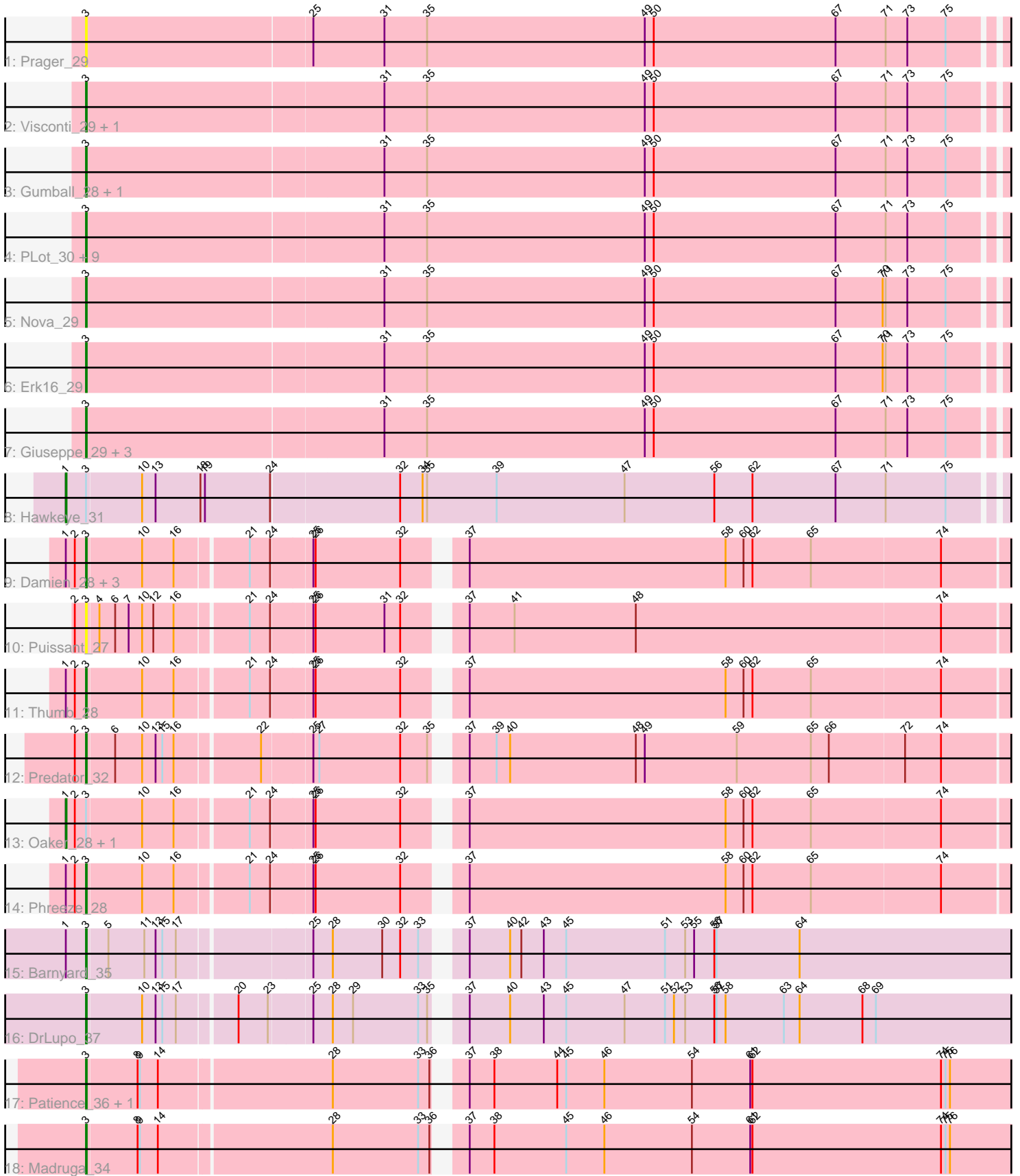


# Zoomed Pham 189929



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 189929 Report

This analysis was run 11/02/24 on database version 579.

Pham number 189929 has 37 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Prager\_29
- Track 2 : Visconti\_29, Troll4\_29
- Track 3 : Gumball\_28, SirHarley\_28
- Track 4 : PLOT\_30, Butterscotch\_29, KandZ\_29, Chill\_30, WaldoWhy\_30, BigMama\_27, Adjutor\_30, Penelope2018\_29, PBI1\_29, Thoth\_29
- Track 5 : Nova\_29
- Track 6 : Erk16\_29
- Track 7 : Giuseppe\_29, Mopey\_29, Delton\_29, Helpful\_30
- Track 8 : Hawkeye\_31
- Track 9 : Damien\_28, Beckerton\_28, Megatron06\_30, Cborch11\_29
- Track 10 : Puissant\_27
- Track 11 : Thumb\_28
- Track 12 : Predator\_32
- Track 13 : Oaker\_28, Konstantine\_33
- Track 14 : Phreeze\_28
- Track 15 : Barnyard\_35
- Track 16 : DrLupo\_37
- Track 17 : Patience\_36, Labelle\_35
- Track 18 : Madruga\_34

### ***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 32 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adjutor\_30, Barnyard\_35, Beckerton\_28, BigMama\_27, Butterscotch\_29, Cborch11\_29, Chill\_30, Damien\_28, Delton\_29, DrLupo\_37, Erk16\_29, Giuseppe\_29, Gumball\_28, Helpful\_30, KandZ\_29, Labelle\_35, Madruga\_34, Megatron06\_30, Mopey\_29, Nova\_29, PBI1\_29, PLOT\_30, Patience\_36, Penelope2018\_29, Phreeze\_28, Prager\_29, Predator\_32, Puissant\_27, SirHarley\_28, Thoth\_29, Thumb\_28, Troll4\_29, Visconti\_29, WaldoWhy\_30,

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

- Hawkeye\_31, Konstantine\_33, Oaker\_28,

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

- 

### Summary by start number:

Start 1:

- Found in 10 of 37 ( 27.0% ) of genes in pham
- Manual Annotations of this start: 3 of 35
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Hawkeye\_31 (D2), Konstantine\_33 (H1), Oaker\_28 (H1),

Start 3:

- Found in 37 of 37 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 32 of 35
- Called 91.9% of time when present
- Phage (with cluster) where this start called: Adjutor\_30 (D1), Barnyard\_35 (H2), Beckerton\_28 (H1), BigMama\_27 (D1), Butterscotch\_29 (D1), Cborch11\_29 (H1), Chill\_30 (D1), Damien\_28 (H1), Delton\_29 (D1), DrLupo\_37 (H2), Erk16\_29 (D1), Giuseppe\_29 (D1), Gumball\_28 (D1), Helpful\_30 (D1), KandZ\_29 (D1), Labelle\_35 (U), Madruga\_34 (U), Megatron06\_30 (H1), Mopey\_29 (D1), Nova\_29 (D1), PBI1\_29 (D1), PLOT\_30 (D1), Patience\_36 (U), Penelope2018\_29 (D1), Phreeze\_28 (H1), Prager\_29 (D1), Predator\_32 (H1), Puissant\_27 (H1), SirHarley\_28 (D1), Thoth\_29 (D1), Thumb\_28 (H1), Troll4\_29 (D1), Visconti\_29 (D1), WaldoWhy\_30 (D1),

### Summary by clusters:

There are 5 clusters represented in this pham: H2, D2, H1, U, D1,

Info for manual annotations of cluster D1:

- Start number 3 was manually annotated 20 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 1 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster H1:

- Start number 1 was manually annotated 2 times for cluster H1.
- Start number 3 was manually annotated 7 times for cluster H1.

Info for manual annotations of cluster H2:

- Start number 3 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster U:

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

### Gene Information:

Gene: Adjutor\_30 Start: 22601, Stop: 24256, Start Num: 3

Candidate Starts for Adjutor\_30:

(Start: 3 @22601 has 32 MA's), (31, 22991), (35, 23048), (49, 23339), (50, 23351), (67, 23594), (71, 23660), (73, 23687), (75, 23738), (78, 23834), (79, 23855), (89, 23996), (90, 24014), (95, 24086), (103, 24173), (108, 24206),

Gene: Barnyard\_35 Start: 25132, Stop: 26775, Start Num: 3

Candidate Starts for Barnyard\_35:

(Start: 1 @25105 has 3 MA's), (Start: 3 @25132 has 32 MA's), (5, 25159), (11, 25207), (13, 25222), (15, 25231), (17, 25249), (25, 25414), (28, 25438), (30, 25504), (32, 25528), (33, 25552), (37, 25591), (40, 25645), (42, 25660), (43, 25690), (45, 25720), (51, 25852), (53, 25879), (55, 25891), (56, 25918), (57, 25921), (64, 26032), (77, 26317), (88, 26512), (89, 26521), (92, 26566), (97, 26623), (101, 26674), (107, 26725), (109, 26737), (111, 26761),

Gene: Beckerton\_28 Start: 24591, Stop: 26219, Start Num: 3

Candidate Starts for Beckerton\_28:

(Start: 1 @24564 has 3 MA's), (2, 24576), (Start: 3 @24591 has 32 MA's), (10, 24663), (16, 24705), (21, 24795), (24, 24822), (25, 24873), (26, 24876), (32, 24987), (37, 25050), (58, 25392), (60, 25416), (62, 25428), (65, 25506), (74, 25677), (81, 25842), (82, 25866), (94, 26037), (96, 26061), (100, 26097), (102, 26130), (105, 26151), (106, 26157), (107, 26169), (110, 26187), (111, 26205), (112, 26208),

Gene: BigMama\_27 Start: 22677, Stop: 24332, Start Num: 3

Candidate Starts for BigMama\_27:

(Start: 3 @22677 has 32 MA's), (31, 23067), (35, 23124), (49, 23415), (50, 23427), (67, 23670), (71, 23736), (73, 23763), (75, 23814), (78, 23910), (79, 23931), (89, 24072), (90, 24090), (95, 24162), (103, 24249), (108, 24282),

Gene: Butterscotch\_29 Start: 22661, Stop: 24316, Start Num: 3

Candidate Starts for Butterscotch\_29:

(Start: 3 @22661 has 32 MA's), (31, 23051), (35, 23108), (49, 23399), (50, 23411), (67, 23654), (71, 23720), (73, 23747), (75, 23798), (78, 23894), (79, 23915), (89, 24056), (90, 24074), (95, 24146), (103, 24233), (108, 24266),

Gene: Cborch11\_29 Start: 24053, Stop: 25681, Start Num: 3

Candidate Starts for Cborch11\_29:

(Start: 1 @24026 has 3 MA's), (2, 24038), (Start: 3 @24053 has 32 MA's), (10, 24125), (16, 24167), (21, 24257), (24, 24284), (25, 24335), (26, 24338), (32, 24449), (37, 24512), (58, 24854), (60, 24878), (62, 24890), (65, 24968), (74, 25139), (81, 25304), (82, 25328), (94, 25499), (96, 25523), (100, 25559), (102, 25592), (105, 25613), (106, 25619), (107, 25631), (110, 25649), (111, 25667), (112, 25670),

Gene: Chill\_30 Start: 22667, Stop: 24322, Start Num: 3

Candidate Starts for Chill\_30:

(Start: 3 @22667 has 32 MA's), (31, 23057), (35, 23114), (49, 23405), (50, 23417), (67, 23660), (71, 23726), (73, 23753), (75, 23804), (78, 23900), (79, 23921), (89, 24062), (90, 24080), (95, 24152), (103, 24239), (108, 24272),

Gene: Damien\_28 Start: 24054, Stop: 25682, Start Num: 3

Candidate Starts for Damien\_28:

(Start: 1 @24027 has 3 MA's), (2, 24039), (Start: 3 @24054 has 32 MA's), (10, 24126), (16, 24168), (21, 24258), (24, 24285), (25, 24336), (26, 24339), (32, 24450), (37, 24513), (58, 24855), (60, 24879), (62, 24891), (65, 24969), (74, 25140), (81, 25305), (82, 25329), (94, 25500), (96, 25524), (100, 25560), (102, 25593), (105, 25614), (106, 25620), (107, 25632), (110, 25650), (111, 25668), (112, 25671),

Gene: Delton\_29 Start: 22673, Stop: 24328, Start Num: 3

Candidate Starts for Delton\_29:

(Start: 3 @22673 has 32 MA's), (31, 23063), (35, 23120), (49, 23411), (50, 23423), (67, 23666), (71, 23732), (73, 23759), (75, 23810), (78, 23906), (79, 23927), (85, 24026), (87, 24056), (89, 24068), (90, 24086), (91, 24110), (95, 24158), (103, 24245), (108, 24278),

Gene: DrLupo\_37 Start: 25532, Stop: 27175, Start Num: 3

Candidate Starts for DrLupo\_37:

(Start: 3 @25532 has 32 MA's), (10, 25604), (13, 25622), (15, 25631), (17, 25649), (20, 25721), (23, 25760), (25, 25814), (28, 25838), (29, 25865), (33, 25952), (35, 25964), (37, 25991), (40, 26045), (43, 26090), (45, 26120), (47, 26198), (51, 26252), (52, 26264), (53, 26279), (56, 26318), (57, 26321), (58, 26333), (63, 26411), (64, 26432), (68, 26516), (69, 26534), (82, 26831), (88, 26912), (89, 26921), (92, 26966), (97, 27023), (101, 27074), (109, 27137), (111, 27161),

Gene: Erk16\_29 Start: 22664, Stop: 24319, Start Num: 3

Candidate Starts for Erk16\_29:

(Start: 3 @22664 has 32 MA's), (31, 23054), (35, 23111), (49, 23402), (50, 23414), (67, 23657), (70, 23720), (71, 23723), (73, 23750), (75, 23801), (78, 23897), (79, 23918), (89, 24059), (90, 24077), (95, 24149), (103, 24236), (108, 24269),

Gene: Giuseppe\_29 Start: 22653, Stop: 24308, Start Num: 3

Candidate Starts for Giuseppe\_29:

(Start: 3 @22653 has 32 MA's), (31, 23043), (35, 23100), (49, 23391), (50, 23403), (67, 23646), (71, 23712), (73, 23739), (75, 23790), (78, 23886), (79, 23907), (85, 24006), (87, 24036), (89, 24048), (90, 24066), (91, 24090), (95, 24138), (103, 24225), (108, 24258),

Gene: Gumball\_28 Start: 22611, Stop: 24266, Start Num: 3

Candidate Starts for Gumball\_28:

(Start: 3 @22611 has 32 MA's), (31, 23001), (35, 23058), (49, 23349), (50, 23361), (67, 23604), (71, 23670), (73, 23697), (75, 23748), (78, 23844), (89, 24006), (90, 24024), (95, 24096), (103, 24183), (108, 24216),

Gene: Hawkeye\_31 Start: 22619, Stop: 24298, Start Num: 1

Candidate Starts for Hawkeye\_31:

(Start: 1 @22619 has 3 MA's), (Start: 3 @22646 has 32 MA's), (10, 22718), (13, 22736), (18, 22796), (19, 22802), (24, 22889), (32, 23054), (34, 23084), (35, 23090), (39, 23183), (47, 23354), (56, 23474), (62, 23525), (67, 23636), (71, 23702), (75, 23780), (78, 23876), (84, 23981), (89, 24038), (95, 24128), (101, 24194), (102, 24206), (103, 24215), (104, 24224),

Gene: Helpful\_30 Start: 22661, Stop: 24316, Start Num: 3

Candidate Starts for Helpful\_30:

(Start: 3 @22661 has 32 MA's), (31, 23051), (35, 23108), (49, 23399), (50, 23411), (67, 23654), (71, 23720), (73, 23747), (75, 23798), (78, 23894), (79, 23915), (85, 24014), (87, 24044), (89, 24056), (90, 24074), (91, 24098), (95, 24146), (103, 24233), (108, 24266),

Gene: KandZ\_29 Start: 22761, Stop: 24416, Start Num: 3

Candidate Starts for KandZ\_29:

(Start: 3 @22761 has 32 MA's), (31, 23151), (35, 23208), (49, 23499), (50, 23511), (67, 23754), (71, 23820), (73, 23847), (75, 23898), (78, 23994), (79, 24015), (89, 24156), (90, 24174), (95, 24246), (103, 24333), (108, 24366),

Gene: Konstantine\_33 Start: 25228, Stop: 26883, Start Num: 1

Candidate Starts for Konstantine\_33:

(Start: 1 @25228 has 3 MA's), (2, 25240), (Start: 3 @25255 has 32 MA's), (10, 25327), (16, 25369), (21, 25459), (24, 25486), (25, 25537), (26, 25540), (32, 25651), (37, 25714), (58, 26056), (60, 26080), (62, 26092), (65, 26170), (74, 26341), (81, 26506), (82, 26530), (94, 26701), (96, 26725), (100, 26761), (102, 26794), (105, 26815), (106, 26821), (107, 26833), (110, 26851), (111, 26869), (112, 26872),

Gene: Labelle\_35 Start: 27101, Stop: 28744, Start Num: 3

Candidate Starts for Labelle\_35:

(Start: 3 @27101 has 32 MA's), (8, 27167), (9, 27170), (14, 27194), (28, 27416), (33, 27530), (36, 27545), (37, 27569), (38, 27602), (44, 27686), (45, 27698), (46, 27749), (54, 27866), (61, 27944), (62, 27947), (74, 28199), (75, 28205), (76, 28211), (82, 28394),

Gene: Madruga\_34 Start: 26770, Stop: 28413, Start Num: 3

Candidate Starts for Madruga\_34:

(Start: 3 @26770 has 32 MA's), (8, 26836), (9, 26839), (14, 26863), (28, 27085), (33, 27199), (36, 27214), (37, 27238), (38, 27271), (45, 27367), (46, 27418), (54, 27535), (61, 27613), (62, 27616), (74, 27868), (75, 27874), (76, 27880), (82, 28063),

Gene: Megatron06\_30 Start: 24587, Stop: 26215, Start Num: 3

Candidate Starts for Megatron06\_30:

(Start: 1 @24560 has 3 MA's), (2, 24572), (Start: 3 @24587 has 32 MA's), (10, 24659), (16, 24701), (21, 24791), (24, 24818), (25, 24869), (26, 24872), (32, 24983), (37, 25046), (58, 25388), (60, 25412), (62, 25424), (65, 25502), (74, 25673), (81, 25838), (82, 25862), (94, 26033), (96, 26057), (100, 26093), (102, 26126), (105, 26147), (106, 26153), (107, 26165), (110, 26183), (111, 26201), (112, 26204),

Gene: Mopey\_29 Start: 22661, Stop: 24316, Start Num: 3

Candidate Starts for Mopey\_29:

(Start: 3 @22661 has 32 MA's), (31, 23051), (35, 23108), (49, 23399), (50, 23411), (67, 23654), (71, 23720), (73, 23747), (75, 23798), (78, 23894), (79, 23915), (85, 24014), (87, 24044), (89, 24056), (90, 24074), (91, 24098), (95, 24146), (103, 24233), (108, 24266),

Gene: Nova\_29 Start: 23088, Stop: 24743, Start Num: 3

Candidate Starts for Nova\_29:

(Start: 3 @23088 has 32 MA's), (31, 23478), (35, 23535), (49, 23826), (50, 23838), (67, 24081), (70, 24144), (71, 24147), (73, 24174), (75, 24225), (78, 24321), (79, 24342), (87, 24471), (89, 24483), (90, 24501), (95, 24573), (103, 24660), (108, 24693),

Gene: Oaker\_28 Start: 24284, Stop: 25939, Start Num: 1

Candidate Starts for Oaker\_28:

(Start: 1 @24284 has 3 MA's), (2, 24296), (Start: 3 @24311 has 32 MA's), (10, 24383), (16, 24425), (21, 24515), (24, 24542), (25, 24593), (26, 24596), (32, 24707), (37, 24770), (58, 25112), (60, 25136), (62, 25148), (65, 25226), (74, 25397), (81, 25562), (82, 25586), (94, 25757), (96, 25781), (100, 25817), (102, 25850), (105, 25871), (106, 25877), (107, 25889), (110, 25907), (111, 25925), (112, 25928),

Gene: PBI1\_29 Start: 22592, Stop: 24247, Start Num: 3

Candidate Starts for PBI1\_29:

(Start: 3 @22592 has 32 MA's), (31, 22982), (35, 23039), (49, 23330), (50, 23342), (67, 23585), (71, 23651), (73, 23678), (75, 23729), (78, 23825), (79, 23846), (89, 23987), (90, 24005), (95, 24077), (103, 24164), (108, 24197),

Gene: PLOT\_30 Start: 22664, Stop: 24319, Start Num: 3

Candidate Starts for PLOT\_30:

(Start: 3 @22664 has 32 MA's), (31, 23054), (35, 23111), (49, 23402), (50, 23414), (67, 23657), (71, 23723), (73, 23750), (75, 23801), (78, 23897), (79, 23918), (89, 24059), (90, 24077), (95, 24149), (103, 24236), (108, 24269),

Gene: Patience\_36 Start: 27651, Stop: 29294, Start Num: 3

Candidate Starts for Patience\_36:

(Start: 3 @27651 has 32 MA's), (8, 27717), (9, 27720), (14, 27744), (28, 27966), (33, 28080), (36, 28095), (37, 28119), (38, 28152), (44, 28236), (45, 28248), (46, 28299), (54, 28416), (61, 28494), (62, 28497), (74, 28749), (75, 28755), (76, 28761), (82, 28944),

Gene: Penelope2018\_29 Start: 22661, Stop: 24316, Start Num: 3

Candidate Starts for Penelope2018\_29:

(Start: 3 @22661 has 32 MA's), (31, 23051), (35, 23108), (49, 23399), (50, 23411), (67, 23654), (71, 23720), (73, 23747), (75, 23798), (78, 23894), (79, 23915), (89, 24056), (90, 24074), (95, 24146), (103, 24233), (108, 24266),

Gene: Phreeze\_28 Start: 24054, Stop: 25682, Start Num: 3

Candidate Starts for Phreeze\_28:

(Start: 1 @24027 has 3 MA's), (2, 24039), (Start: 3 @24054 has 32 MA's), (10, 24126), (16, 24168), (21, 24258), (24, 24285), (25, 24336), (26, 24339), (32, 24450), (37, 24513), (58, 24855), (60, 24879), (62, 24891), (65, 24969), (74, 25140), (81, 25305), (82, 25329), (86, 25398), (89, 25419), (93, 25497), (94, 25500), (96, 25524), (98, 25536), (99, 25554), (100, 25560), (102, 25593), (105, 25614), (106, 25620), (107, 25632), (110, 25650), (111, 25668), (112, 25671),

Gene: Prager\_29 Start: 22673, Stop: 24328, Start Num: 3

Candidate Starts for Prager\_29:

(Start: 3 @22673 has 32 MA's), (25, 22970), (31, 23063), (35, 23120), (49, 23411), (50, 23423), (67, 23666), (71, 23732), (73, 23759), (75, 23810), (78, 23906), (89, 24068), (90, 24086), (95, 24158), (103, 24245), (108, 24278),

Gene: Predator\_32 Start: 25635, Stop: 27263, Start Num: 3

Candidate Starts for Predator\_32:

(2, 25620), (Start: 3 @25635 has 32 MA's), (6, 25671), (10, 25707), (13, 25725), (15, 25734), (16, 25749), (22, 25854), (25, 25917), (27, 25923), (32, 26031), (35, 26067), (37, 26094), (39, 26130), (40, 26148), (48, 26316), (49, 26328), (59, 26451), (65, 26550), (66, 26574), (72, 26673), (74, 26721), (80, 26871), (81, 26886), (83, 26940), (89, 27000), (93, 27078), (100, 27141), (102, 27174), (105, 27195), (106, 27201), (111, 27249),

Gene: Puissant\_27 Start: 24517, Stop: 26145, Start Num: 3

Candidate Starts for Puissant\_27:

(2, 24502), (Start: 3 @24517 has 32 MA's), (4, 24532), (6, 24553), (7, 24571), (10, 24589), (12, 24604), (16, 24631), (21, 24721), (24, 24748), (25, 24799), (26, 24802), (31, 24892), (32, 24913), (37, 24976), (41, 25036), (48, 25198), (74, 25603), (80, 25753), (81, 25768), (89, 25882), (93, 25960), (100, 26023), (102, 26056), (107, 26095), (110, 26113), (111, 26131),

Gene: SirHarley\_28 Start: 22593, Stop: 24248, Start Num: 3

Candidate Starts for SirHarley\_28:

(Start: 3 @22593 has 32 MA's), (31, 22983), (35, 23040), (49, 23331), (50, 23343), (67, 23586), (71, 23652), (73, 23679), (75, 23730), (78, 23826), (89, 23988), (90, 24006), (95, 24078), (103, 24165), (108, 24198),

Gene: Thoth\_29 Start: 22658, Stop: 24313, Start Num: 3

Candidate Starts for Thoth\_29:

(Start: 3 @22658 has 32 MA's), (31, 23048), (35, 23105), (49, 23396), (50, 23408), (67, 23651), (71, 23717), (73, 23744), (75, 23795), (78, 23891), (79, 23912), (89, 24053), (90, 24071), (95, 24143), (103, 24230), (108, 24263),

Gene: Thumb\_28 Start: 24054, Stop: 25682, Start Num: 3

Candidate Starts for Thumb\_28:

(Start: 1 @24027 has 3 MA's), (2, 24039), (Start: 3 @24054 has 32 MA's), (10, 24126), (16, 24168), (21, 24258), (24, 24285), (25, 24336), (26, 24339), (32, 24450), (37, 24513), (58, 24855), (60, 24879), (62, 24891), (65, 24969), (74, 25140), (81, 25305), (82, 25329), (86, 25398), (89, 25419), (93, 25497), (94, 25500), (96, 25524), (99, 25554), (100, 25560), (102, 25593), (105, 25614), (106, 25620), (107, 25632), (110, 25650), (111, 25668), (112, 25671),

Gene: Troll4\_29 Start: 22662, Stop: 24317, Start Num: 3

Candidate Starts for Troll4\_29:

(Start: 3 @22662 has 32 MA's), (31, 23052), (35, 23109), (49, 23400), (50, 23412), (67, 23655), (71, 23721), (73, 23748), (75, 23799), (78, 23895), (85, 24015), (89, 24057), (90, 24075), (95, 24147), (103, 24234), (108, 24267),

Gene: Visconti\_29 Start: 22671, Stop: 24326, Start Num: 3

Candidate Starts for Visconti\_29:

(Start: 3 @22671 has 32 MA's), (31, 23061), (35, 23118), (49, 23409), (50, 23421), (67, 23664), (71, 23730), (73, 23757), (75, 23808), (78, 23904), (85, 24024), (89, 24066), (90, 24084), (95, 24156), (103, 24243), (108, 24276),

Gene: WaldoWhy\_30 Start: 22667, Stop: 24322, Start Num: 3

Candidate Starts for WaldoWhy\_30:

(Start: 3 @22667 has 32 MA's), (31, 23057), (35, 23114), (49, 23405), (50, 23417), (67, 23660), (71, 23726), (73, 23753), (75, 23804), (78, 23900), (79, 23921), (89, 24062), (90, 24080), (95, 24152), (103, 24239), (108, 24272),