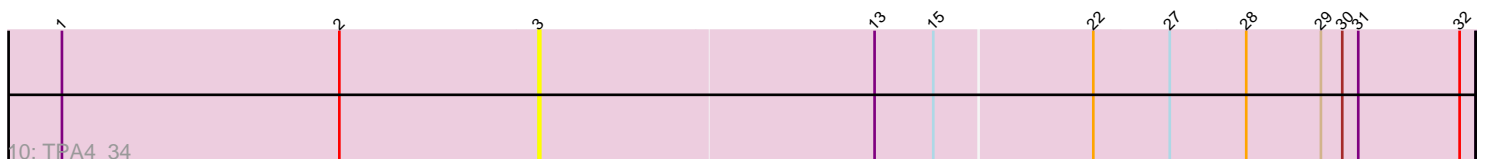
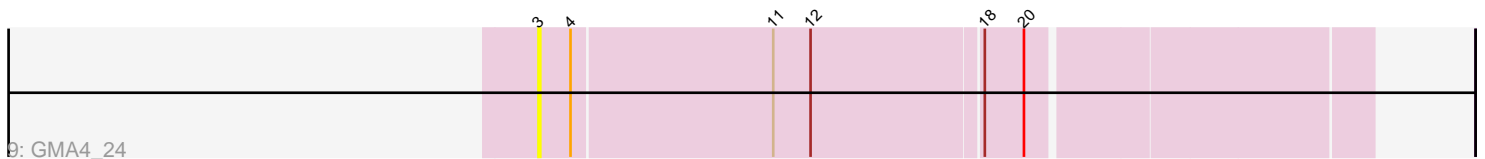
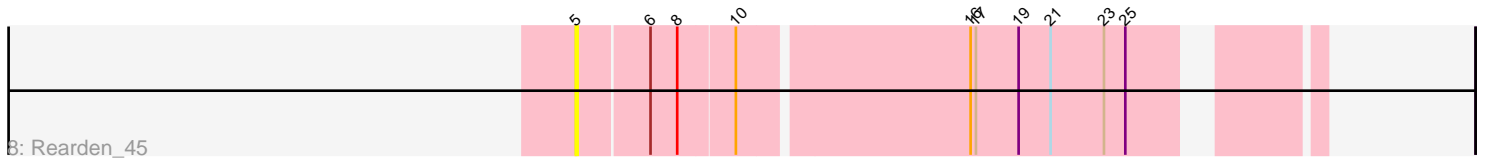
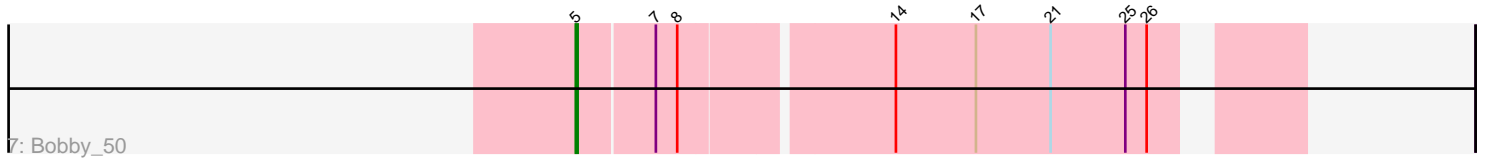
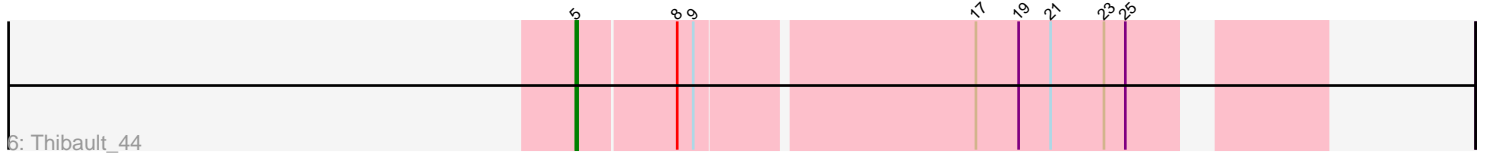
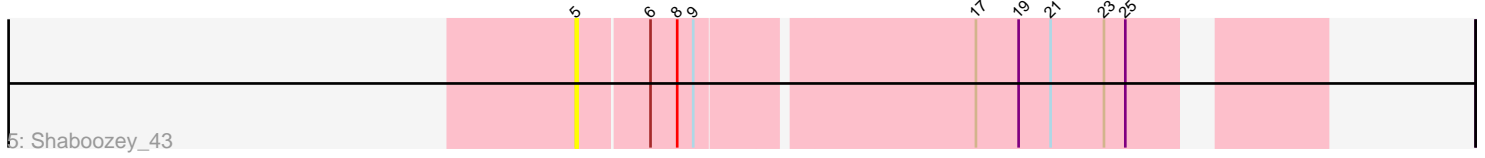
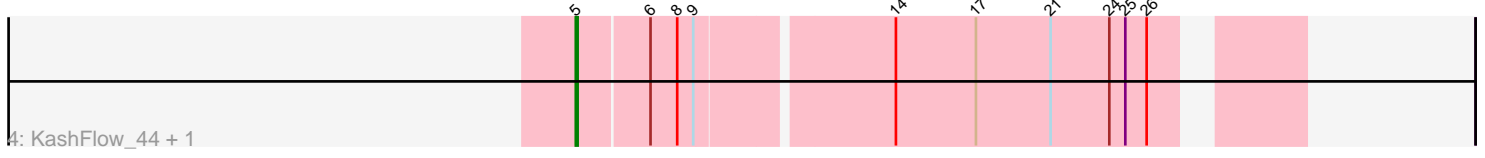
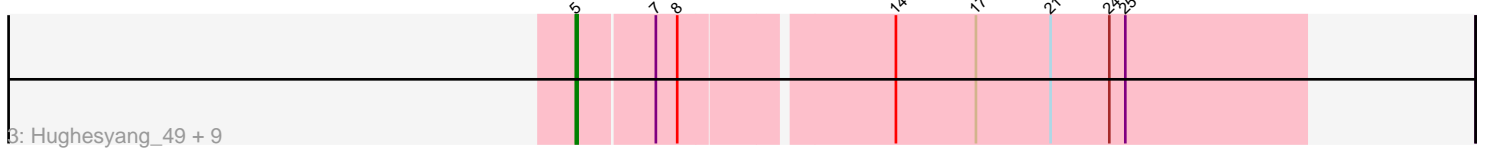
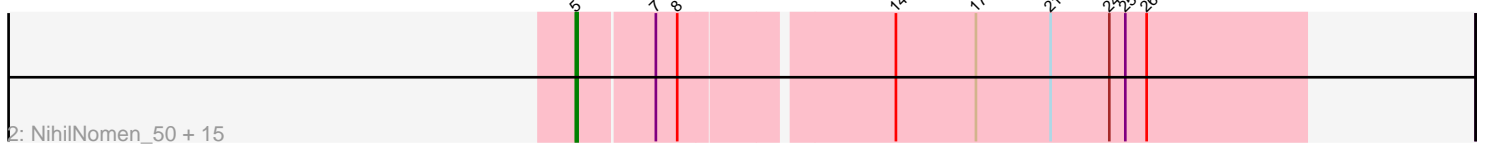
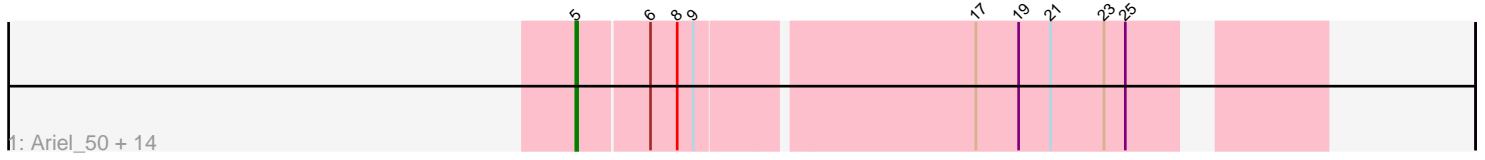


Pham 214376



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 214376 Report

This analysis was run 02/22/25 on database version 588.

Pham number 214376 has 49 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Ariel\_50, Dallas\_53, Gonephishing\_52, Courthouse\_50, Lucky2013\_50, Redno2\_49, Porcelain\_49, MiaZeal\_50, Nekros\_49, Marleymoo\_52, Squint\_49, Omega\_55, LittleE\_55, Zelink\_52, Superphikiman\_50
- Track 2 : NihilNomen\_50, Dove\_48, DmpstrDiver\_52, Pound\_53, Phoebus\_50, Duke13\_54, Constella\_43, Kalah2\_51, Wanda\_57, Optimus\_56, Bombitas\_48, Minerva\_57, Odette\_51, Schatzie\_48, JuicyJay\_53, Klein\_51
- Track 3 : Hughesyang\_49, Ejimix\_51, Bagrid\_50, EricMillard\_51, ThreeRngTarjay\_49, Beem\_51, Halley\_51, BAKA\_55, Yeet\_49, HokkenD\_44
- Track 4 : KashFlow\_44, Hannaconda\_47
- Track 5 : Shaboozey\_43
- Track 6 : Thibault\_44
- Track 7 : Bobby\_50
- Track 8 : Rearden\_45
- Track 9 : GMA4\_24
- Track 10 : TPA4\_34

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

The start number called the most often in the published annotations is 5, it was called in 40 of the 40 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel\_50, BAKA\_55, Bagrid\_50, Beem\_51, Bobby\_50, Bombitas\_48, Constella\_43, Courthouse\_50, Dallas\_53, DmpstrDiver\_52, Dove\_48, Duke13\_54, Ejimix\_51, EricMillard\_51, Gonephishing\_52, Halley\_51, Hannaconda\_47, HokkenD\_44, Hughesyang\_49, JuicyJay\_53, Kalah2\_51, KashFlow\_44, Klein\_51, LittleE\_55, Lucky2013\_50, Marleymoo\_52, MiaZeal\_50, Minerva\_57, Nekros\_49, NihilNomen\_50, Odette\_51, Omega\_55, Optimus\_56, Phoebus\_50, Porcelain\_49, Pound\_53, Rearden\_45, Redno2\_49, Schatzie\_48, Shaboozey\_43, Squint\_49, Superphikiman\_50, Thibault\_44, ThreeRngTarjay\_49, Wanda\_57, Yeet\_49, Zelink\_52,

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

-

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

- GMA4\_24, TPA4\_34,

### Summary by start number:

Start 3:

- Found in 2 of 49 ( 4.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA4\_24 (singleton), TPA4\_34 (singleton),

Start 5:

- Found in 47 of 49 ( 95.9% ) of genes in pham
- Manual Annotations of this start: 40 of 40
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel\_50 (J), BAKA\_55 (J), Bagrid\_50 (J), Beem\_51 (J), Bobby\_50 (J), Bombitas\_48 (J), Constella\_43 (J), Courthouse\_50 (J), Dallas\_53 (J), DmpstrDiver\_52 (J), Dove\_48 (J), Duke13\_54 (J), Ejimix\_51 (J), EricMillard\_51 (J), Gonephishing\_52 (J), Halley\_51 (J), Hannaconda\_47 (J), HokkenD\_44 (J), Hughesyang\_49 (J), JuicyJay\_53 (J), Kalah2\_51 (J), KashFlow\_44 (J), Klein\_51 (J), LittleE\_55 (J), Lucky2013\_50 (J), Marleymoo\_52 (J), MiaZeal\_50 (J), Minerva\_57 (J), Nekros\_49 (J), NihilNomen\_50 (J), Odette\_51 (J), Omega\_55 (J), Optimus\_56 (J), Phoebus\_50 (J), Porcelain\_49 (J), Pound\_53 (J), Rearden\_45 (J), Redno2\_49 (J), Schatzie\_48 (J), Shaboozey\_43 (J), Squint\_49 (J), Superphikiman\_50 (J), Thibault\_44 (J), ThreeRngTarjay\_49 (J), Wanda\_57 (J), Yeet\_49 (J), Zelink\_52 (J),

### Summary by clusters:

There are 2 clusters represented in this pham: singleton, J,

Info for manual annotations of cluster J:

- Start number 5 was manually annotated 40 times for cluster J.

### Gene Information:

Gene: Ariel\_50 Start: 40019, Stop: 40405, Start Num: 5

Candidate Starts for Ariel\_50:

(Start: 5 @40019 has 40 MA's), (6, 40058), (8, 40073), (9, 40082), (17, 40229), (19, 40253), (21, 40271), (23, 40301), (25, 40313),

Gene: BAKA\_55 Start: 43842, Stop: 44237, Start Num: 5

Candidate Starts for BAKA\_55:

(Start: 5 @43842 has 40 MA's), (7, 43884), (8, 43896), (14, 44007), (17, 44052), (21, 44094), (24, 44127), (25, 44136),

Gene: Bagrid\_50 Start: 43175, Stop: 43570, Start Num: 5

Candidate Starts for Bagrid\_50:

(Start: 5 @43175 has 40 MA's), (7, 43217), (8, 43229), (14, 43340), (17, 43385), (21, 43427), (24, 43460), (25, 43469),

Gene: Beem\_51 Start: 43741, Stop: 44136, Start Num: 5

Candidate Starts for Beem\_51:

(Start: 5 @43741 has 40 MA's), (7, 43783), (8, 43795), (14, 43906), (17, 43951), (21, 43993), (24, 44026), (25, 44035),

Gene: Bobby\_50 Start: 42341, Stop: 42715, Start Num: 5

Candidate Starts for Bobby\_50:

(Start: 5 @42341 has 40 MA's), (7, 42383), (8, 42395), (14, 42506), (17, 42551), (21, 42593), (25, 42635), (26, 42647),

Gene: Bombitas\_48 Start: 43335, Stop: 43730, Start Num: 5

Candidate Starts for Bombitas\_48:

(Start: 5 @43335 has 40 MA's), (7, 43377), (8, 43389), (14, 43500), (17, 43545), (21, 43587), (24, 43620), (25, 43629), (26, 43641),

Gene: Constella\_43 Start: 39899, Stop: 40273, Start Num: 5

Candidate Starts for Constella\_43:

(Start: 5 @39899 has 40 MA's), (7, 39941), (8, 39953), (14, 40064), (17, 40109), (21, 40151), (24, 40184), (25, 40193), (26, 40205),

Gene: Courthouse\_50 Start: 40423, Stop: 40809, Start Num: 5

Candidate Starts for Courthouse\_50:

(Start: 5 @40423 has 40 MA's), (6, 40462), (8, 40477), (9, 40486), (17, 40633), (19, 40657), (21, 40675), (23, 40705), (25, 40717),

Gene: Dallas\_53 Start: 43296, Stop: 43670, Start Num: 5

Candidate Starts for Dallas\_53:

(Start: 5 @43296 has 40 MA's), (6, 43335), (8, 43350), (9, 43359), (17, 43506), (19, 43530), (21, 43548), (23, 43578), (25, 43590),

Gene: DmpstrDiver\_52 Start: 43289, Stop: 43663, Start Num: 5

Candidate Starts for DmpstrDiver\_52:

(Start: 5 @43289 has 40 MA's), (7, 43331), (8, 43343), (14, 43454), (17, 43499), (21, 43541), (24, 43574), (25, 43583), (26, 43595),

Gene: Dove\_48 Start: 42823, Stop: 43197, Start Num: 5

Candidate Starts for Dove\_48:

(Start: 5 @42823 has 40 MA's), (7, 42865), (8, 42877), (14, 42988), (17, 43033), (21, 43075), (24, 43108), (25, 43117), (26, 43129),

Gene: Duke13\_54 Start: 43607, Stop: 44002, Start Num: 5

Candidate Starts for Duke13\_54:

(Start: 5 @43607 has 40 MA's), (7, 43649), (8, 43661), (14, 43772), (17, 43817), (21, 43859), (24, 43892), (25, 43901), (26, 43913),

Gene: Ejimix\_51 Start: 44526, Stop: 44921, Start Num: 5

Candidate Starts for Ejimix\_51:

(Start: 5 @44526 has 40 MA's), (7, 44568), (8, 44580), (14, 44691), (17, 44736), (21, 44778), (24, 44811), (25, 44820),

Gene: EricMillard\_51 Start: 44027, Stop: 44422, Start Num: 5

Candidate Starts for EricMillard\_51:

(Start: 5 @44027 has 40 MA's), (7, 44069), (8, 44081), (14, 44192), (17, 44237), (21, 44279), (24, 44312), (25, 44321),

Gene: GMA4\_24 Start: 21879, Stop: 22325, Start Num: 3

Candidate Starts for GMA4\_24:

(3, 21879), (4, 21897), (11, 22008), (12, 22029), (18, 22122), (20, 22143),

Gene: Gonephishing\_52 Start: 41701, Stop: 42087, Start Num: 5

Candidate Starts for Gonephishing\_52:

(Start: 5 @41701 has 40 MA's), (6, 41740), (8, 41755), (9, 41764), (17, 41911), (19, 41935), (21, 41953), (23, 41983), (25, 41995),

Gene: Halley\_51 Start: 43740, Stop: 44135, Start Num: 5

Candidate Starts for Halley\_51:

(Start: 5 @43740 has 40 MA's), (7, 43782), (8, 43794), (14, 43905), (17, 43950), (21, 43992), (24, 44025), (25, 44034),

Gene: Hannaconda\_47 Start: 38249, Stop: 38623, Start Num: 5

Candidate Starts for Hannaconda\_47:

(Start: 5 @38249 has 40 MA's), (6, 38288), (8, 38303), (9, 38312), (14, 38414), (17, 38459), (21, 38501), (24, 38534), (25, 38543), (26, 38555),

Gene: HokkenD\_44 Start: 42009, Stop: 42404, Start Num: 5

Candidate Starts for HokkenD\_44:

(Start: 5 @42009 has 40 MA's), (7, 42051), (8, 42063), (14, 42174), (17, 42219), (21, 42261), (24, 42294), (25, 42303),

Gene: Hughesyang\_49 Start: 43669, Stop: 44064, Start Num: 5

Candidate Starts for Hughesyang\_49:

(Start: 5 @43669 has 40 MA's), (7, 43711), (8, 43723), (14, 43834), (17, 43879), (21, 43921), (24, 43954), (25, 43963),

Gene: JuicyJay\_53 Start: 45516, Stop: 45890, Start Num: 5

Candidate Starts for JuicyJay\_53:

(Start: 5 @45516 has 40 MA's), (7, 45558), (8, 45570), (14, 45681), (17, 45726), (21, 45768), (24, 45801), (25, 45810), (26, 45822),

Gene: Kalah2\_51 Start: 44095, Stop: 44490, Start Num: 5

Candidate Starts for Kalah2\_51:

(Start: 5 @44095 has 40 MA's), (7, 44137), (8, 44149), (14, 44260), (17, 44305), (21, 44347), (24, 44380), (25, 44389), (26, 44401),

Gene: KashFlow\_44 Start: 37870, Stop: 38244, Start Num: 5

Candidate Starts for KashFlow\_44:

(Start: 5 @37870 has 40 MA's), (6, 37909), (8, 37924), (9, 37933), (14, 38035), (17, 38080), (21, 38122), (24, 38155), (25, 38164), (26, 38176),

Gene: Klein\_51 Start: 43328, Stop: 43702, Start Num: 5

Candidate Starts for Klein\_51:

(Start: 5 @43328 has 40 MA's), (7, 43370), (8, 43382), (14, 43493), (17, 43538), (21, 43580), (24, 43613), (25, 43622), (26, 43634),

Gene: LittleE\_55 Start: 43568, Stop: 43954, Start Num: 5

Candidate Starts for LittleE\_55:

(Start: 5 @43568 has 40 MA's), (6, 43607), (8, 43622), (9, 43631), (17, 43778), (19, 43802), (21, 43820), (23, 43850), (25, 43862),

Gene: Lucky2013\_50 Start: 40559, Stop: 40945, Start Num: 5

Candidate Starts for Lucky2013\_50:

(Start: 5 @40559 has 40 MA's), (6, 40598), (8, 40613), (9, 40622), (17, 40769), (19, 40793), (21, 40811), (23, 40841), (25, 40853),

Gene: Marleymoo\_52 Start: 43437, Stop: 43823, Start Num: 5

Candidate Starts for Marleymoo\_52:

(Start: 5 @43437 has 40 MA's), (6, 43476), (8, 43491), (9, 43500), (17, 43647), (19, 43671), (21, 43689), (23, 43719), (25, 43731),

Gene: MiaZeal\_50 Start: 40234, Stop: 40620, Start Num: 5

Candidate Starts for MiaZeal\_50:

(Start: 5 @40234 has 40 MA's), (6, 40273), (8, 40288), (9, 40297), (17, 40444), (19, 40468), (21, 40486), (23, 40516), (25, 40528),

Gene: Minerva\_57 Start: 45156, Stop: 45551, Start Num: 5

Candidate Starts for Minerva\_57:

(Start: 5 @45156 has 40 MA's), (7, 45198), (8, 45210), (14, 45321), (17, 45366), (21, 45408), (24, 45441), (25, 45450), (26, 45462),

Gene: Nekros\_49 Start: 42641, Stop: 43027, Start Num: 5

Candidate Starts for Nekros\_49:

(Start: 5 @42641 has 40 MA's), (6, 42680), (8, 42695), (9, 42704), (17, 42851), (19, 42875), (21, 42893), (23, 42923), (25, 42935),

Gene: NihilNomen\_50 Start: 43826, Stop: 44221, Start Num: 5

Candidate Starts for NihilNomen\_50:

(Start: 5 @43826 has 40 MA's), (7, 43868), (8, 43880), (14, 43991), (17, 44036), (21, 44078), (24, 44111), (25, 44120), (26, 44132),

Gene: Odette\_51 Start: 43068, Stop: 43442, Start Num: 5

Candidate Starts for Odette\_51:

(Start: 5 @43068 has 40 MA's), (7, 43110), (8, 43122), (14, 43233), (17, 43278), (21, 43320), (24, 43353), (25, 43362), (26, 43374),

Gene: Omega\_55 Start: 44873, Stop: 45259, Start Num: 5

Candidate Starts for Omega\_55:

(Start: 5 @44873 has 40 MA's), (6, 44912), (8, 44927), (9, 44936), (17, 45083), (19, 45107), (21, 45125), (23, 45155), (25, 45167),

Gene: Optimus\_56 Start: 44741, Stop: 45136, Start Num: 5

Candidate Starts for Optimus\_56:

(Start: 5 @44741 has 40 MA's), (7, 44783), (8, 44795), (14, 44906), (17, 44951), (21, 44993), (24, 45026), (25, 45035), (26, 45047),

Gene: Phoebus\_50 Start: 44027, Stop: 44422, Start Num: 5

Candidate Starts for Phoebus\_50:

(Start: 5 @44027 has 40 MA's), (7, 44069), (8, 44081), (14, 44192), (17, 44237), (21, 44279), (24, 44312), (25, 44321), (26, 44333),

Gene: Porcelain\_49 Start: 40234, Stop: 40620, Start Num: 5

Candidate Starts for Porcelain\_49:

(Start: 5 @40234 has 40 MA's), (6, 40273), (8, 40288), (9, 40297), (17, 40444), (19, 40468), (21, 40486), (23, 40516), (25, 40528),

Gene: Pound\_53 Start: 45604, Stop: 45999, Start Num: 5

Candidate Starts for Pound\_53:

(Start: 5 @45604 has 40 MA's), (7, 45646), (8, 45658), (14, 45769), (17, 45814), (21, 45856), (24, 45889), (25, 45898), (26, 45910),

Gene: Rearden\_45 Start: 39845, Stop: 40225, Start Num: 5

Candidate Starts for Rearden\_45:

(Start: 5 @39845 has 40 MA's), (6, 39884), (8, 39899), (10, 39929), (16, 40052), (17, 40055), (19, 40079), (21, 40097), (23, 40127), (25, 40139),

Gene: Redno2\_49 Start: 40812, Stop: 41186, Start Num: 5

Candidate Starts for Redno2\_49:

(Start: 5 @40812 has 40 MA's), (6, 40851), (8, 40866), (9, 40875), (17, 41022), (19, 41046), (21, 41064), (23, 41094), (25, 41106),

Gene: Schatzie\_48 Start: 42816, Stop: 43190, Start Num: 5

Candidate Starts for Schatzie\_48:

(Start: 5 @42816 has 40 MA's), (7, 42858), (8, 42870), (14, 42981), (17, 43026), (21, 43068), (24, 43101), (25, 43110), (26, 43122),

Gene: Shaboozey\_43 Start: 37604, Stop: 37990, Start Num: 5

Candidate Starts for Shaboozey\_43:

(Start: 5 @37604 has 40 MA's), (6, 37643), (8, 37658), (9, 37667), (17, 37814), (19, 37838), (21, 37856), (23, 37886), (25, 37898),

Gene: Squint\_49 Start: 40353, Stop: 40739, Start Num: 5

Candidate Starts for Squint\_49:

(Start: 5 @40353 has 40 MA's), (6, 40392), (8, 40407), (9, 40416), (17, 40563), (19, 40587), (21, 40605), (23, 40635), (25, 40647),

Gene: Superphikiman\_50 Start: 40425, Stop: 40811, Start Num: 5

Candidate Starts for Superphikiman\_50:

(Start: 5 @40425 has 40 MA's), (6, 40464), (8, 40479), (9, 40488), (17, 40635), (19, 40659), (21, 40677), (23, 40707), (25, 40719),

Gene: TPA4\_34 Start: 30182, Stop: 30700, Start Num: 3

Candidate Starts for TPA4\_34:

(1, 29915), (2, 30071), (3, 30182), (13, 30368), (15, 30401), (22, 30488), (27, 30530), (28, 30572), (29, 30614), (30, 30626), (31, 30635), (32, 30692),

Gene: Thibault\_44 Start: 40998, Stop: 41384, Start Num: 5

Candidate Starts for Thibault\_44:

(Start: 5 @40998 has 40 MA's), (8, 41052), (9, 41061), (17, 41208), (19, 41232), (21, 41250), (23, 41280), (25, 41292),

Gene: ThreeRngTarjay\_49 Start: 43904, Stop: 44299, Start Num: 5

Candidate Starts for ThreeRngTarjay\_49:

(Start: 5 @43904 has 40 MA's), (7, 43946), (8, 43958), (14, 44069), (17, 44114), (21, 44156), (24, 44189), (25, 44198),

Gene: Wanda\_57 Start: 43615, Stop: 44010, Start Num: 5

Candidate Starts for Wanda\_57:

(Start: 5 @43615 has 40 MA's), (7, 43657), (8, 43669), (14, 43780), (17, 43825), (21, 43867), (24, 43900), (25, 43909), (26, 43921),

Gene: Yeet\_49 Start: 43036, Stop: 43431, Start Num: 5

Candidate Starts for Yeet\_49:

(Start: 5 @43036 has 40 MA's), (7, 43078), (8, 43090), (14, 43201), (17, 43246), (21, 43288), (24, 43321), (25, 43330),

Gene: Zelink\_52 Start: 44851, Stop: 45225, Start Num: 5

Candidate Starts for Zelink\_52:

(Start: 5 @44851 has 40 MA's), (6, 44890), (8, 44905), (9, 44914), (17, 45061), (19, 45085), (21, 45103), (23, 45133), (25, 45145),