761, Start Num: 4
Candidate Starts for ProMouse_3:
(Start: 4 @1531 has 38 MA's), (Start: 6 @1537 has 4 MA's), (11, 1651), (14, 1744),

Gene: Redno2_5 Start: 2011, Stop: 2184, Start Num: 5
Candidate Starts for Redno2_5:
(1, 1933), (2, 1939), (Start: 3 @1981 has 2 MA's), (Start: 5 @2011 has 25 MA's), (7, 2077), (12, 2134),
(13, 2158),

Gene: Rhynn_3 Start: 1690, Stop: 1902, Start Num: 4
Candidate Starts for Rhynn_3:
(Start: 4 @1690 has 38 MA's), (11, 1810),

Gene: Schatzie_4 Start: 1550, Stop: 1723, Start Num: 5
Candidate Starts for Schatzie_4:
(1, 1472), (2, 1478), (Start: 3 @1520 has 2 MA's), (Start: 5 @1550 has 25 MA's), (7, 1616), (12, 1673),
(13, 1697),

Gene: SkiPole_5 Start: 1957, Stop: 2187, Start Num: 4
Candidate Starts for SkiPole_5:
(Start: 4 @1957 has 38 MA's), (Start: 6 @1963 has 4 MA's), (11, 2077), (14, 2170),

Gene: StrongArm_3 Start: 1483, Stop: 1713, Start Num: 4
Candidate Starts for StrongArm_3:
(Start: 4 @1483 has 38 MA's), (Start: 6 @1489 has 4 MA's), (11, 1603), (14, 1696),

Gene: Superphikiman_6 Start: 2845, Stop: 3018, Start Num: 5

Candidate Starts for Superphikiman_6:

(1, 2767), (2, 2773), (Start: 3 @2815 has 2 MA's), (Start: 5 @2845 has 25 MA's), (7, 2911), (12, 2968),

Gene: Target_4 Start: 1788, Stop: 2018, Start Num: 4

Candidate Starts for Target_4:

(Start: 4 @1788 has 38 MA's), (Start: 6 @1794 has 4 MA's), (11, 1908), (14, 2001),

Gene: TheloniousMonk_4 Start: 1691, Stop: 1903, Start Num: 4

Candidate Starts for TheloniousMonk_4:

(Start: 4 @1691 has 38 MA's), (Start: 6 @1697 has 4 MA's), (11, 1811),

Gene: ThreeRngTarjay_5 Start: 2296, Stop: 2469, Start Num: 5

Candidate Starts for ThreeRngTarjay_5:

(1, 2218), (2, 2224), (Start: 3 @2266 has 2 MA's), (Start: 5 @2296 has 25 MA's), (7, 2362), (12, 2419), (13, 2443),

Gene: Treddle_4 Start: 1700, Stop: 1906, Start Num: 6

Candidate Starts for Treddle_4:

(Start: 4 @1694 has 38 MA's), (Start: 6 @1700 has 4 MA's), (11, 1814),

Gene: Trouble_3 Start: 1535, Stop: 1765, Start Num: 4

Candidate Starts for Trouble_3:

(Start: 4 @1535 has 38 MA's), (Start: 6 @1541 has 4 MA's), (11, 1655), (14, 1748),

Gene: Turj99_3 Start: 1541, Stop: 1753, Start Num: 4

Candidate Starts for Turj99_3:

(Start: 4 @1541 has 38 MA's), (Start: 6 @1547 has 4 MA's), (11, 1661),

Gene: Wanda_6 Start: 2837, Stop: 2998, Start Num: 5

Candidate Starts for Wanda_6:

(Start: 5 @2837 has 25 MA's), (8, 2927), (9, 2948), (10, 2951), (12, 2960),

Gene: Yeet_4 Start: 1550, Stop: 1723, Start Num: 5

Candidate Starts for Yeet_4:

(1, 1472), (2, 1478), (Start: 3 @1520 has 2 MA's), (Start: 5 @1550 has 25 MA's), (7, 1616), (12, 1673), (13, 1697),

Gene: Zeeculate_3 Start: 1475, Stop: 1687, Start Num: 4

Candidate Starts for Zeeculate_3:

(Start: 4 @1475 has 38 MA's), (Start: 6 @1481 has 4 MA's), (11, 1595),

Gene: Zelink_5 Start: 2094, Stop: 2267, Start Num: 5

Candidate Starts for Zelink_5:

(1, 2016), (2, 2022), (Start: 3 @2064 has 2 MA's), (Start: 5 @2094 has 25 MA's), (7, 2160), (12, 2217),

Gene: Zeuska_3 Start: 1542, Stop: 1772, Start Num: 4

Candidate Starts for Zeuska_3:

(Start: 4 @1542 has 38 MA's), (Start: 6 @1548 has 4 MA's), (11, 1662), (14, 1755),