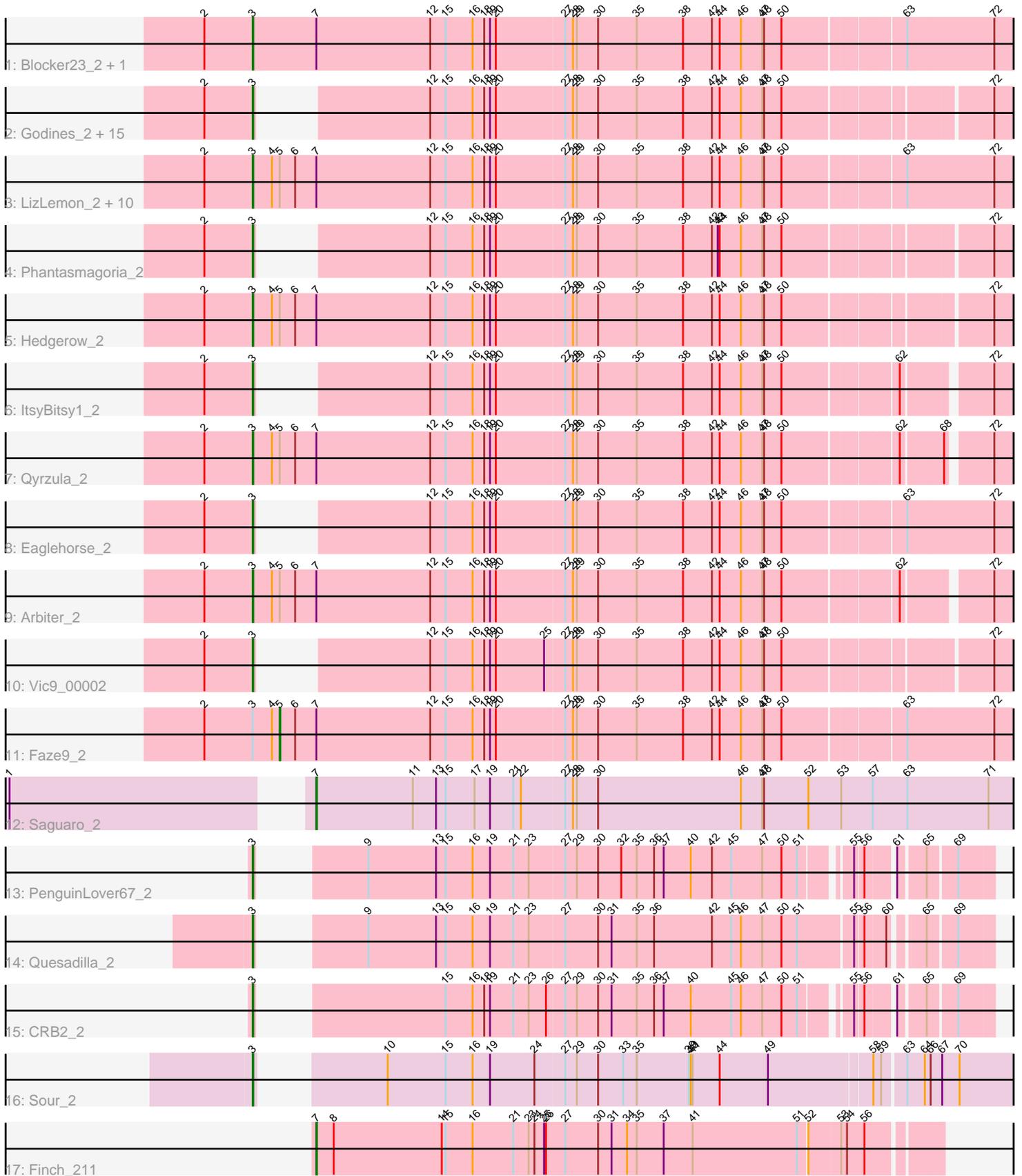


# Pham 291300



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 291300 Report

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

Pham number 291300 has 43 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Blocker23\_2, PrinceCharming\_2
- Track 2 : Godines\_2, Ares\_2, Opia\_2, Allegro\_2, Kolhan\_2, Lephleur\_2, Bananafish\_2, Kheth\_2, Tres\_2, Calamitous\_2, Sabella\_2, Holeinone\_2, TA17A\_2, MasterPo\_2, Laurie\_2, LilSmirk\_2
- Track 3 : LizLemon\_2, Rosebush\_2, Boyle\_2, FrenchFry\_2, Coffee\_2, Rhinoforte\_2, Glass\_2, Lars\_2, Brownie5\_2, Kaleb\_2, West99\_2
- Track 4 : Phantasmagoria\_2
- Track 5 : Hedgerow\_2
- Track 6 : ItsyBitsy1\_2
- Track 7 : Qyrzula\_2
- Track 8 : Eaglehorse\_2
- Track 9 : Arbiter\_2
- Track 10 : Vic9\_00002
- Track 11 : Faze9\_2
- Track 12 : Saguaro\_2
- Track 13 : PenguinLover67\_2
- Track 14 : Quesadilla\_2
- Track 15 : CRB2\_2
- Track 16 : Sour\_2
- Track 17 : Finch\_211

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

The start number called the most often in the published annotations is 3, it was called in 39 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Allegro\_2, Arbiter\_2, Ares\_2, Bananafish\_2, Blocker23\_2, Boyle\_2, Brownie5\_2, CRB2\_2, Calamitous\_2, Coffee\_2, Eaglehorse\_2, FrenchFry\_2, Glass\_2, Godines\_2, Hedgerow\_2, Holeinone\_2, ItsyBitsy1\_2, Kaleb\_2, Kheth\_2, Kolhan\_2, Lars\_2, Laurie\_2, Lephleur\_2, LilSmirk\_2, LizLemon\_2, MasterPo\_2, Opia\_2, PenguinLover67\_2, Phantasmagoria\_2, PrinceCharming\_2, Quesadilla\_2, Qyrzula\_2, Rhinoforte\_2, Rosebush\_2, Sabella\_2, Sour\_2, TA17A\_2, Tres\_2, Vic9\_00002, West99\_2,

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

- Faze9\_2,

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

- Finch\_211, Saguaro\_2,

### Summary by start number:

Start 3:

- Found in 41 of 43 ( 95.3% ) of genes in pham
- Manual Annotations of this start: 39 of 42
- Called 97.6% of time when present
- Phage (with cluster) where this start called: Allegro\_2 (B2), Arbitrator\_2 (B2), Ares\_2 (B2), Bananafish\_2 (B2), Blocker23\_2 (B2), Boyle\_2 (B2), Brownie5\_2 (B2), CRB2\_2 (B9), Calamitous\_2 (B2), Coffee\_2 (B2), Eaglehorse\_2 (B2), FrenchFry\_2 (B2), Glass\_2 (B2), Godines\_2 (B2), Hedgerow\_2 (B2), Holeinone\_2 (B2), ItsyBitsy1\_2 (B2), Kaleb\_2 (B2), Kheth\_2 (B2), Kolhan\_2 (B2), Lars\_2 (B2), Laurie\_2 (B2), Lephleur\_2 (B2), LilSmirk\_2 (B2), LizLemon\_2 (B2), MasterPo\_2 (B2), Opia\_2 (B2), PenguinLover67\_2 (B9), Phantasmagoria\_2 (B2), PrinceCharming\_2 (B2), Quesadilla\_2 (B9), Qyrzula\_2 (B2), Rhinoforte\_2 (B2), Rosebush\_2 (B2), Sabella\_2 (B2), Sour\_2 (DR), TA17A\_2 (B2), Tres\_2 (B2), Vic9\_00002 (B2), West99\_2 (B2),

Start 5:

- Found in 15 of 43 ( 34.9% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Faze9\_2 (B2),

Start 7:

- Found in 19 of 43 ( 44.2% ) of genes in pham
- Manual Annotations of this start: 2 of 42
- Called 10.5% of time when present
- Phage (with cluster) where this start called: Finch\_211 (singleton), Saguaro\_2 (B7),

### Summary by clusters:

There are 5 clusters represented in this pham: singleton, B7, DR, B9, B2,

Info for manual annotations of cluster B2:

- Start number 3 was manually annotated 35 times for cluster B2.
- Start number 5 was manually annotated 1 time for cluster B2.

Info for manual annotations of cluster B7:

- Start number 7 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 3 was manually annotated 3 times for cluster B9.

Info for manual annotations of cluster DR:

- Start number 3 was manually annotated 1 time for cluster DR.

### **Gene Information:**

Gene: Allegro\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Allegro\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Arbiter\_2 Start: 789, Stop: 1919, Start Num: 3

Candidate Starts for Arbiter\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (62, 1767), (72, 1884),

Gene: Ares\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Ares\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Bananafish\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Bananafish\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Blocker23\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Blocker23\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Boyle\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Boyle\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Brownie5\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Brownie5\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: CRB2\_2 Start: 630, Stop: 1619, Start Num: 3

Candidate Starts for CRB2\_2:

(Start: 3 @630 has 39 MA's), (15, 840), (16, 882), (18, 900), (19, 909), (21, 945), (23, 969), (26, 996), (27, 1020), (29, 1038), (30, 1071), (31, 1092), (35, 1131), (36, 1158), (37, 1173), (40, 1215), (45, 1278), (46, 1293), (47, 1326), (50, 1356), (51, 1380), (55, 1440), (56, 1452), (61, 1488), (65, 1524), (69, 1566),

Gene: Calamitous\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Calamitous\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Coffee\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Coffee\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Eaglehorse\_2 Start: 789, Stop: 1847, Start Num: 3

Candidate Starts for Eaglehorse\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (63, 1680), (72, 1812),

Gene: Faze9\_2 Start: 831, Stop: 1946, Start Num: 5

Candidate Starts for Faze9\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Finch\_211 Start: 122885, Stop: 123829, Start Num: 7

Candidate Starts for Finch\_211:

(Start: 7 @122885 has 2 MA's), (8, 122912), (14, 123080), (15, 123086), (16, 123128), (21, 123191), (23, 123215), (24, 123224), (25, 123239), (26, 123242), (27, 123272), (30, 123323), (31, 123344), (34, 123368), (35, 123383), (37, 123425), (41, 123470), (51, 123632), (52, 123644), (53, 123692), (54, 123701), (56, 123728),

Gene: FrenchFry\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for FrenchFry\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Glass\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Glass\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Godines\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Godines\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Hedgerow\_2 Start: 789, Stop: 1928, Start Num: 3

Candidate Starts for Hedgerow\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (72, 1893),

Gene: Holeinone\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Holeinone\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: ItsyBitsy1\_2 Start: 789, Stop: 1820, Start Num: 3

Candidate Starts for ItsyBitsy1\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (62, 1668), (72, 1785),

Gene: Kaleb\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Kaleb\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Kheth\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Kheth\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Kolhan\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Kolhan\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Lars\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Lars\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Laurie\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Laurie\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Lephleur\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Lephleur\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: LilSmirk\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for LilSmirk\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: LizLemon\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for LizLemon\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: MasterPo\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for MasterPo\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Opia\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Opia\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: PenguinLover67\_2 Start: 630, Stop: 1619, Start Num: 3

Candidate Starts for PenguinLover67\_2:

(Start: 3 @630 has 39 MA's), (9, 720), (13, 825), (15, 840), (16, 882), (19, 909), (21, 945), (23, 969), (27, 1020), (29, 1038), (30, 1071), (32, 1107), (35, 1131), (36, 1158), (37, 1173), (40, 1215), (42, 1248), (45, 1278), (47, 1326), (50, 1356), (51, 1380), (55, 1440), (56, 1452), (61, 1488), (65, 1524), (69, 1566),

Gene: Phantasmagoria\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Phantasmagoria\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (43, 1407), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: PrinceCharming\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for PrinceCharming\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Quesadilla\_2 Start: 630, Stop: 1634, Start Num: 3

Candidate Starts for Quesadilla\_2:

(Start: 3 @630 has 39 MA's), (9, 720), (13, 825), (15, 840), (16, 882), (19, 909), (21, 945), (23, 969), (27, 1020), (30, 1071), (31, 1092), (35, 1131), (36, 1158), (42, 1248), (45, 1278), (46, 1293), (47, 1326), (50, 1356), (51, 1380), (55, 1458), (56, 1470), (60, 1500), (65, 1539), (69, 1581),

Gene: Qyrzula\_2 Start: 789, Stop: 1919, Start Num: 3

Candidate Starts for Qyrzula\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (62, 1767), (68, 1824), (72, 1884),

Gene: Rhinoforte\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Rhinoforte\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Rosebush\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for Rosebush\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),

Gene: Sabella\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Sabella\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Saguaro\_2 Start: 732, Stop: 1823, Start Num: 7

Candidate Starts for Saguaro\_2:

(1, 333), (Start: 7 @732 has 2 MA's), (11, 882), (13, 918), (15, 933), (17, 978), (19, 1002), (21, 1038), (22, 1050), (27, 1113), (28, 1125), (29, 1131), (30, 1164), (46, 1386), (47, 1419), (48, 1422), (52, 1491), (53, 1542), (57, 1590), (63, 1644), (71, 1770),

Gene: Sour\_2 Start: 612, Stop: 1685, Start Num: 3

Candidate Starts for Sour\_2:

(Start: 3 @612 has 39 MA's), (10, 735), (15, 825), (16, 867), (19, 894), (24, 963), (27, 1005), (29, 1023), (30, 1056), (33, 1095), (35, 1116), (39, 1197), (40, 1200), (41, 1203), (44, 1245), (49, 1320), (58, 1476), (59, 1488), (63, 1521), (64, 1548), (66, 1557), (67, 1575), (70, 1602),

Gene: TA17A\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for TA17A\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Tres\_2 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Tres\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: Vic9\_00002 Start: 789, Stop: 1829, Start Num: 3

Candidate Starts for Vic9\_00002:

(2, 714), (Start: 3 @789 has 39 MA's), (12, 966), (15, 990), (16, 1032), (18, 1050), (19, 1059), (20, 1068), (25, 1143), (27, 1170), (28, 1182), (29, 1188), (30, 1221), (35, 1281), (38, 1353), (42, 1398), (44, 1410), (46, 1443), (47, 1476), (48, 1479), (50, 1506), (72, 1794),

Gene: West99\_2 Start: 789, Stop: 1946, Start Num: 3

Candidate Starts for West99\_2:

(2, 714), (Start: 3 @789 has 39 MA's), (4, 819), (Start: 5 @831 has 1 MA's), (6, 855), (Start: 7 @888 has 2 MA's), (12, 1065), (15, 1089), (16, 1131), (18, 1149), (19, 1158), (20, 1167), (27, 1269), (28, 1281), (29, 1287), (30, 1320), (35, 1380), (38, 1452), (42, 1497), (44, 1509), (46, 1542), (47, 1575), (48, 1578), (50, 1605), (63, 1779), (72, 1911),