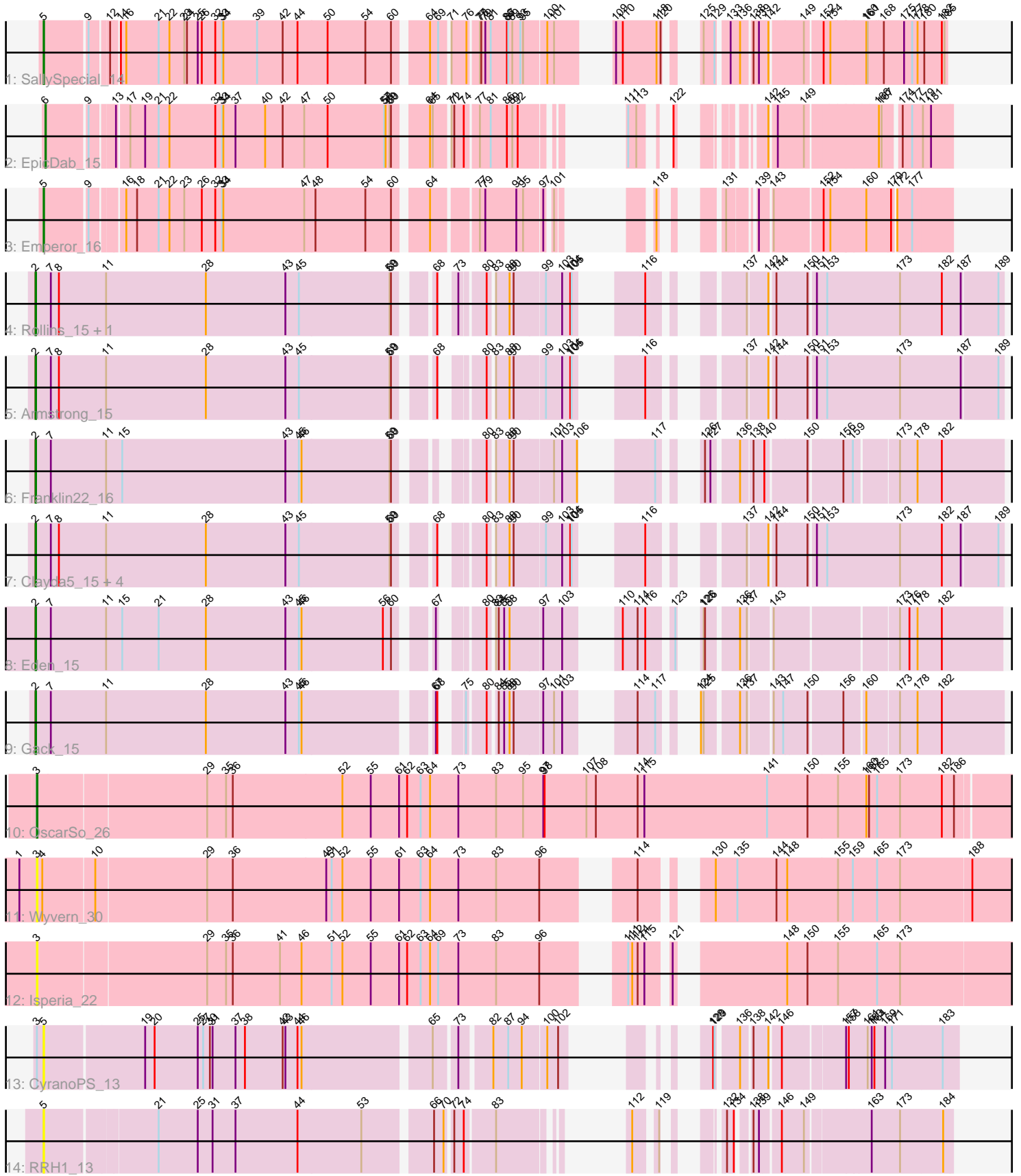


Pham 171801



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 171801 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171801 has 19 members, 4 are drafts.

Phages represented in each track:

- Track 1 : SallySpecial\_14
- Track 2 : EpicDab\_15
- Track 3 : Emperor\_16
- Track 4 : Rollins\_15, Bernstein\_15
- Track 5 : Armstrong\_15
- Track 6 : Franklin22\_16
- Track 7 : Clayda5\_15, Coltrane\_15, Vitas\_15, Skylord\_15, Brahms\_15
- Track 8 : Eden\_15
- Track 9 : Gack\_15
- Track 10 : OscarSo\_26
- Track 11 : Wyvern\_30
- Track 12 : Isperia\_22
- Track 13 : CyranoPS\_13
- Track 14 : RRH1\_13

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

The start number called the most often in the published annotations is 2, it was called in 11 of the 15 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Armstrong\_15, Bernstein\_15, Brahms\_15, Clayda5\_15, Coltrane\_15, Eden\_15, Franklin22\_16, Gack\_15, Rollins\_15, Skylord\_15, Vitas\_15,

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

- 

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

- CyranoPS\_13, Emperor\_16, EpicDab\_15, Isperia\_22, OscarSo\_26, RRH1\_13, SallySpecial\_14, Wyvern\_30,

### **Summary by start number:**

Start 2:

- Found in 11 of 19 ( 57.9% ) of genes in pham
- Manual Annotations of this start: 11 of 15
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Armstrong\_15 (EB), Bernstein\_15 (EB), Brahms\_15 (EB), Clayda5\_15 (EB), Coltrane\_15 (EB), Eden\_15 (EB), Franklin22\_16 (EB), Gack\_15 (EB), Rollins\_15 (EB), Skylord\_15 (EB), Vitas\_15 (EB),

#### Start 3:

- Found in 4 of 19 ( 21.1% ) of genes in pham
- Manual Annotations of this start: 1 of 15
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Iperia\_22 (GJ), OscarSo\_26 (GJ), Wyvern\_30 (GJ),

#### Start 5:

- Found in 4 of 19 ( 21.1% ) of genes in pham
- Manual Annotations of this start: 2 of 15
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CyranoPS\_13 (singleton), Emperor\_16 (DM), RRH1\_13 (singleton), SallySpecial\_14 (DM),

#### Start 6:

- Found in 1 of 19 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 1 of 15
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EpicDab\_15 (DM),

### **Summary by clusters:**

There are 4 clusters represented in this pham: singleton, DM, GJ, EB,

Info for manual annotations of cluster DM:

- Start number 5 was manually annotated 2 times for cluster DM.
- Start number 6 was manually annotated 1 time for cluster DM.

Info for manual annotations of cluster EB:

- Start number 2 was manually annotated 11 times for cluster EB.

Info for manual annotations of cluster GJ:

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

### **Gene Information:**

Gene: Armstrong\_15 Start: 9789, Stop: 11612, Start Num: 2

Candidate Starts for Armstrong\_15:

(Start: 2 @9789 has 11 MA's), (7, 9822), (8, 9840), (11, 9945), (28, 10167), (43, 10344), (45, 10374), (59, 10575), (60, 10578), (68, 10641), (80, 10704), (83, 10713), (88, 10743), (90, 10752), (99, 10815), (103, 10848), (104, 10866), (105, 10869), (116, 10947), (137, 11079), (142, 11121), (144, 11130), (150, 11196), (151, 11208), (153, 11229), (173, 11391), (187, 11523), (189, 11601),

Gene: Bernstein\_15 Start: 9849, Stop: 11672, Start Num: 2

Candidate Starts for Bernstein\_15:

(Start: 2 @9849 has 11 MA's), (7, 9882), (8, 9900), (11, 10005), (28, 10227), (43, 10404), (45, 10434), (59, 10635), (60, 10638), (68, 10701), (73, 10716), (80, 10764), (83, 10773), (88, 10803), (90, 10812), (99, 10875), (103, 10908), (104, 10926), (105, 10929), (116, 11007), (137, 11139), (142, 11181), (144, 11190), (150, 11256), (151, 11268), (153, 11289), (173, 11451), (182, 11544), (187, 11583), (189, 11661),

Gene: Brahms\_15 Start: 9789, Stop: 11612, Start Num: 2

Candidate Starts for Brahms\_15:

(Start: 2 @9789 has 11 MA's), (7, 9822), (8, 9840), (11, 9945), (28, 10167), (43, 10344), (45, 10374), (59, 10575), (60, 10578), (68, 10641), (80, 10704), (83, 10713), (88, 10743), (90, 10752), (99, 10815), (103, 10848), (104, 10866), (105, 10869), (116, 10947), (137, 11079), (142, 11121), (144, 11130), (150, 11196), (151, 11208), (153, 11229), (173, 11391), (182, 11484), (187, 11523), (189, 11601),

Gene: Clayda5\_15 Start: 9789, Stop: 11612, Start Num: 2

Candidate Starts for Clayda5\_15:

(Start: 2 @9789 has 11 MA's), (7, 9822), (8, 9840), (11, 9945), (28, 10167), (43, 10344), (45, 10374), (59, 10575), (60, 10578), (68, 10641), (80, 10704), (83, 10713), (88, 10743), (90, 10752), (99, 10815), (103, 10848), (104, 10866), (105, 10869), (116, 10947), (137, 11079), (142, 11121), (144, 11130), (150, 11196), (151, 11208), (153, 11229), (173, 11391), (182, 11484), (187, 11523), (189, 11601),

Gene: Coltrane\_15 Start: 9789, Stop: 11612, Start Num: 2

Candidate Starts for Coltrane\_15:

(Start: 2 @9789 has 11 MA's), (7, 9822), (8, 9840), (11, 9945), (28, 10167), (43, 10344), (45, 10374), (59, 10575), (60, 10578), (68, 10641), (80, 10704), (83, 10713), (88, 10743), (90, 10752), (99, 10815), (103, 10848), (104, 10866), (105, 10869), (116, 10947), (137, 11079), (142, 11121), (144, 11130), (150, 11196), (151, 11208), (153, 11229), (173, 11391), (182, 11484), (187, 11523), (189, 11601),

Gene: CyranoPS\_13 Start: 7551, Stop: 9212, Start Num: 5

Candidate Starts for CyranoPS\_13:

(Start: 3 @7536 has 1 MA's), (Start: 5 @7551 has 2 MA's), (19, 7764), (20, 7785), (25, 7881), (27, 7893), (30, 7908), (31, 7914), (37, 7965), (38, 7986), (42, 8070), (43, 8076), (44, 8103), (46, 8112), (65, 8376), (73, 8418), (82, 8481), (87, 8514), (94, 8544), (100, 8595), (102, 8619), (128, 8721), (129, 8724), (136, 8766), (138, 8787), (142, 8820), (146, 8841), (157, 8967), (158, 8973), (161, 9015), (163, 9024), (164, 9030), (169, 9051), (171, 9066), (183, 9177),

Gene: Eden\_15 Start: 9928, Stop: 11736, Start Num: 2

Candidate Starts for Eden\_15:

(Start: 2 @9928 has 11 MA's), (7, 9961), (11, 10084), (15, 10120), (21, 10201), (28, 10306), (43, 10483), (45, 10513), (46, 10519), (56, 10699), (60, 10717), (67, 10777), (80, 10843), (83, 10852), (84, 10858), (85, 10870), (88, 10882), (97, 10948), (103, 10987), (110, 11038), (114, 11071), (116, 11086), (123, 11128), (125, 11137), (126, 11140), (136, 11203), (137, 11218), (143, 11263), (173, 11512), (176, 11533), (178, 11551), (182, 11605),

Gene: Emperor\_16 Start: 9361, Stop: 10944, Start Num: 5

Candidate Starts for Emperor\_16:

(Start: 5 @9361 has 2 MA's), (9, 9448), (16, 9511), (18, 9535), (21, 9583), (22, 9607), (23, 9640), (26, 9679), (32, 9709), (33, 9724), (34, 9727), (47, 9907), (48, 9931), (54, 10042), (60, 10099), (64, 10162), (77, 10252), (79, 10264), (91, 10333), (95, 10348), (97, 10387), (101, 10396), (118, 10450), (131, 10504), (139, 10549), (143, 10573), (152, 10675), (154, 10690), (160, 10765), (170, 10819), (172, 10825), (177, 10858),

Gene: EpicDab\_15 Start: 9326, Stop: 10867, Start Num: 6

Candidate Starts for EpicDab\_15:

(Start: 6 @9326 has 1 MA's), (9, 9410), (13, 9458), (17, 9482), (19, 9515), (21, 9545), (22, 9569), (32, 9671), (33, 9686), (34, 9689), (37, 9716), (40, 9782), (42, 9821), (47, 9869), (50, 9920), (57, 10046), (58, 10049), (59, 10058), (60, 10061), (64, 10124), (65, 10130), (71, 10160), (72, 10166), (74, 10187), (77, 10214), (81, 10238), (86, 10274), (89, 10286), (92, 10298), (111, 10373), (113, 10391), (122, 10412), (142, 10508), (145, 10520), (149, 10577), (166, 10721), (167, 10727), (174, 10760), (177, 10781), (179, 10802), (181, 10820),

Gene: Franklin22\_16 Start: 10101, Stop: 11915, Start Num: 2

Candidate Starts for Franklin22\_16:

(Start: 2 @10101 has 11 MA's), (7, 10134), (11, 10257), (15, 10293), (43, 10656), (45, 10686), (46, 10692), (59, 10887), (60, 10890), (80, 11016), (83, 11025), (88, 11055), (90, 11064), (101, 11145), (103, 11160), (106, 11193), (117, 11277), (126, 11313), (127, 11325), (136, 11376), (138, 11400), (140, 11424), (150, 11508), (156, 11577), (159, 11598), (173, 11685), (178, 11724), (182, 11778),

Gene: Gack\_15 Start: 9990, Stop: 11804, Start Num: 2

Candidate Starts for Gack\_15:

(Start: 2 @9990 has 11 MA's), (7, 10023), (11, 10146), (28, 10368), (43, 10545), (45, 10575), (46, 10581), (67, 10839), (68, 10842), (75, 10869), (80, 10905), (84, 10920), (85, 10932), (88, 10944), (90, 10953), (97, 11010), (101, 11034), (103, 11049), (114, 11133), (117, 11166), (124, 11193), (125, 11199), (136, 11265), (137, 11280), (143, 11325), (147, 11346), (150, 11397), (156, 11466), (160, 11508), (173, 11574), (178, 11613), (182, 11667),

Gene: Isperia\_22 Start: 13262, Stop: 15256, Start Num: 3

Candidate Starts for Isperia\_22:

(Start: 3 @13262 has 1 MA's), (29, 13628), (35, 13670), (36, 13685), (41, 13790), (46, 13838), (51, 13904), (52, 13928), (55, 13991), (61, 14054), (62, 14072), (63, 14102), (64, 14123), (69, 14141), (73, 14186), (83, 14270), (96, 14366), (111, 14486), (112, 14495), (114, 14507), (115, 14522), (121, 14561), (148, 14762), (150, 14807), (155, 14873), (165, 14960), (173, 15011),

Gene: OscarSo\_26 Start: 15660, Stop: 17801, Start Num: 3

Candidate Starts for OscarSo\_26:

(Start: 3 @15660 has 1 MA's), (29, 16026), (35, 16068), (36, 16083), (52, 16326), (55, 16389), (61, 16452), (62, 16470), (63, 16500), (64, 16521), (73, 16584), (83, 16668), (95, 16728), (97, 16773), (98, 16776), (107, 16869), (108, 16890), (114, 16983), (115, 16998), (141, 17271), (150, 17361), (155, 17427), (160, 17490), (162, 17496), (165, 17514), (173, 17565), (182, 17655), (186, 17682),

Gene: RRH1\_13 Start: 8442, Stop: 10040, Start Num: 5

Candidate Starts for RRH1\_13:

(Start: 5 @8442 has 2 MA's), (21, 8676), (25, 8763), (31, 8796), (37, 8847), (44, 8985), (53, 9126), (66, 9264), (70, 9285), (72, 9297), (74, 9318), (83, 9381), (112, 9510), (119, 9546), (132, 9594), (134, 9609), (138, 9630), (139, 9642), (146, 9681), (149, 9729), (163, 9864), (173, 9927), (184, 10020),

Gene: Rollins\_15 Start: 9849, Stop: 11672, Start Num: 2

Candidate Starts for Rollins\_15:

(Start: 2 @9849 has 11 MA's), (7, 9882), (8, 9900), (11, 10005), (28, 10227), (43, 10404), (45, 10434), (59, 10635), (60, 10638), (68, 10701), (73, 10716), (80, 10764), (83, 10773), (88, 10803), (90, 10812), (99, 10875), (103, 10908), (104, 10926), (105, 10929), (116, 11007), (137, 11139), (142, 11181), (144, 11190), (150, 11256), (151, 11268), (153, 11289), (173, 11451), (182, 11544), (187, 11583), (189, 11661),

Gene: SallySpecial\_14 Start: 8310, Stop: 10028, Start Num: 5

Candidate Starts for SallySpecial\_14:

(Start: 5 @8310 has 2 MA's), (9, 8397), (12, 8433), (14, 8448), (16, 8460), (21, 8532), (22, 8556), (23, 8589), (24, 8595), (25, 8619), (26, 8628), (32, 8658), (33, 8673), (34, 8676), (39, 8751), (42, 8808), (44, 8841), (50, 8907), (54, 8991), (60, 9048), (64, 9111), (69, 9129), (71, 9147), (76, 9180), (77, 9201), (78, 9204), (79, 9213), (81, 9225), (86, 9261), (87, 9264), (89, 9273), (93, 9291), (95, 9297), (100, 9345), (101, 9360), (109, 9420), (110, 9435), (118, 9510), (120, 9519), (125, 9540), (129, 9564), (133, 9585), (136, 9606), (138, 9627), (139, 9639), (142, 9660), (149, 9729), (152, 9765), (154, 9780), (160, 9855), (161, 9858), (168, 9891), (175, 9936), (177, 9954), (178, 9966), (180, 9978), (182, 10017), (185, 10023),

Gene: Skylord\_15 Start: 9789, Stop: 11612, Start Num: 2

Candidate Starts for Skylord\_15:

(Start: 2 @9789 has 11 MA's), (7, 9822), (8, 9840), (11, 9945), (28, 10167), (43, 10344), (45, 10374), (59, 10575), (60, 10578), (68, 10641), (80, 10704), (83, 10713), (88, 10743), (90, 10752), (99, 10815), (103, 10848), (104, 10866), (105, 10869), (116, 10947), (137, 11079), (142, 11121), (144, 11130), (150, 11196), (151, 11208), (153, 11229), (173, 11391), (182, 11484), (187, 11523), (189, 11601),

Gene: Vitas\_15 Start: 9789, Stop: 11612, Start Num: 2

Candidate Starts for Vitas\_15:

(Start: 2 @9789 has 11 MA's), (7, 9822), (8, 9840), (11, 9945), (28, 10167), (43, 10344), (45, 10374), (59, 10575), (60, 10578), (68, 10641), (80, 10704), (83, 10713), (88, 10743), (90, 10752), (99, 10815), (103, 10848), (104, 10866), (105, 10869), (116, 10947), (137, 11079), (142, 11121), (144, 11130), (150, 11196), (151, 11208), (153, 11229), (173, 11391), (182, 11484), (187, 11523), (189, 11601),

Gene: Wyvern\_30 Start: 14072, Stop: 16066, Start Num: 3

Candidate Starts for Wyvern\_30:

(1, 14033), (Start: 3 @14072 has 1 MA's), (4, 14084), (10, 14195), (29, 14438), (36, 14495), (49, 14702), (51, 14714), (52, 14738), (55, 14801), (61, 14864), (63, 14912), (64, 14933), (73, 14996), (83, 15080), (96, 15176), (114, 15317), (130, 15413), (135, 15461), (144, 15548), (148, 15572), (155, 15683), (159, 15716), (165, 15770), (173, 15821), (188, 15974),