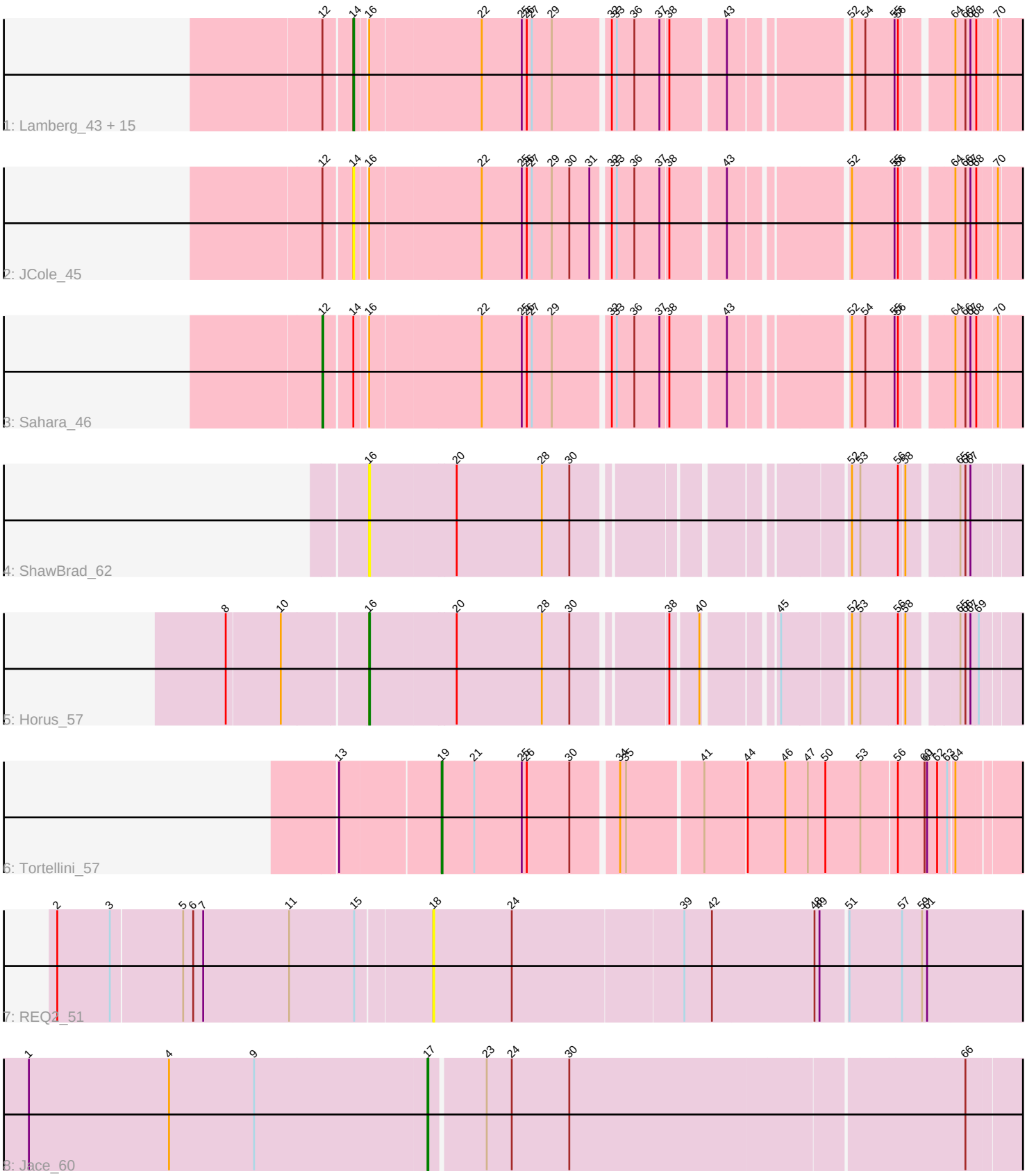
# Pham 224872


1: Lamberg_43 + 15
2: JCole_45
3: Sahara_46
4: ShawBrad_62
5: Horus_57
6: Tortellini_57
7: REQ2_51
8: Jace_60

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 224872 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224872 has 23 members, 3 are drafts.

Phages represented in each track:
• Track 1 : Lamberg_43, Nettuno_43, GemG_47, TuertoX_47, Gizermo_47, Ebert_49, Bosnia_49, Mocha12_47, Sproutie_47, Bjanes7_44, Whiteclaw_47, Matteo_40, Cynthia_47, Haley23_47, Clap_47, Savage_47
• Track 2 : JCole_45
• Track 3 : Sahara_46
• Track 4 : ShawBrad_62
• Track 5 : Horus_57
• Track 6 : Tortellini_57
• Track 7 : REQ2_51
• Track 8 : Jace_60

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

The start number called the most often in the published annotations is 14, it was called in 16 of the 20 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Bjanes7_44, Bosnia_49, Clap_47, Cynthia_47, Ebert_49, GemG_47, Gizermo_47, Haley23_47, JCole_45, Lamberg_43, Matteo_40, Mocha12_47, Nettuno_43, Savage_47, Sproutie_47, TuertoX_47, Whiteclaw_47,

Genes that have the "Most Annotated" start but do not call it:
• Sahara_46,

Genes that do not have the "Most Annotated" start:
• Horus_57, Jace_60, REQ2_51, ShawBrad_62, Tortellini_57,

**Summary by start number:**

Start 12:
• Found in 18 of 23 ( 78.3% ) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 5.6% of time when present
• Phage (with cluster) where this start called: Sahara_46 (CZ2),

Start 14:
• Found in 18 of 23 ( 78.3% ) of genes in pham
• Manual Annotations of this start: 16 of 20
• Called 94.4% of time when present
• Phage (with cluster) where this start called: Bjanes7_44 (CZ2), Bosnia_49 (CZ1), Clap_47 (CZ2), Cynthia_47 (CZ2), Ebert_49 (CZ2), GemG_47 (CZ2), Gizermo_47 (CZ2), Haley23_47 (CZ2), JCole_45 (CZ2), Lamberg_43 (CZ2), Matteo_40 (CZ2), Mocha12_47 (CZ2), Nettuno_43 (CZ2), Savage_47 (CZ2), Sproutie_47 (CZ2), TuertoX_47 (CZ2), Whiteclaw_47 (CZ2),

Start 16:
• Found in 20 of 23 ( 87.0% ) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 10.0% of time when present
• Phage (with cluster) where this start called: Horus_57 (DN1), ShawBrad_62 (DN1),

Start 17:
• Found in 1 of 23 ( 4.3% ) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jace_60 (singleton),

Start 18:
• Found in 1 of 23 ( 4.3% ) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: REQ2_51 (singleton),

Start 19:
• Found in 1 of 23 ( 4.3% ) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tortellini_57 (P2),

**Summary by clusters:**

There are 5 clusters represented in this pham: CZ2, P2, singleton, CZ1, DN1,

Info for manual annotations of cluster CZ1:
•Start number 14 was manually annotated 1 time for cluster CZ1.

Info for manual annotations of cluster CZ2:
•Start number 12 was manually annotated 1 time for cluster CZ2.
•Start number 14 was manually annotated 15 times for cluster CZ2.

Info for manual annotations of cluster DN1:
•Start number 16 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster P2:
•Start number 19 was manually annotated 1 time for cluster P2.

### *Gene Information:*

Gene: Bjanes7_44 Start: 32757, Stop: 33497, Start Num: 14
Candidate Starts for Bjanes7_44:
(Start: 12 @32727 has 1 MA's), (Start: 14 @32757 has 16 MA's), (Start: 16 @32769 has 1 MA's), (22, 32898), (25, 32946), (26, 32952), (27, 32958), (29, 32982), (32, 33045), (33, 33051), (36, 33072), (37, 33102), (38, 33111), (43, 33171), (52, 33294), (54, 33309), (55, 33342), (56, 33345), (64, 33396), (66, 33408), (67, 33414), (68, 33420), (70, 33441),

Gene: Bosnia_49 Start: 39121, Stop: 39861, Start Num: 14
Candidate Starts for Bosnia_49:
(Start: 12 @39091 has 1 MA's), (Start: 14 @39121 has 16 MA's), (Start: 16 @39133 has 1 MA's), (22, 39262), (25, 39310), (26, 39316), (27, 39322), (29, 39346), (32, 39409), (33, 39415), (36, 39436), (37, 39466), (38, 39475), (43, 39535), (52, 39658), (54, 39673), (55, 39706), (56, 39709), (64, 39760), (66, 39772), (67, 39778), (68, 39784), (70, 39805),

Gene: Clap_47 Start: 32936, Stop: 33676, Start Num: 14
Candidate Starts for Clap_47:
(Start: 12 @32906 has 1 MA's), (Start: 14 @32936 has 16 MA's), (Start: 16 @32948 has 1 MA's), (22, 33077), (25, 33125), (26, 33131), (27, 33137), (29, 33161), (32, 33224), (33, 33230), (36, 33251), (37, 33281), (38, 33290), (43, 33350), (52, 33473), (54, 33488), (55, 33521), (56, 33524), (64, 33575), (66, 33587), (67, 33593), (68, 33599), (70, 33620),

Gene: Cynthia_47 Start: 32934, Stop: 33674, Start Num: 14
Candidate Starts for Cynthia_47:
(Start: 12 @32904 has 1 MA's), (Start: 14 @32934 has 16 MA's), (Start: 16 @32946 has 1 MA's), (22, 33075), (25, 33123), (26, 33129), (27, 33135), (29, 33159), (32, 33222), (33, 33228), (36, 33249), (37, 33279), (38, 33288), (43, 33348), (52, 33471), (54, 33486), (55, 33519), (56, 33522), (64, 33573), (66, 33585), (67, 33591), (68, 33597), (70, 33618),

Gene: Ebert_49 Start: 32860, Stop: 33600, Start Num: 14
Candidate Starts for Ebert_49:
(Start: 12 @32830 has 1 MA's), (Start: 14 @32860 has 16 MA's), (Start: 16 @32872 has 1 MA's), (22, 33001), (25, 33049), (26, 33055), (27, 33061), (29, 33085), (32, 33148), (33, 33154), (36, 33175), (37, 33205), (38, 33214), (43, 33274), (52, 33397), (54, 33412), (55, 33445), (56, 33448), (64, 33499), (66, 33511), (67, 33517), (68, 33523), (70, 33544),

Gene: GemG_47 Start: 32940, Stop: 33680, Start Num: 14
Candidate Starts for GemG_47:
(Start: 12 @32910 has 1 MA's), (Start: 14 @32940 has 16 MA's), (Start: 16 @32952 has 1 MA's), (22, 33081), (25, 33129), (26, 33135), (27, 33141), (29, 33165), (32, 33228), (33, 33234), (36, 33255), (37, 33285), (38, 33294), (43, 33354), (52, 33477), (54, 33492), (55, 33525), (56, 33528), (64, 33579), (66, 33591), (67, 33597), (68, 33603), (70, 33624),

Gene: Gizermo_47 Start: 32936, Stop: 33676, Start Num: 14
Candidate Starts for Gizermo_47:
(Start: 12 @32906 has 1 MA's), (Start: 14 @32936 has 16 MA's), (Start: 16 @32948 has 1 MA's), (22, 33077), (25, 33125), (26, 33131), (27, 33137), (29, 33161), (32, 33224), (33, 33230), (36, 33251), (37, 33281), (38, 33290), (43, 33350), (52, 33473), (54, 33488), (55, 33521), (56, 33524), (64, 33575), (66, 33587), (67, 33593), (68, 33599), (70, 33620),

Gene: Haley23_47 Start: 32936, Stop: 33676, Start Num: 14
Candidate Starts for Haley23_47:

(Start: 12 @32906 has 1 MA's), (Start: 14 @32936 has 16 MA's), (Start: 16 @32948 has 1 MA's), (22, 33077), (25, 33125), (26, 33131), (27, 33137), (29, 33161), (32, 33224), (33, 33230), (36, 33251), (37, 33281), (38, 33290), (43, 33350), (52, 33473), (54, 33488), (55, 33521), (56, 33524), (64, 33575), (66, 33587), (67, 33593), (68, 33599), (70, 33620),

Gene: Horus_57 Start: 37729, Stop: 38445, Start Num: 16
Candidate Starts for Horus_57:
(8, 37570), (10, 37633), (Start: 16 @37729 has 1 MA's), (20, 37828), (28, 37930), (30, 37963), (38, 38065), (40, 38095), (45, 38167), (52, 38242), (53, 38251), (56, 38293), (58, 38299), (65, 38350), (66, 38356), (67, 38362), (69, 38371),

Gene: JCole_45 Start: 31954, Stop: 32694, Start Num: 14
Candidate Starts for JCole_45:
(Start: 12 @31924 has 1 MA's), (Start: 14 @31954 has 16 MA's), (Start: 16 @31966 has 1 MA's), (22, 32095), (25, 32143), (26, 32149), (27, 32155), (29, 32179), (30, 32200), (31, 32224), (32, 32242), (33, 32248), (36, 32269), (37, 32299), (38, 32308), (43, 32368), (52, 32491), (55, 32539), (56, 32542), (64, 32593), (66, 32605), (67, 32611), (68, 32617), (70, 32638),

Gene: Jace_60 Start: 37621, Stop: 38346, Start Num: 17
Candidate Starts for Jace_60:
(1, 37147), (4, 37315), (9, 37417), (Start: 17 @37621 has 1 MA's), (23, 37684), (24, 37714), (30, 37783), (66, 38239),

Gene: Lamberg_43 Start: 31445, Stop: 32185, Start Num: 14
Candidate Starts for Lamberg_43:
(Start: 12 @31415 has 1 MA's), (Start: 14 @31445 has 16 MA's), (Start: 16 @31457 has 1 MA's), (22, 31586), (25, 31634), (26, 31640), (27, 31646), (29, 31670), (32, 31733), (33, 31739), (36, 31760), (37, 31790), (38, 31799), (43, 31859), (52, 31982), (54, 31997), (55, 32030), (56, 32033), (64, 32084), (66, 32096), (67, 32102), (68, 32108), (70, 32129),

Gene: Matteo_40 Start: 30487, Stop: 31227, Start Num: 14
Candidate Starts for Matteo_40:
(Start: 12 @30457 has 1 MA's), (Start: 14 @30487 has 16 MA's), (Start: 16 @30499 has 1 MA's), (22, 30628), (25, 30676), (26, 30682), (27, 30688), (29, 30712), (32, 30775), (33, 30781), (36, 30802), (37, 30832), (38, 30841), (43, 30901), (52, 31024), (54, 31039), (55, 31072), (56, 31075), (64, 31126), (66, 31138), (67, 31144), (68, 31150), (70, 31171),

Gene: Mocha12_47 Start: 32936, Stop: 33676, Start Num: 14
Candidate Starts for Mocha12_47:
(Start: 12 @32906 has 1 MA's), (Start: 14 @32936 has 16 MA's), (Start: 16 @32948 has 1 MA's), (22, 33077), (25, 33125), (26, 33131), (27, 33137), (29, 33161), (32, 33224), (33, 33230), (36, 33251), (37, 33281), (38, 33290), (43, 33350), (52, 33473), (54, 33488), (55, 33521), (56, 33524), (64, 33575), (66, 33587), (67, 33593), (68, 33599), (70, 33620),

Gene: Nettuno_43 Start: 31445, Stop: 32185, Start Num: 14
Candidate Starts for Nettuno_43:
(Start: 12 @31415 has 1 MA's), (Start: 14 @31445 has 16 MA's), (Start: 16 @31457 has 1 MA's), (22, 31586), (25, 31634), (26, 31640), (27, 31646), (29, 31670), (32, 31733), (33, 31739), (36, 31760), (37, 31790), (38, 31799), (43, 31859), (52, 31982), (54, 31997), (55, 32030), (56, 32033), (64, 32084), (66, 32096), (67, 32102), (68, 32108), (70, 32129),

Gene: REQ2_51 Start: 36591, Stop: 37391, Start Num: 18
Candidate Starts for REQ2_51:

(2, 36153), (3, 36216), (5, 36300), (6, 36312), (7, 36324), (11, 36426), (15, 36504), (18, 36591), (24, 36684), (39, 36885), (42, 36918), (48, 37035), (49, 37041), (51, 37071), (57, 37134), (59, 37158), (61, 37164),

Gene: Sahara_46 Start: 32653, Stop: 33423, Start Num: 12
Candidate Starts for Sahara_46:
(Start: 12 @32653 has 1 MA's), (Start: 14 @32683 has 16 MA's), (Start: 16 @32695 has 1 MA's), (22, 32824), (25, 32872), (26, 32878), (27, 32884), (29, 32908), (32, 32971), (33, 32977), (36, 32998), (37, 33028), (38, 33037), (43, 33097), (52, 33220), (54, 33235), (55, 33268), (56, 33271), (64, 33322), (66, 33334), (67, 33340), (68, 33346), (70, 33367),

Gene: Savage_47 Start: 32936, Stop: 33676, Start Num: 14
Candidate Starts for Savage_47:
(Start: 12 @32906 has 1 MA's), (Start: 14 @32936 has 16 MA's), (Start: 16 @32948 has 1 MA's), (22, 33077), (25, 33125), (26, 33131), (27, 33137), (29, 33161), (32, 33224), (33, 33230), (36, 33251), (37, 33281), (38, 33290), (43, 33350), (52, 33473), (54, 33488), (55, 33521), (56, 33524), (64, 33575), (66, 33587), (67, 33593), (68, 33599), (70, 33620),

Gene: ShawBrad_62 Start: 37256, Stop: 37972, Start Num: 16
Candidate Starts for ShawBrad_62:
(Start: 16 @37256 has 1 MA's), (20, 37355), (28, 37457), (30, 37490), (52, 37769), (53, 37778), (56, 37820), (58, 37826), (65, 37877), (66, 37883), (67, 37889),

Gene: Sproutie_47 Start: 32936, Stop: 33676, Start Num: 14
Candidate Starts for Sproutie_47:
(Start: 12 @32906 has 1 MA's), (Start: 14 @32936 has 16 MA's), (Start: 16 @32948 has 1 MA's), (22, 33077), (25, 33125), (26, 33131), (27, 33137), (29, 33161), (32, 33224), (33, 33230), (36, 33251), (37, 33281), (38, 33290), (43, 33350), (52, 33473), (54, 33488), (55, 33521), (56, 33524), (64, 33575), (66, 33587), (67, 33593), (68, 33599), (70, 33620),

Gene: Tortellini_57 Start: 40962, Stop: 41663, Start Num: 19
Candidate Starts for Tortellini_57:
(13, 40845), (Start: 19 @40962 has 1 MA's), (21, 41001), (25, 41058), (26, 41064), (30, 41115), (34, 41166), (35, 41172), (41, 41259), (44, 41307), (46, 41352), (47, 41379), (50, 41400), (53, 41442), (56, 41481), (60, 41511), (61, 41514), (62, 41526), (63, 41538), (64, 41544),

Gene: TuertoX_47 Start: 32936, Stop: 33676, Start Num: 14
Candidate Starts for TuertoX_47:
(Start: 12 @32906 has 1 MA's), (Start: 14 @32936 has 16 MA's), (Start: 16 @32948 has 1 MA's), (22, 33077), (25, 33125), (26, 33131), (27, 33137), (29, 33161), (32, 33224), (33, 33230), (36, 33251), (37, 33281), (38, 33290), (43, 33350), (52, 33473), (54, 33488), (55, 33521), (56, 33524), (64, 33575), (66, 33587), (67, 33593), (68, 33599), (70, 33620),

Gene: Whiteclaw_47 Start: 32936, Stop: 33676, Start Num: 14
Candidate Starts for Whiteclaw_47:
(Start: 12 @32906 has 1 MA's), (Start: 14 @32936 has 16 MA's), (Start: 16 @32948 has 1 MA's), (22, 33077), (25, 33125), (26, 33131), (27, 33137), (29, 33161), (32, 33224), (33, 33230), (36, 33251), (37, 33281), (38, 33290), (43, 33350), (52, 33473), (54, 33488), (55, 33521), (56, 33524), (64, 33575), (66, 33587), (67, 33593), (68, 33599), (70, 33620),