**Supplementary Table S4** Top BLAST-n results of *mrjp2* gene sequences of *Apis mellifera* and *Apis cerana javana* from Indonesia.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No** | **Sample ID** | **Top BLAST-N** | ***Query cover***  **(%)** | ***E-value* (%)** | ***Identity* (%)** | **Accesion Number** |
| 1 | H\_Am1\_Bdw | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 98.69% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHE7W0CD01R) |
| 2 | B\_Am1\_Bdw 1 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 99.18% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMUKZGTX016) |
| 3 | B\_Am1\_Bdw 2 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 99.00% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMUXSNB8016) |
| 4 | H\_Am2\_Bdw | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 98.20% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHENGC6J01R) |
| 5 | B\_Am2\_Bdw 1 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 98.99% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHCR8YX6013) |
| 6 | B\_Am2\_Bdw 2 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 99.17% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMV73UB1013) |
| 7 | H\_Am1\_Btl | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 93.95% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHEESKE2016) |
| 8 | B\_Am1\_Btl 1 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 99.02% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHBV9456013) |
| 9 | B\_Am1\_Btl 2 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 99.00% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHC6WKZ4016) |
| 10 | H\_Am2\_Btl | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 93.95% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHEY12CG013) |
| 11 | B\_Am2\_Btl 1 | 1. *mellifera carnica mjp2* | 100% | 0.0 | 99.01% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHD00E63013) |
| 12 | B\_Am2\_Btl 2 | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 99.00% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHDA21WF013) |
| 13 | H\_Ac1\_Bgr | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 90.38% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHNK1ZZ9013) |
| 14 | B\_Ac1\_Bgr 1 | 1. *cerana mrjp7* | 76% | 0.0 | 98.77% | [AY862496.1](https://www.ncbi.nlm.nih.gov/nucleotide/AY862496.1?report=genbank&log$=nucltop&blast_rank=1&RID=W7RWCNJ4016) |
| 15 | H\_Ac1\_Pti | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 91.03% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMTCVP7W016) |
| 16 | B\_Ac1\_Pti 1 | 1. *mellifea carnica mrjp2* | 99% | 0.0 | 91.03% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCSAZ2M4016) |
| 17 | B\_Ac1\_Pti 2 | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 91.04% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCT08GE6016) |
| 18 | H\_Ac2\_Pti | 1. *mellifera canica mrjp2* | 99% | 0.0 | 90.86% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHE0U0KB016) |
| 19 | B\_Ac2\_Pti 1 | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 91.01% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCVY3Z6N016) |
| 20 | B\_Ac2\_Pti 2 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 90.76% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMW9M0RS016) |
| 21 | H\_Ac1\_GKd | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 91.03% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHDSN26G016) |
| 22 | B\_Ac1\_GKd 1 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 91.04% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCPF7453016) |
| 23 | B\_Ac1\_GKd 2 | 1. *cerana mrjp7* | 80% | 0.0 | 98.60% | [AY862496.1](https://www.ncbi.nlm.nih.gov/nucleotide/AY862496.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCRJ9DEN013) |
| 24 | H\_Ac2\_GKd | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 91.19% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMT3V5P6016) |
| 25 | B\_Ac2\_GKd 1 | 1. *mellifea carnica mrjp2* | 100% | 0.0 | 90.48% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCV8753K016) |
| 26 | B\_Ac2\_GKd 2 | 1. *mellifea carnica mrjp2* | 99% | 0.0 | 91.06% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMWM1SAZ013) |
| 27 | H\_Ac1\_Btl | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 91.03% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WHDHJ1YA01R) |
| 28 | B\_Ac1\_Btl 1 | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 91.12% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMUADS6S01R) |
| 29 | B\_Ac1\_Btl 2 | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 91.03% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCN7N64D013) |
| 30 | H\_Ac2\_Btl | 1. *mellifera carnica mrjp2* | 100% | 0.0 | 91.21% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WMS7GTZE013) |
| 31 | B\_Ac2\_Btl 1 | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 90.77% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCU17J0Z013) |
| 32 | B\_Ac2\_Btl 2 | 1. *mellifera carnica mrjp2* | 99% | 0.0 | 91.00% | [KX951418.1](https://www.ncbi.nlm.nih.gov/nucleotide/KX951418.1?report=genbank&log$=nucltop&blast_rank=1&RID=WCUK7PGC016) |