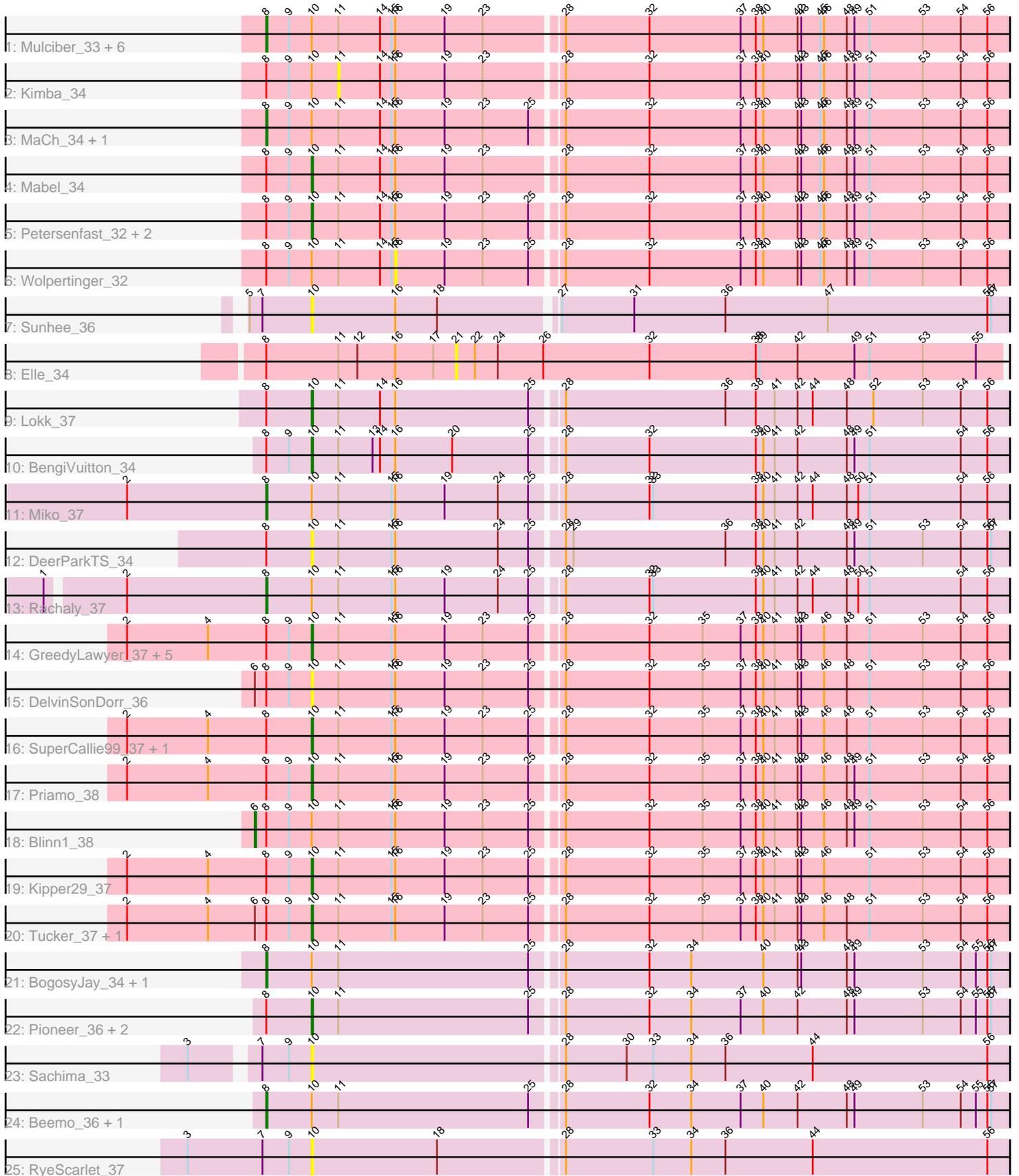# Pham 283930

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 283930 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283930 has 45 members, 14 are drafts.

Phages represented in each track:
• Track 1 : Mulciber_33, Timothy_34, Joselito_34, Orange_33, Ebony_34, Salz_34, Snape_33
• Track 2 : Kimba_34
• Track 3 : MaCh_34, Gilberta_34
• Track 4 : Mabel_34
• Track 5 : Petersenfast_32, Saskia_33, Bachome_35
• Track 6 : Wolpertinger_32
• Track 7 : Sunhee_36
• Track 8 : Elle_34
• Track 9 : Lokk_37
• Track 10 : BengiVuitton_34
• Track 11 : Miko_37
• Track 12 : DeerParkTS_34
• Track 13 : Rachaly_37
• Track 14 : GreedyLawyer_37, Garak_38, BlessJoy_37, ToneTone_34, BennyP_37, Candra_37
• Track 15 : DelvinSonDorr_36
• Track 16 : SuperCallie99_37, Gruunaga_37
• Track 17 : Priamo_38
• Track 18 : Blinn1_38
• Track 19 : Kipper29_37
• Track 20 : Tucker_37, Wiks_36
• Track 21 : BogosyJay_34, Maminiaina_34
• Track 22 : Pioneer_36, Ayanochan_36, ExplosioNervosa_36
• Track 23 : Sachima_33
• Track 24 : Beemo_36, Phonnegut_36
• Track 25 : RyeScarlet_37

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

The start number called the most often in the published annotations is 10, it was called in 15 of the 31 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Ayanochan_36, Bachome_35, BengiVuitton_34, BennyP_37, BlessJoy_37, Candra_37, DeerParkTS_34, DelvinSonDorr_36, ExplosioNervosa_36, Garak_38, GreedyLawyer_37, Gruunaga_37, Kipper29_37, Lokk_37, Mabel_34, Petersenfast_32, Pioneer_36, Priamo_38, RyeScarlet_37, Sachima_33, Saskia_33, Sunhee_36, SuperCallie99_37, ToneTone_34, Tucker_37, Wiks_36,

Genes that have the "Most Annotated" start but do not call it:
• Beemo_36, Blinn1_38, BogosyJay_34, Ebony_34, Gilberta_34, Joselito_34, Kimba_34, MaCh_34, Maminiaina_34, Miko_37, Mulciber_33, Orange_33, Phonnegut_36, Rachaly_37, Salz_34, Snape_33, Timothy_34, Wolpertinger_32,

Genes that do not have the "Most Annotated" start:
• Elle_34,

Summary by start number:

Start 6:
• Found in 4 of 45 (8.9%) of genes in pham
• Manual Annotations of this start: 1 of 31
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Blinn1_38 (A6),

Start 8:
• Found in 42 of 45 (93.3%) of genes in pham
• Manual Annotations of this start: 15 of 31
• Called 35.7% of time when present
• Phage (with cluster) where this start called: Beemo_36 (A9), BogosyJay_34 (A9), Ebony_34 (A11), Gilberta_34 (A11), Joselito_34 (A11), MaCh_34 (A11), Maminiaina_34 (A9), Miko_37 (A2), Mulciber_33 (A11), Orange_33 (A11), Phonnegut_36 (A9), Rachaly_37 (A2), Salz_34 (A11), Snape_33 (A11), Timothy_34 (A11),

Start 10:
• Found in 44 of 45 (97.8%) of genes in pham
• Manual Annotations of this start: 15 of 31
• Called 59.1% of time when present
• Phage (with cluster) where this start called: Ayanochan_36 (A9), Bachome_35 (A11), BengiVuitton_34 (A2), BennyP_37 (A6), BlessJoy_37 (A6), Candra_37 (A6), DeerParkTS_34 (A2), DelvinSonDorr_36 (A6), ExplosioNervosa_36 (A9), Garak_38 (A6), GreedyLawyer_37 (A6), Gruunaga_37 (A6), Kipper29_37 (A6), Lokk_37 (A2), Mabel_34 (A11), Petersenfast_32 (A11), Pioneer_36 (A9), Priamo_38 (A6), RyeScarlet_37 (A9), Sachima_33 (A9), Saskia_33 (A11), Sunhee_36 (A14), SuperCallie99_37 (A6), ToneTone_34 (A6), Tucker_37 (A6), Wiks_36 (A6),

Start 11:
• Found in 42 of 45 (93.3%) of genes in pham
• No Manual Annotations of this start.
• Called 2.4% of time when present
• Phage (with cluster) where this start called: Kimba_34 (A11),

Start 16:
• Found in 36 of 45 (80.0%) of genes in pham
• No Manual Annotations of this start.

• Called 2.8% of time when present
• Phage (with cluster) where this start called: Wolpertinger_32 (A11),

Start 21:
• Found in 1 of 45 (2.2%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Elle_34 (A15),

Summary by clusters:

There are 6 clusters represented in this pham: A15, A14, A11, A2, A6, A9,

Info for manual annotations of cluster A11:
•Start number 8 was manually annotated 9 times for cluster A11.
•Start number 10 was manually annotated 2 times for cluster A11.

Info for manual annotations of cluster A2:
•Start number 8 was manually annotated 2 times for cluster A2.
•Start number 10 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A6:
•Start number 6 was manually annotated 1 time for cluster A6.
•Start number 10 was manually annotated 9 times for cluster A6.

Info for manual annotations of cluster A9:
•Start number 8 was manually annotated 4 times for cluster A9.
•Start number 10 was manually annotated 2 times for cluster A9.

Gene Information:
Gene: Ayanochan_36 Start: 27076, Stop: 27618, Start Num: 10
Candidate Starts for Ayanochan_36:
(Start: 8 @27040 has 15 MA's), (Start: 10 @27076 has 15 MA's), (11, 27097), (25, 27247), (28, 27268), (32, 27334), (34, 27367), (37, 27406), (40, 27424), (42, 27451), (48, 27490), (49, 27496), (53, 27550), (54, 27580), (55, 27592), (56, 27601), (57, 27604),

Gene: Bachome_35 Start: 26144, Stop: 26686, Start Num: 10
Candidate Starts for Bachome_35:
(Start: 8 @26108 has 15 MA's), (9, 26126), (Start: 10 @26144 has 15 MA's), (11, 26165), (14, 26198), (15, 26207), (16, 26210), (19, 26249), (23, 26279), (25, 26315), (28, 26336), (32, 26402), (37, 26474), (38, 26486), (40, 26492), (42, 26519), (43, 26522), (45, 26537), (46, 26540), (48, 26558), (49, 26564), (51, 26576), (53, 26618), (54, 26648), (56, 26669),

Gene: Beemo_36 Start: 27041, Stop: 27619, Start Num: 8
Candidate Starts for Beemo_36:
(Start: 8 @27041 has 15 MA's), (Start: 10 @27077 has 15 MA's), (11, 27098), (25, 27248), (28, 27269), (32, 27335), (34, 27368), (37, 27407), (40, 27425), (42, 27452), (48, 27491), (49, 27497), (53, 27551), (54, 27581), (55, 27593), (56, 27602), (57, 27605),

Gene: BengiVuitton_34 Start: 26453, Stop: 26995, Start Num: 10
Candidate Starts for BengiVuitton_34:
(Start: 8 @26417 has 15 MA's), (9, 26435), (Start: 10 @26453 has 15 MA's), (11, 26474), (13, 26501), (14, 26507), (16, 26519), (20, 26564), (25, 26624), (28, 26645), (32, 26711), (38, 26795), (40, 26801), (41, 26810), (42, 26828), (48, 26867), (49, 26873), (51, 26885), (54, 26957), (56, 26978),

Gene: BennyP_37 Start: 25110, Stop: 25652, Start Num: 10
Candidate Starts for BennyP_37:
(2, 24966), (4, 25029), (Start: 8 @25074 has 15 MA's), (9, 25092), (Start: 10 @25110 has 15 MA's), (11, 25131), (15, 25173), (16, 25176), (19, 25215), (23, 25245), (25, 25281), (28, 25302), (32, 25368), (35, 25410), (37, 25440), (38, 25452), (40, 25458), (41, 25467), (42, 25485), (43, 25488), (46, 25506), (48, 25524), (51, 25542), (53, 25584), (54, 25614), (56, 25635),

Gene: BlessJoy_37 Start: 25105, Stop: 25647, Start Num: 10
Candidate Starts for BlessJoy_37:
(2, 24961), (4, 25024), (Start: 8 @25069 has 15 MA's), (9, 25087), (Start: 10 @25105 has 15 MA's), (11, 25126), (15, 25168), (16, 25171), (19, 25210), (23, 25240), (25, 25276), (28, 25297), (32, 25363), (35, 25405), (37, 25435), (38, 25447), (40, 25453), (41, 25462), (42, 25480), (43, 25483), (46, 25501), (48, 25519), (51, 25537), (53, 25579), (54, 25609), (56, 25630),

Gene: Blinn1_38 Start: 25132, Stop: 25719, Start Num: 6
Candidate Starts for Blinn1_38:
(Start: 6 @25132 has 1 MA's), (Start: 8 @25141 has 15 MA's), (9, 25159), (Start: 10 @25177 has 15 MA's), (11, 25198), (15, 25240), (16, 25243), (19, 25282), (23, 25312), (25, 25348), (28, 25369), (32, 25435), (35, 25477), (37, 25507), (38, 25519), (40, 25525), (41, 25534), (42, 25552), (43, 25555), (46, 25573), (48, 25591), (49, 25597), (51, 25609), (53, 25651), (54, 25681), (56, 25702),

Gene: BogosyJay_34 Start: 26586, Stop: 27164, Start Num: 8
Candidate Starts for BogosyJay_34:
(Start: 8 @26586 has 15 MA's), (Start: 10 @26622 has 15 MA's), (11, 26643), (25, 26793), (28, 26814), (32, 26880), (34, 26913), (40, 26970), (42, 26997), (43, 27000), (48, 27036), (49, 27042), (53, 27096), (54, 27126), (55, 27138), (56, 27147), (57, 27150),

Gene: Candra_37 Start: 25146, Stop: 25688, Start Num: 10
Candidate Starts for Candra_37:
(2, 25002), (4, 25065), (Start: 8 @25110 has 15 MA's), (9, 25128), (Start: 10 @25146 has 15 MA's), (11, 25167), (15, 25209), (16, 25212), (19, 25251), (23, 25281), (25, 25317), (28, 25338), (32, 25404), (35, 25446), (37, 25476), (38, 25488), (40, 25494), (41, 25503), (42, 25521), (43, 25524), (46, 25542), (48, 25560), (51, 25578), (53, 25620), (54, 25650), (56, 25671),

Gene: DeerParkTS_34 Start: 26427, Stop: 26972, Start Num: 10
Candidate Starts for DeerParkTS_34:
(Start: 8 @26391 has 15 MA's), (Start: 10 @26427 has 15 MA's), (11, 26448), (15, 26490), (16, 26493), (24, 26574), (25, 26598), (28, 26622), (29, 26628), (36, 26748), (38, 26772), (40, 26778), (41, 26787), (42, 26805), (48, 26844), (49, 26850), (51, 26862), (53, 26904), (54, 26934), (56, 26955), (57, 26958),

Gene: DelvinSonDorr_36 Start: 25104, Stop: 25646, Start Num: 10
Candidate Starts for DelvinSonDorr_36:
(Start: 6 @25059 has 1 MA's), (Start: 8 @25068 has 15 MA's), (9, 25086), (Start: 10 @25104 has 15 MA's), (11, 25125), (15, 25167), (16, 25170), (19, 25209), (23, 25239), (25, 25275), (28, 25296), (32, 25362), (35, 25404), (37, 25434), (38, 25446), (40, 25452), (41, 25461), (42, 25479), (43, 25482), (46, 25500), (48, 25518), (51, 25536), (53, 25578), (54, 25608), (56, 25629),

Gene: Ebony_34 Start: 26075, Stop: 26653, Start Num: 8
Candidate Starts for Ebony_34:
(Start: 8 @26075 has 15 MA's), (9, 26093), (Start: 10 @26111 has 15 MA's), (11, 26132), (14, 26165), (15, 26174), (16, 26177), (19, 26216), (23, 26246), (28, 26303), (32, 26369), (37, 26441), (38, 26453), (40, 26459), (42, 26486), (43, 26489), (45, 26504), (46, 26507), (48, 26525), (49, 26531), (51, 26543), (53, 26585), (54, 26615), (56, 26636),

Gene: Elle_34 Start: 24107, Stop: 24538, Start Num: 21
Candidate Starts for Elle_34:
(Start: 8 @23957 has 15 MA's), (11, 24014), (12, 24029), (16, 24059), (17, 24089), (21, 24107), (22, 24122), (24, 24140), (26, 24176), (32, 24260), (38, 24344), (39, 24347), (42, 24377), (49, 24422), (51, 24434), (53, 24476), (55, 24518),

Gene: ExplosioNervosa_36 Start: 27111, Stop: 27653, Start Num: 10
Candidate Starts for ExplosioNervosa_36:
(Start: 8 @27075 has 15 MA's), (Start: 10 @27111 has 15 MA's), (11, 27132), (25, 27282), (28, 27303), (32, 27369), (34, 27402), (37, 27441), (40, 27459), (42, 27486), (48, 27525), (49, 27531), (53, 27585), (54, 27615), (55, 27627), (56, 27636), (57, 27639),

Gene: Garak_38 Start: 25111, Stop: 25653, Start Num: 10
Candidate Starts for Garak_38:
(2, 24967), (4, 25030), (Start: 8 @25075 has 15 MA's), (9, 25093), (Start: 10 @25111 has 15 MA's), (11, 25132), (15, 25174), (16, 25177), (19, 25216), (23, 25246), (25, 25282), (28, 25303), (32, 25369), (35, 25411), (37, 25441), (38, 25453), (40, 25459), (41, 25468), (42, 25486), (43, 25489), (46, 25507), (48, 25525), (51, 25543), (53, 25585), (54, 25615), (56, 25636),

Gene: Gilberta_34 Start: 26111, Stop: 26689, Start Num: 8
Candidate Starts for Gilberta_34:
(Start: 8 @26111 has 15 MA's), (9, 26129), (Start: 10 @26147 has 15 MA's), (11, 26168), (14, 26201), (15, 26210), (16, 26213), (19, 26252), (23, 26282), (25, 26318), (28, 26339), (32, 26405), (37, 26477), (38, 26489), (40, 26495), (42, 26522), (43, 26525), (45, 26540), (46, 26543), (48, 26561), (49, 26567), (51, 26579), (53, 26621), (54, 26651), (56, 26672),

Gene: GreedyLawyer_37 Start: 25110, Stop: 25652, Start Num: 10
Candidate Starts for GreedyLawyer_37:
(2, 24966), (4, 25029), (Start: 8 @25074 has 15 MA's), (9, 25092), (Start: 10 @25110 has 15 MA's), (11, 25131), (15, 25173), (16, 25176), (19, 25215), (23, 25245), (25, 25281), (28, 25302), (32, 25368), (35, 25410), (37, 25440), (38, 25452), (40, 25458), (41, 25467), (42, 25485), (43, 25488), (46, 25506), (48, 25524), (51, 25542), (53, 25584), (54, 25614), (56, 25635),

Gene: Gruunaga_37 Start: 25099, Stop: 25641, Start Num: 10
Candidate Starts for Gruunaga_37:
(2, 24955), (4, 25018), (Start: 8 @25063 has 15 MA's), (Start: 10 @25099 has 15 MA's), (11, 25120), (15, 25162), (16, 25165), (19, 25204), (23, 25234), (25, 25270), (28, 25291), (32, 25357), (35, 25399), (37, 25429), (38, 25441), (40, 25447), (41, 25456), (42, 25474), (43, 25477), (46, 25495), (48, 25513), (51, 25531), (53, 25573), (54, 25603), (56, 25624),

Gene: Joselito_34 Start: 26120, Stop: 26698, Start Num: 8
Candidate Starts for Joselito_34:
(Start: 8 @26120 has 15 MA's), (9, 26138), (Start: 10 @26156 has 15 MA's), (11, 26177), (14, 26210), (15, 26219), (16, 26222), (19, 26261), (23, 26291), (28, 26348), (32, 26414), (37, 26486), (38, 26498), (40, 26504), (42, 26531), (43, 26534), (45, 26549), (46, 26552), (48, 26570), (49, 26576), (51, 26588),

(53, 26630), (54, 26660), (56, 26681),

Gene: Kimba_34 Start: 26141, Stop: 26662, Start Num: 11
Candidate Starts for Kimba_34:
(Start: 8 @26084 has 15 MA's), (9, 26102), (Start: 10 @26120 has 15 MA's), (11, 26141), (14, 26174),
(15, 26183), (16, 26186), (19, 26225), (23, 26255), (28, 26312), (32, 26378), (37, 26450), (38, 26462),
(40, 26468), (42, 26495), (43, 26498), (45, 26513), (46, 26516), (48, 26534), (49, 26540), (51, 26552),
(53, 26594), (54, 26624), (56, 26645),

Gene: Kipper29_37 Start: 25110, Stop: 25652, Start Num: 10
Candidate Starts for Kipper29_37:
(2, 24966), (4, 25029), (Start: 8 @25074 has 15 MA's), (9, 25092), (Start: 10 @25110 has 15 MA's),
(11, 25131), (15, 25173), (16, 25176), (19, 25215), (23, 25245), (25, 25281), (28, 25302), (32, 25368),
(35, 25410), (37, 25440), (38, 25452), (40, 25458), (41, 25467), (42, 25485), (43, 25488), (46, 25506),
(51, 25542), (53, 25584), (54, 25614), (56, 25635),

Gene: Lokk_37 Start: 27588, Stop: 28130, Start Num: 10
Candidate Starts for Lokk_37:
(Start: 8 @27552 has 15 MA's), (Start: 10 @27588 has 15 MA's), (11, 27609), (14, 27642), (16, 27654),
(25, 27759), (28, 27780), (36, 27906), (38, 27930), (41, 27945), (42, 27963), (44, 27975), (48, 28002),
(52, 28023), (53, 28062), (54, 28092), (56, 28113),

Gene: MaCh_34 Start: 26108, Stop: 26686, Start Num: 8
Candidate Starts for MaCh_34:
(Start: 8 @26108 has 15 MA's), (9, 26126), (Start: 10 @26144 has 15 MA's), (11, 26165), (14, 26198),
(15, 26207), (16, 26210), (19, 26249), (23, 26279), (25, 26315), (28, 26336), (32, 26402), (37, 26474),
(38, 26486), (40, 26492), (42, 26519), (43, 26522), (45, 26537), (46, 26540), (48, 26558), (49, 26564),
(51, 26576), (53, 26618), (54, 26648), (56, 26669),

Gene: Mabel_34 Start: 26118, Stop: 26660, Start Num: 10
Candidate Starts for Mabel_34:
(Start: 8 @26082 has 15 MA's), (9, 26100), (Start: 10 @26118 has 15 MA's), (11, 26139), (14, 26172),
(15, 26181), (16, 26184), (19, 26223), (23, 26253), (28, 26310), (32, 26376), (37, 26448), (38, 26460),
(40, 26466), (42, 26493), (43, 26496), (45, 26511), (46, 26514), (48, 26532), (49, 26538), (51, 26550),
(53, 26592), (54, 26622), (56, 26643),

Gene: Maminiaina_34 Start: 26568, Stop: 27146, Start Num: 8
Candidate Starts for Maminiaina_34:
(Start: 8 @26568 has 15 MA's), (Start: 10 @26604 has 15 MA's), (11, 26625), (25, 26775), (28, 26796),
(32, 26862), (34, 26895), (40, 26952), (42, 26979), (43, 26982), (48, 27018), (49, 27024), (53, 27078),
(54, 27108), (55, 27120), (56, 27129), (57, 27132),

Gene: Miko_37 Start: 27726, Stop: 28304, Start Num: 8
Candidate Starts for Miko_37:
(2, 27618), (Start: 8 @27726 has 15 MA's), (Start: 10 @27762 has 15 MA's), (11, 27783), (15, 27825),
(16, 27828), (19, 27867), (24, 27909), (25, 27933), (28, 27954), (32, 28020), (33, 28023), (38, 28104),
(40, 28110), (41, 28119), (42, 28137), (44, 28149), (48, 28176), (50, 28185), (51, 28194), (54, 28266),
(56, 28287),

Gene: Mulciber_33 Start: 25663, Stop: 26241, Start Num: 8
Candidate Starts for Mulciber_33:
(Start: 8 @25663 has 15 MA's), (9, 25681), (Start: 10 @25699 has 15 MA's), (11, 25720), (14, 25753),
(15, 25762), (16, 25765), (19, 25804), (23, 25834), (28, 25891), (32, 25957), (37, 26029), (38, 26041),

(40, 26047), (42, 26074), (43, 26077), (45, 26092), (46, 26095), (48, 26113), (49, 26119), (51, 26131), (53, 26173), (54, 26203), (56, 26224),

Gene: Orange_33 Start: 25669, Stop: 26247, Start Num: 8
Candidate Starts for Orange_33:
(Start: 8 @25669 has 15 MA's), (9, 25687), (Start: 10 @25705 has 15 MA's), (11, 25726), (14, 25759), (15, 25768), (16, 25771), (19, 25810), (23, 25840), (28, 25897), (32, 25963), (37, 26035), (38, 26047), (40, 26053), (42, 26080), (43, 26083), (45, 26098), (46, 26101), (48, 26119), (49, 26125), (51, 26137), (53, 26179), (54, 26209), (56, 26230),

Gene: Petersenfast_32 Start: 25704, Stop: 26246, Start Num: 10
Candidate Starts for Petersenfast_32:
(Start: 8 @25668 has 15 MA's), (9, 25686), (Start: 10 @25704 has 15 MA's), (11, 25725), (14, 25758), (15, 25767), (16, 25770), (19, 25809), (23, 25839), (25, 25875), (28, 25896), (32, 25962), (37, 26034), (38, 26046), (40, 26052), (42, 26079), (43, 26082), (45, 26097), (46, 26100), (48, 26118), (49, 26124), (51, 26136), (53, 26178), (54, 26208), (56, 26229),

Gene: Phonnegut_36 Start: 27040, Stop: 27618, Start Num: 8
Candidate Starts for Phonnegut_36:
(Start: 8 @27040 has 15 MA's), (Start: 10 @27076 has 15 MA's), (11, 27097), (25, 27247), (28, 27268), (32, 27334), (34, 27367), (37, 27406), (40, 27424), (42, 27451), (48, 27490), (49, 27496), (53, 27550), (54, 27580), (55, 27592), (56, 27601), (57, 27604),

Gene: Pioneer_36 Start: 27076, Stop: 27618, Start Num: 10
Candidate Starts for Pioneer_36:
(Start: 8 @27040 has 15 MA's), (Start: 10 @27076 has 15 MA's), (11, 27097), (25, 27247), (28, 27268), (32, 27334), (34, 27367), (37, 27406), (40, 27424), (42, 27451), (48, 27490), (49, 27496), (53, 27550), (54, 27580), (55, 27592), (56, 27601), (57, 27604),

Gene: Priamo_38 Start: 25149, Stop: 25691, Start Num: 10
Candidate Starts for Priamo_38:
(2, 25005), (4, 25068), (Start: 8 @25113 has 15 MA's), (9, 25131), (Start: 10 @25149 has 15 MA's), (11, 25170), (15, 25212), (16, 25215), (19, 25254), (23, 25284), (25, 25320), (28, 25341), (32, 25407), (35, 25449), (37, 25479), (38, 25491), (40, 25497), (41, 25506), (42, 25524), (43, 25527), (46, 25545), (48, 25563), (49, 25569), (51, 25581), (53, 25623), (54, 25653), (56, 25674),

Gene: Rachaly_37 Start: 27592, Stop: 28170, Start Num: 8
Candidate Starts for Rachaly_37:
(1, 27427), (2, 27484), (Start: 8 @27592 has 15 MA's), (Start: 10 @27628 has 15 MA's), (11, 27649), (15, 27691), (16, 27694), (19, 27733), (24, 27775), (25, 27799), (28, 27820), (32, 27886), (33, 27889), (38, 27970), (40, 27976), (41, 27985), (42, 28003), (44, 28015), (48, 28042), (50, 28051), (51, 28060), (54, 28132), (56, 28153),

Gene: RyeScarlet_37 Start: 27076, Stop: 27618, Start Num: 10
Candidate Starts for RyeScarlet_37:
(3, 26980), (7, 27037), (9, 27058), (Start: 10 @27076 has 15 MA's), (18, 27175), (28, 27268), (33, 27337), (34, 27367), (36, 27394), (44, 27463), (56, 27601),

Gene: Sachima_33 Start: 27052, Stop: 27594, Start Num: 10
Candidate Starts for Sachima_33:
(3, 26968), (7, 27013), (9, 27034), (Start: 10 @27052 has 15 MA's), (28, 27244), (30, 27292), (33, 27313), (34, 27343), (36, 27370), (44, 27439), (56, 27577),

Gene: Salz_34 Start: 26023, Stop: 26601, Start Num: 8
Candidate Starts for Salz_34:
(Start: 8 @26023 has 15 MA's), (9, 26041), (Start: 10 @26059 has 15 MA's), (11, 26080), (14, 26113),
(15, 26122), (16, 26125), (19, 26164), (23, 26194), (28, 26251), (32, 26317), (37, 26389), (38, 26401),
(40, 26407), (42, 26434), (43, 26437), (45, 26452), (46, 26455), (48, 26473), (49, 26479), (51, 26491),
(53, 26533), (54, 26563), (56, 26584),

Gene: Saskia_33 Start: 25901, Stop: 26443, Start Num: 10
Candidate Starts for Saskia_33:
(Start: 8 @25865 has 15 MA's), (9, 25883), (Start: 10 @25901 has 15 MA's), (11, 25922), (14, 25955),
(15, 25964), (16, 25967), (19, 26006), (23, 26036), (25, 26072), (28, 26093), (32, 26159), (37, 26231),
(38, 26243), (40, 26249), (42, 26276), (43, 26279), (45, 26294), (46, 26297), (48, 26315), (49, 26321),
(51, 26333), (53, 26375), (54, 26405), (56, 26426),

Gene: Snape_33 Start: 25666, Stop: 26244, Start Num: 8
Candidate Starts for Snape_33:
(Start: 8 @25666 has 15 MA's), (9, 25684), (Start: 10 @25702 has 15 MA's), (11, 25723), (14, 25756),
(15, 25765), (16, 25768), (19, 25807), (23, 25837), (28, 25894), (32, 25960), (37, 26032), (38, 26044),
(40, 26050), (42, 26077), (43, 26080), (45, 26095), (46, 26098), (48, 26116), (49, 26122), (51, 26134),
(53, 26176), (54, 26206), (56, 26227),

Gene: Sunhee_36 Start: 26510, Stop: 27049, Start Num: 10
Candidate Starts for Sunhee_36:
(5, 26462), (7, 26471), (Start: 10 @26510 has 15 MA's), (16, 26576), (18, 26609), (27, 26696), (31,
26753), (36, 26825), (47, 26906), (56, 27032), (57, 27035),

Gene: SuperCallie99_37 Start: 25102, Stop: 25644, Start Num: 10
Candidate Starts for SuperCallie99_37:
(2, 24958), (4, 25021), (Start: 8 @25066 has 15 MA's), (Start: 10 @25102 has 15 MA's), (11, 25123),
(15, 25165), (16, 25168), (19, 25207), (23, 25237), (25, 25273), (28, 25294), (32, 25360), (35, 25402),
(37, 25432), (38, 25444), (40, 25450), (41, 25459), (42, 25477), (43, 25480), (46, 25498), (48, 25516),
(51, 25534), (53, 25576), (54, 25606), (56, 25627),

Gene: Timothy_34 Start: 26026, Stop: 26604, Start Num: 8
Candidate Starts for Timothy_34:
(Start: 8 @26026 has 15 MA's), (9, 26044), (Start: 10 @26062 has 15 MA's), (11, 26083), (14, 26116),
(15, 26125), (16, 26128), (19, 26167), (23, 26197), (28, 26254), (32, 26320), (37, 26392), (38, 26404),
(40, 26410), (42, 26437), (43, 26440), (45, 26455), (46, 26458), (48, 26476), (49, 26482), (51, 26494),
(53, 26536), (54, 26566), (56, 26587),

Gene: ToneTone_34 Start: 24815, Stop: 25357, Start Num: 10
Candidate Starts for ToneTone_34:
(2, 24671), (4, 24734), (Start: 8 @24779 has 15 MA's), (9, 24797), (Start: 10 @24815 has 15 MA's),
(11, 24836), (15, 24878), (16, 24881), (19, 24920), (23, 24950), (25, 24986), (28, 25007), (32, 25073),
(35, 25115), (37, 25145), (38, 25157), (40, 25163), (41, 25172), (42, 25190), (43, 25193), (46, 25211),
(48, 25229), (51, 25247), (53, 25289), (54, 25319), (56, 25340),

Gene: Tucker_37 Start: 24901, Stop: 25443, Start Num: 10
Candidate Starts for Tucker_37:
(2, 24757), (4, 24820), (Start: 6 @24856 has 1 MA's), (Start: 8 @24865 has 15 MA's), (9, 24883),
(Start: 10 @24901 has 15 MA's), (11, 24922), (15, 24964), (16, 24967), (19, 25006), (23, 25036), (25,
25072), (28, 25093), (32, 25159), (35, 25201), (37, 25231), (38, 25243), (40, 25249), (41, 25258), (42,
25276), (43, 25279), (46, 25297), (48, 25315), (51, 25333), (53, 25375), (54, 25405), (56, 25426),

Gene: Wiks_36 Start: 24883, Stop: 25425, Start Num: 10
Candidate Starts for Wiks_36:
(2, 24739), (4, 24802), (Start: 6 @24838 has 1 MA's), (Start: 8 @24847 has 15 MA's), (9, 24865), (Start: 10 @24883 has 15 MA's), (11, 24904), (15, 24946), (16, 24949), (19, 24988), (23, 25018), (25, 25054), (28, 25075), (32, 25141), (35, 25183), (37, 25213), (38, 25225), (40, 25231), (41, 25240), (42, 25258), (43, 25261), (46, 25279), (48, 25297), (51, 25315), (53, 25357), (54, 25387), (56, 25408),

Gene: Wolpertinger_32 Start: 25770, Stop: 26246, Start Num: 16
Candidate Starts for Wolpertinger_32:
(Start: 8 @25668 has 15 MA's), (9, 25686), (Start: 10 @25704 has 15 MA's), (11, 25725), (14, 25758), (15, 25767), (16, 25770), (19, 25809), (23, 25839), (25, 25875), (28, 25896), (32, 25962), (37, 26034), (38, 26046), (40, 26052), (42, 26079), (43, 26082), (45, 26097), (46, 26100), (48, 26118), (49, 26124), (51, 26136), (53, 26178), (54, 26208), (56, 26229),