Arthrophage Lore Gene Summary

Baylor University 2017

Total Genes: 26

Adair,T.L., Lucas,L.G., Young,A.M., Chang,J.P, Chiang,A., Driver,Y.D., Guynup,T.A., Hanson,B.S., Hastings,J.L., Heimbuch,M.D., Heller,G.S., Jaffery,R.T., Kim,M.J., Kowlaski,T.M., McMillin,K.J., Mullen,W.G., Peckinpah,A.G., Reyes,A., Sauser-Rojo,S.L., Schimdt,K.I., Scott,K.A., Tateossian,T.S., Willenborg,H.M., Wilson,J.A., Wilson,K.M., Wong,W.C., Wyatt,K.R.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Insertions | Deletions | Start/ Stop Codon Alteration | NKF’s | Found Functions |
| 2 (Gene 21 & 26) | 2 (Gene 21 & 26) | 2 (Gene 3 & 24) | 13 | 13 |

|  |  |  |
| --- | --- | --- |
| Gene: | Issue: | Notes: |
| 3 | Start site? | lengthened to agree with ST and LO |
| 12-13 | 110bp Gap | There is an ORF, but returns no significant BLAST results |
| 15 | Start site? | Lengthening would result in overlap and not Q1:S1 BLAST |
| 17 | Function | current function listed as hydrolase, however, blast results along with CDD suggests amidase more accurate function |
| 18-19 | 11bp Overlap | Not shortened to agree with ST and match BLAST Q1:S1 |
| 19-20 | 67 bp Gap | Elongation would result in overlap and not Q1:S1 BLAST |
| 21 | Insertion/Deletion | Original 21 (forward) deleted to add gene 21 (reverse). Reverse gene 21 has significant BLAST hit with 109 bp gap ensuring space for leftward promoter |
| 24 | Start site? | lengthened to match Genemark call, had Q1:S1 blast hit and limited gap size |
| 26 | Insertion/Deletion | Original gene 26 deleted and moved to a new reading frame. NCBI Blast hit and CDD to confirm |