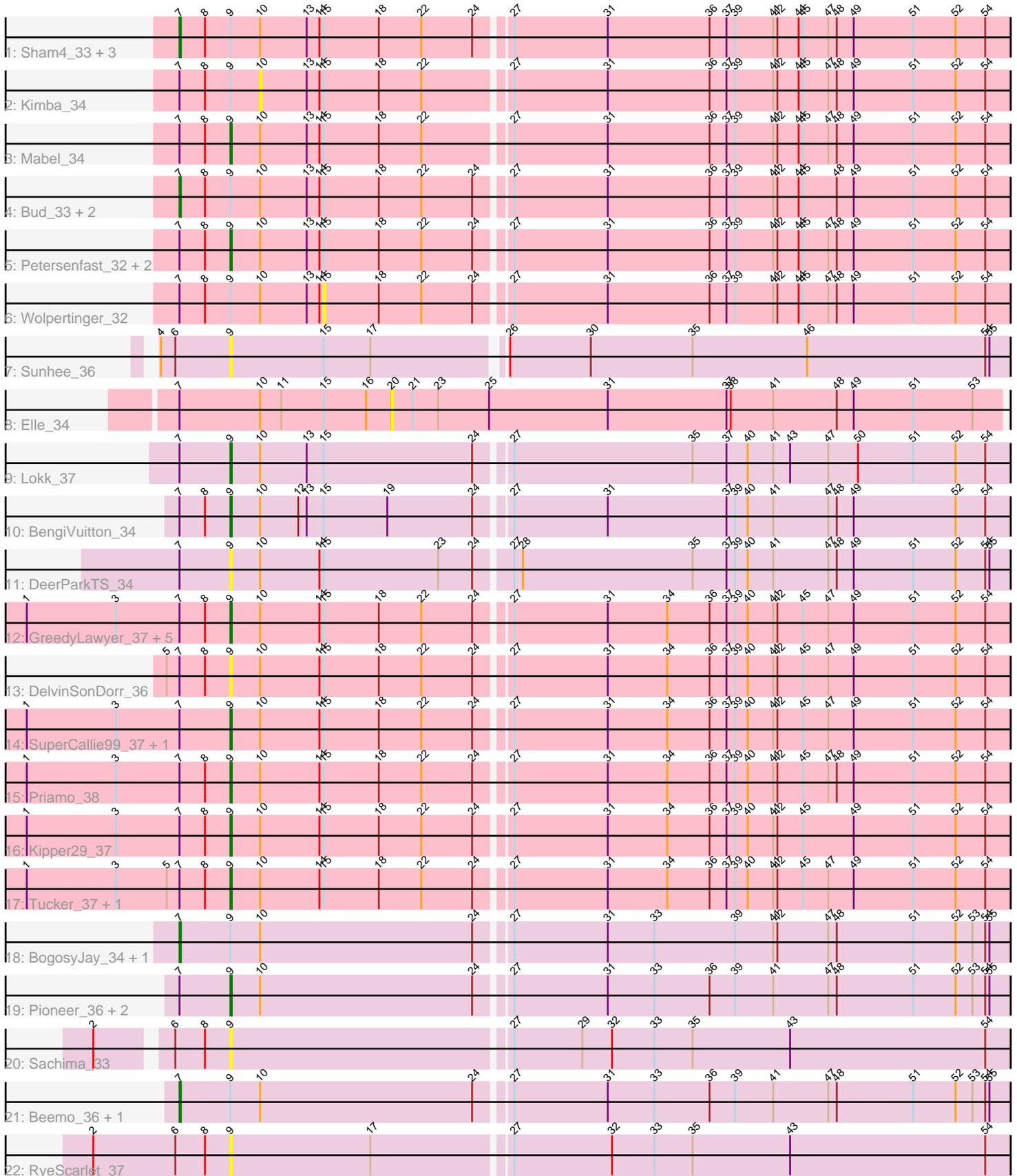# Pham 289552

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 289552 Report

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

Pham number 289552 has 40 members, 14 are drafts.

Phages represented in each track:
• Track 1 : Sham4_33, Gilberta_34, Flaverint_34, MaCh_34
• Track 2 : Kimba_34
• Track 3 : Mabel_34
• Track 4 : Bud_33, Hutc2_33, Bowtie_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 : DeerParkTS_34
• Track 12 : GreedyLawyer_37, Garak_38, BlessJoy_37, ToneTone_34, BennyP_37, Candra_37
• Track 13 : DelvinSonDorr_36
• Track 14 : SuperCallie99_37, Gruunaga_37
• Track 15 : Priamo_38
• Track 16 : Kipper29_37
• Track 17 : Tucker_37, Wiks_36
• Track 18 : BogosyJay_34, Maminiaina_34
• Track 19 : Pioneer_36, Ayanochan_36, ExplosioNervosa_36
• Track 20 : Sachima_33
• Track 21 : Beemo_36, Phonnegut_36
• Track 22 : 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 9, it was called in 15 of the 26 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, BogosyJay_34, Bowtie_34, Bud_33, Flaverint_34, Gilberta_34, Hutc2_33, Kimba_34, MaCh_34, Maminiaina_34, Phonnegut_36, Sham4_33, Wolpertinger_32,

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

Summary by start number:

Start 7:
• Found in 37 of 40 (92.5%) of genes in pham
• Manual Annotations of this start: 11 of 26
• Called 29.7% of time when present
• Phage (with cluster) where this start called: Beemo_36 (A9), BogosyJay_34 (A9), Bowtie_34 (A11), Bud_33 (A11), Flaverint_34 (A11), Gilberta_34 (A11), Hutc2_33 (A11), MaCh_34 (A11), Maminiaina_34 (A9), Phonnegut_36 (A9), Sham4_33 (A11),

Start 9:
• Found in 39 of 40 (97.5%) of genes in pham
• Manual Annotations of this start: 15 of 26
• Called 66.7% 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 10:
• Found in 37 of 40 (92.5%) of genes in pham
• No Manual Annotations of this start.
• Called 2.7% of time when present
• Phage (with cluster) where this start called: Kimba_34 (A11),

Start 15:
• Found in 31 of 40 (77.5%) of genes in pham
• No Manual Annotations of this start.
• Called 3.2% of time when present
• Phage (with cluster) where this start called: Wolpertinger_32 (A11),

Start 20:
• Found in 1 of 40 (2.5%) 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 7 was manually annotated 7 times for cluster A11.
•Start number 9 was manually annotated 2 times for cluster A11.

Info for manual annotations of cluster A2:
•Start number 9 was manually annotated 2 times for cluster A2.

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

Info for manual annotations of cluster A9:
•Start number 7 was manually annotated 4 times for cluster A9.
•Start number 9 was manually annotated 2 times for cluster A9.

Gene Information:

Gene: Ayanochan_36 Start: 27076, Stop: 27618, Start Num: 9
Candidate Starts for Ayanochan_36:
(Start: 7 @27040 has 11 MA's), (Start: 9 @27076 has 15 MA's), (10, 27097), (24, 27247), (27, 27268), (31, 27334), (33, 27367), (36, 27406), (39, 27424), (41, 27451), (47, 27490), (48, 27496), (51, 27550), (52, 27580), (53, 27592), (54, 27601), (55, 27604),

Gene: Bachome_35 Start: 26144, Stop: 26686, Start Num: 9
Candidate Starts for Bachome_35:
(Start: 7 @26108 has 11 MA's), (8, 26126), (Start: 9 @26144 has 15 MA's), (10, 26165), (13, 26198), (14, 26207), (15, 26210), (18, 26249), (22, 26279), (24, 26315), (27, 26336), (31, 26402), (36, 26474), (37, 26486), (39, 26492), (41, 26519), (42, 26522), (44, 26537), (45, 26540), (47, 26558), (48, 26564), (49, 26576), (51, 26618), (52, 26648), (54, 26669),

Gene: Beemo_36 Start: 27041, Stop: 27619, Start Num: 7
Candidate Starts for Beemo_36:
(Start: 7 @27041 has 11 MA's), (Start: 9 @27077 has 15 MA's), (10, 27098), (24, 27248), (27, 27269), (31, 27335), (33, 27368), (36, 27407), (39, 27425), (41, 27452), (47, 27491), (48, 27497), (51, 27551), (52, 27581), (53, 27593), (54, 27602), (55, 27605),

Gene: BengiVuitton_34 Start: 26453, Stop: 26995, Start Num: 9
Candidate Starts for BengiVuitton_34:
(Start: 7 @26417 has 11 MA's), (8, 26435), (Start: 9 @26453 has 15 MA's), (10, 26474), (12, 26501), (13, 26507), (15, 26519), (19, 26564), (24, 26624), (27, 26645), (31, 26711), (37, 26795), (39, 26801), (40, 26810), (41, 26828), (47, 26867), (48, 26873), (49, 26885), (52, 26957), (54, 26978),

Gene: BennyP_37 Start: 25110, Stop: 25652, Start Num: 9
Candidate Starts for BennyP_37:
(1, 24966), (3, 25029), (Start: 7 @25074 has 11 MA's), (8, 25092), (Start: 9 @25110 has 15 MA's), (10, 25131), (14, 25173), (15, 25176), (18, 25215), (22, 25245), (24, 25281), (27, 25302), (31, 25368), (34, 25410), (36, 25440), (37, 25452), (39, 25458), (40, 25467), (41, 25485), (42, 25488), (45, 25506), (47, 25524), (49, 25542), (51, 25584), (52, 25614), (54, 25635),

Gene: BlessJoy_37 Start: 25105, Stop: 25647, Start Num: 9
Candidate Starts for BlessJoy_37:
(1, 24961), (3, 25024), (Start: 7 @25069 has 11 MA's), (8, 25087), (Start: 9 @25105 has 15 MA's), (10, 25126), (14, 25168), (15, 25171), (18, 25210), (22, 25240), (24, 25276), (27, 25297), (31, 25363), (34, 25405), (36, 25435), (37, 25447), (39, 25453), (40, 25462), (41, 25480), (42, 25483), (45, 25501), (47, 25519), (49, 25537), (51, 25579), (52, 25609), (54, 25630),

Gene: BogosyJay_34 Start: 26586, Stop: 27164, Start Num: 7
Candidate Starts for BogosyJay_34:
(Start: 7 @26586 has 11 MA's), (Start: 9 @26622 has 15 MA's), (10, 26643), (24, 26793), (27, 26814), (31, 26880), (33, 26913), (39, 26970), (41, 26997), (42, 27000), (47, 27036), (48, 27042), (51, 27096), (52, 27126), (53, 27138), (54, 27147), (55, 27150),

Gene: Bowtie_34 Start: 26120, Stop: 26698, Start Num: 7
Candidate Starts for Bowtie_34:
(Start: 7 @26120 has 11 MA's), (8, 26138), (Start: 9 @26156 has 15 MA's), (10, 26177), (13, 26210), (14, 26219), (15, 26222), (18, 26261), (22, 26291), (24, 26327), (27, 26348), (31, 26414), (36, 26486), (37, 26498), (39, 26504), (41, 26531), (42, 26534), (44, 26549), (45, 26552), (48, 26576), (49, 26588), (51, 26630), (52, 26660), (54, 26681),

Gene: Bud_33 Start: 25675, Stop: 26253, Start Num: 7
Candidate Starts for Bud_33:
(Start: 7 @25675 has 11 MA's), (8, 25693), (Start: 9 @25711 has 15 MA's), (10, 25732), (13, 25765), (14, 25774), (15, 25777), (18, 25816), (22, 25846), (24, 25882), (27, 25903), (31, 25969), (36, 26041), (37, 26053), (39, 26059), (41, 26086), (42, 26089), (44, 26104), (45, 26107), (48, 26131), (49, 26143), (51, 26185), (52, 26215), (54, 26236),

Gene: Candra_37 Start: 25146, Stop: 25688, Start Num: 9
Candidate Starts for Candra_37:
(1, 25002), (3, 25065), (Start: 7 @25110 has 11 MA's), (8, 25128), (Start: 9 @25146 has 15 MA's), (10, 25167), (14, 25209), (15, 25212), (18, 25251), (22, 25281), (24, 25317), (27, 25338), (31, 25404), (34, 25446), (36, 25476), (37, 25488), (39, 25494), (40, 25503), (41, 25521), (42, 25524), (45, 25542), (47, 25560), (49, 25578), (51, 25620), (52, 25650), (54, 25671),

Gene: DeerParkTS_34 Start: 26427, Stop: 26972, Start Num: 9
Candidate Starts for DeerParkTS_34:
(Start: 7 @26391 has 11 MA's), (Start: 9 @26427 has 15 MA's), (10, 26448), (14, 26490), (15, 26493), (23, 26574), (24, 26598), (27, 26622), (28, 26628), (35, 26748), (37, 26772), (39, 26778), (40, 26787), (41, 26805), (47, 26844), (48, 26850), (49, 26862), (51, 26904), (52, 26934), (54, 26955), (55, 26958),

Gene: DelvinSonDorr_36 Start: 25104, Stop: 25646, Start Num: 9
Candidate Starts for DelvinSonDorr_36:
(5, 25059), (Start: 7 @25068 has 11 MA's), (8, 25086), (Start: 9 @25104 has 15 MA's), (10, 25125), (14, 25167), (15, 25170), (18, 25209), (22, 25239), (24, 25275), (27, 25296), (31, 25362), (34, 25404), (36, 25434), (37, 25446), (39, 25452), (40, 25461), (41, 25479), (42, 25482), (45, 25500), (47, 25518), (49, 25536), (51, 25578), (52, 25608), (54, 25629),

Gene: Elle_34 Start: 24107, Stop: 24538, Start Num: 20
Candidate Starts for Elle_34:
(Start: 7 @23957 has 11 MA's), (10, 24014), (11, 24029), (15, 24059), (16, 24089), (20, 24107), (21, 24122), (23, 24140), (25, 24176), (31, 24260), (37, 24344), (38, 24347), (41, 24377), (48, 24422), (49, 24434), (51, 24476), (53, 24518),

Gene: ExplosioNervosa_36 Start: 27111, Stop: 27653, Start Num: 9
Candidate Starts for ExplosioNervosa_36:
(Start: 7 @27075 has 11 MA's), (Start: 9 @27111 has 15 MA's), (10, 27132), (24, 27282), (27, 27303), (31, 27369), (33, 27402), (36, 27441), (39, 27459), (41, 27486), (47, 27525), (48, 27531), (51, 27585), (52, 27615), (53, 27627), (54, 27636), (55, 27639),

Gene: Flaverint_34 Start: 26114, Stop: 26692, Start Num: 7
Candidate Starts for Flaverint_34:
(Start: 7 @26114 has 11 MA's), (8, 26132), (Start: 9 @26150 has 15 MA's), (10, 26171), (13, 26204), (14, 26213), (15, 26216), (18, 26255), (22, 26285), (24, 26321), (27, 26342), (31, 26408), (36, 26480), (37, 26492), (39, 26498), (41, 26525), (42, 26528), (44, 26543), (45, 26546), (47, 26564), (48, 26570), (49, 26582), (51, 26624), (52, 26654), (54, 26675),

Gene: Garak_38 Start: 25111, Stop: 25653, Start Num: 9
Candidate Starts for Garak_38:
(1, 24967), (3, 25030), (Start: 7 @25075 has 11 MA's), (8, 25093), (Start: 9 @25111 has 15 MA's), (10, 25132), (14, 25174), (15, 25177), (18, 25216), (22, 25246), (24, 25282), (27, 25303), (31, 25369), (34, 25411), (36, 25441), (37, 25453), (39, 25459), (40, 25468), (41, 25486), (42, 25489), (45, 25507), (47, 25525), (49, 25543), (51, 25585), (52, 25615), (54, 25636),

Gene: Gilberta_34 Start: 26111, Stop: 26689, Start Num: 7
Candidate Starts for Gilberta_34:
(Start: 7 @26111 has 11 MA's), (8, 26129), (Start: 9 @26147 has 15 MA's), (10, 26168), (13, 26201), (14, 26210), (15, 26213), (18, 26252), (22, 26282), (24, 26318), (27, 26339), (31, 26405), (36, 26477), (37, 26489), (39, 26495), (41, 26522), (42, 26525), (44, 26540), (45, 26543), (47, 26561), (48, 26567), (49, 26579), (51, 26621), (52, 26651), (54, 26672),

Gene: GreedyLawyer_37 Start: 25110, Stop: 25652, Start Num: 9
Candidate Starts for GreedyLawyer_37:
(1, 24966), (3, 25029), (Start: 7 @25074 has 11 MA's), (8, 25092), (Start: 9 @25110 has 15 MA's), (10, 25131), (14, 25173), (15, 25176), (18, 25215), (22, 25245), (24, 25281), (27, 25302), (31, 25368), (34, 25410), (36, 25440), (37, 25452), (39, 25458), (40, 25467), (41, 25485), (42, 25488), (45, 25506), (47, 25524), (49, 25542), (51, 25584), (52, 25614), (54, 25635),

Gene: Gruunaga_37 Start: 25099, Stop: 25641, Start Num: 9
Candidate Starts for Gruunaga_37:
(1, 24955), (3, 25018), (Start: 7 @25063 has 11 MA's), (Start: 9 @25099 has 15 MA's), (10, 25120), (14, 25162), (15, 25165), (18, 25204), (22, 25234), (24, 25270), (27, 25291), (31, 25357), (34, 25399), (36, 25429), (37, 25441), (39, 25447), (40, 25456), (41, 25474), (42, 25477), (45, 25495), (47, 25513), (49, 25531), (51, 25573), (52, 25603), (54, 25624),

Gene: Hutc2_33 Start: 25667, Stop: 26245, Start Num: 7
Candidate Starts for Hutc2_33:
(Start: 7 @25667 has 11 MA's), (8, 25685), (Start: 9 @25703 has 15 MA's), (10, 25724), (13, 25757), (14, 25766), (15, 25769), (18, 25808), (22, 25838), (24, 25874), (27, 25895), (31, 25961), (36, 26033), (37, 26045), (39, 26051), (41, 26078), (42, 26081), (44, 26096), (45, 26099), (48, 26123), (49, 26135), (51, 26177), (52, 26207), (54, 26228),

Gene: Kimba_34 Start: 26141, Stop: 26662, Start Num: 10
Candidate Starts for Kimba_34:
(Start: 7 @26084 has 11 MA's), (8, 26102), (Start: 9 @26120 has 15 MA's), (10, 26141), (13, 26174), (14, 26183), (15, 26186), (18, 26225), (22, 26255), (27, 26312), (31, 26378), (36, 26450), (37, 26462), (39, 26468), (41, 26495), (42, 26498), (44, 26513), (45, 26516), (47, 26534), (48, 26540), (49, 26552),

(51, 26594), (52, 26624), (54, 26645),

Gene: Kipper29_37 Start: 25110, Stop: 25652, Start Num: 9
Candidate Starts for Kipper29_37:
(1, 24966), (3, 25029), (Start: 7 @25074 has 11 MA's), (8, 25092), (Start: 9 @25110 has 15 MA's), (10, 25131), (14, 25173), (15, 25176), (18, 25215), (22, 25245), (24, 25281), (27, 25302), (31, 25368), (34, 25410), (36, 25440), (37, 25452), (39, 25458), (40, 25467), (41, 25485), (42, 25488), (45, 25506), (49, 25542), (51, 25584), (52, 25614), (54, 25635),

Gene: Lokk_37 Start: 27588, Stop: 28130, Start Num: 9
Candidate Starts for Lokk_37:
(Start: 7 @27552 has 11 MA's), (Start: 9 @27588 has 15 MA's), (10, 27609), (13, 27642), (15, 27654), (24, 27759), (27, 27780), (35, 27906), (37, 27930), (40, 27945), (41, 27963), (43, 27975), (47, 28002), (50, 28023), (51, 28062), (52, 28092), (54, 28113),

Gene: MaCh_34 Start: 26108, Stop: 26686, Start Num: 7
Candidate Starts for MaCh_34:
(Start: 7 @26108 has 11 MA's), (8, 26126), (Start: 9 @26144 has 15 MA's), (10, 26165), (13, 26198), (14, 26207), (15, 26210), (18, 26249), (22, 26279), (24, 26315), (27, 26336), (31, 26402), (36, 26474), (37, 26486), (39, 26492), (41, 26519), (42, 26522), (44, 26537), (45, 26540), (47, 26558), (48, 26564), (49, 26576), (51, 26618), (52, 26648), (54, 26669),

Gene: Mabel_34 Start: 26118, Stop: 26660, Start Num: 9
Candidate Starts for Mabel_34:
(Start: 7 @26082 has 11 MA's), (8, 26100), (Start: 9 @26118 has 15 MA's), (10, 26139), (13, 26172), (14, 26181), (15, 26184), (18, 26223), (22, 26253), (27, 26310), (31, 26376), (36, 26448), (37, 26460), (39, 26466), (41, 26493), (42, 26496), (44, 26511), (45, 26514), (47, 26532), (48, 26538), (49, 26550), (51, 26592), (52, 26622), (54, 26643),

Gene: Maminiaina_34 Start: 26568, Stop: 27146, Start Num: 7
Candidate Starts for Maminiaina_34:
(Start: 7 @26568 has 11 MA's), (Start: 9 @26604 has 15 MA's), (10, 26625), (24, 26775), (27, 26796), (31, 26862), (33, 26895), (39, 26952), (41, 26979), (42, 26982), (47, 27018), (48, 27024), (51, 27078), (52, 27108), (53, 27120), (54, 27129), (55, 27132),

Gene: Petersenfast_32 Start: 25704, Stop: 26246, Start Num: 9
Candidate Starts for Petersenfast_32:
(Start: 7 @25668 has 11 MA's), (8, 25686), (Start: 9 @25704 has 15 MA's), (10, 25725), (13, 25758), (14, 25767), (15, 25770), (18, 25809), (22, 25839), (24, 25875), (27, 25896), (31, 25962), (36, 26034), (37, 26046), (39, 26052), (41, 26079), (42, 26082), (44, 26097), (45, 26100), (47, 26118), (48, 26124), (49, 26136), (51, 26178), (52, 26208), (54, 26229),

Gene: Phonnegut_36 Start: 27040, Stop: 27618, Start Num: 7
Candidate Starts for Phonnegut_36:
(Start: 7 @27040 has 11 MA's), (Start: 9 @27076 has 15 MA's), (10, 27097), (24, 27247), (27, 27268), (31, 27334), (33, 27367), (36, 27406), (39, 27424), (41, 27451), (47, 27490), (48, 27496), (51, 27550), (52, 27580), (53, 27592), (54, 27601), (55, 27604),

Gene: Pioneer_36 Start: 27076, Stop: 27618, Start Num: 9
Candidate Starts for Pioneer_36:
(Start: 7 @27040 has 11 MA's), (Start: 9 @27076 has 15 MA's), (10, 27097), (24, 27247), (27, 27268), (31, 27334), (33, 27367), (36, 27406), (39, 27424), (41, 27451), (47, 27490), (48, 27496), (51, 27550), (52, 27580), (53, 27592), (54, 27601), (55, 27604),

Gene: Priamo_38 Start: 25149, Stop: 25691, Start Num: 9
Candidate Starts for Priamo_38:
(1, 25005), (3, 25068), (Start: 7 @25113 has 11 MA's), (8, 25131), (Start: 9 @25149 has 15 MA's), (10, 25170), (14, 25212), (15, 25215), (18, 25254), (22, 25284), (24, 25320), (27, 25341), (31, 25407), (34, 25449), (36, 25479), (37, 25491), (39, 25497), (40, 25506), (41, 25524), (42, 25527), (45, 25545), (47, 25563), (48, 25569), (49, 25581), (51, 25623), (52, 25653), (54, 25674),

Gene: RyeScarlet_37 Start: 27076, Stop: 27618, Start Num: 9
Candidate Starts for RyeScarlet_37:
(2, 26980), (6, 27037), (8, 27058), (Start: 9 @27076 has 15 MA's), (17, 27175), (27, 27268), (32, 27337), (33, 27367), (35, 27394), (43, 27463), (54, 27601),

Gene: Sachima_33 Start: 27052, Stop: 27594, Start Num: 9
Candidate Starts for Sachima_33:
(2, 26968), (6, 27013), (8, 27034), (Start: 9 @27052 has 15 MA's), (27, 27244), (29, 27292), (32, 27313), (33, 27343), (35, 27370), (43, 27439), (54, 27577),

Gene: Saskia_33 Start: 25901, Stop: 26443, Start Num: 9
Candidate Starts for Saskia_33:
(Start: 7 @25865 has 11 MA's), (8, 25883), (Start: 9 @25901 has 15 MA's), (10, 25922), (13, 25955), (14, 25964), (15, 25967), (18, 26006), (22, 26036), (24, 26072), (27, 26093), (31, 26159), (36, 26231), (37, 26243), (39, 26249), (41, 26276), (42, 26279), (44, 26294), (45, 26297), (47, 26315), (48, 26321), (49, 26333), (51, 26375), (52, 26405), (54, 26426),

Gene: Sham4_33 Start: 25667, Stop: 26245, Start Num: 7
Candidate Starts for Sham4_33:
(Start: 7 @25667 has 11 MA's), (8, 25685), (Start: 9 @25703 has 15 MA's), (10, 25724), (13, 25757), (14, 25766), (15, 25769), (18, 25808), (22, 25838), (24, 25874), (27, 25895), (31, 25961), (36, 26033), (37, 26045), (39, 26051), (41, 26078), (42, 26081), (44, 26096), (45, 26099), (47, 26117), (48, 26123), (49, 26135), (51, 26177), (52, 26207), (54, 26228),

Gene: Sunhee_36 Start: 26510, Stop: 27049, Start Num: 9
Candidate Starts for Sunhee_36:
(4, 26462), (6, 26471), (Start: 9 @26510 has 15 MA's), (15, 26576), (17, 26609), (26, 26696), (30, 26753), (35, 26825), (46, 26906), (54, 27032), (55, 27035),

Gene: SuperCallie99_37 Start: 25102, Stop: 25644, Start Num: 9
Candidate Starts for SuperCallie99_37:
(1, 24958), (3, 25021), (Start: 7 @25066 has 11 MA's), (Start: 9 @25102 has 15 MA's), (10, 25123), (14, 25165), (15, 25168), (18, 25207), (22, 25237), (24, 25273), (27, 25294), (31, 25360), (34, 25402), (36, 25432), (37, 25444), (39, 25450), (40, 25459), (41, 25477), (42, 25480), (45, 25498), (47, 25516), (49, 25534), (51, 25576), (52, 25606), (54, 25627),

Gene: ToneTone_34 Start: 24815, Stop: 25357, Start Num: 9
Candidate Starts for ToneTone_34:
(1, 24671), (3, 24734), (Start: 7 @24779 has 11 MA's), (8, 24797), (Start: 9 @24815 has 15 MA's), (10, 24836), (14, 24878), (15, 24881), (18, 24920), (22, 24950), (24, 24986), (27, 25007), (31, 25073), (34, 25115), (36, 25145), (37, 25157), (39, 25163), (40, 25172), (41, 25190), (42, 25193), (45, 25211), (47, 25229), (49, 25247), (51, 25289), (52, 25319), (54, 25340),

Gene: Tucker_37 Start: 24901, Stop: 25443, Start Num: 9
Candidate Starts for Tucker_37:

(1, 24757), (3, 24820), (5, 24856), (Start: 7 @24865 has 11 MA's), (8, 24883), (Start: 9 @24901 has 15 MA's), (10, 24922), (14, 24964), (15, 24967), (18, 25006), (22, 25036), (24, 25072), (27, 25093), (31, 25159), (34, 25201), (36, 25231), (37, 25243), (39, 25249), (40, 25258), (41, 25276), (42, 25279), (45, 25297), (47, 25315), (49, 25333), (51, 25375), (52, 25405), (54, 25426),

Gene: Wiks_36 Start: 24883, Stop: 25425, Start Num: 9
Candidate Starts for Wiks_36:
(1, 24739), (3, 24802), (5, 24838), (Start: 7 @24847 has 11 MA's), (8, 24865), (Start: 9 @24883 has 15 MA's), (10, 24904), (14, 24946), (15, 24949), (18, 24988), (22, 25018), (24, 25054), (27, 25075), (31, 25141), (34, 25183), (36, 25213), (37, 25225), (39, 25231), (40, 25240), (41, 25258), (42, 25261), (45, 25279), (47, 25297), (49, 25315), (51, 25357), (52, 25387), (54, 25408),

Gene: Wolpertinger_32 Start: 25770, Stop: 26246, Start Num: 15
Candidate Starts for Wolpertinger_32:
(Start: 7 @25668 has 11 MA's), (8, 25686), (Start: 9 @25704 has 15 MA's), (10, 25725), (13, 25758), (14, 25767), (15, 25770), (18, 25809), (22, 25839), (24, 25875), (27, 25896), (31, 25962), (36, 26034), (37, 26046), (39, 26052), (41, 26079), (42, 26082), (44, 26097), (45, 26100), (47, 26118), (48, 26124), (49, 26136), (51, 26178), (52, 26208), (54, 26229),