**Supplementary Table S6** Nucleotide variation sites in introns 1–2 and exons 2–3 of *mrjp2* gene: honey (H) and the bee (B) of *Apis mellifera* and *Apis cerana javana* from Indonesia

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **No** | **Sample ID** | **Position of nucleotide side** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Exon 1** | **Intron 1** | | | | | | | | | | | | | | | | | | **Exon 2** | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **1** | **1** | **1** | | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | |
| **3** | **4** | **4** | **4** | **5** | **5** | **6** | **6** | **6** | **6** | **8** | **8** | **8** | **9** | **9** | **9** | **0** | **1** | **1** | | **2** | **2** | **3** | **4** | **4** | **5** | **7** | **7** | **8** | **8** | **9** | |
| **0** | **0** | **4** | **7** | **5** | **6** | **0** | **1** | **2** | **7** | **2** | **4** | **7** | **4** | **6** | **9** | **0** | **4** | **9** | | **4** | **8** | **8** | **2** | **6** | **3** | **8** | **9** | **4** | **5** | **3** | |
| 1 | H Ac2 Pti | **C** | **T** | **T** | **A** | **C** | **A** | **G** | **T** | **A** | **C** | **C** | **C** | **G** | **A** | **A** | **C** | **G** | **T** | **A** | | **A** | **A** | **T** | **G** | **T** | **T** | **G** | **T** | **A** | **A** | **G** | |
| 2 | H Ac1 Btl | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **C** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 3 | B Ac (common) | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 4 | H Ac2 Btl | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 5 | H Ac1 Bgr | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 6 | B Ac2 Btl 1 | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 7 | B Ac2 Gkd 1 | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 8 | H Ac1 Gkd | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 9 | H Ac1 Pti | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 10 | H Ac2 Gkd | **.** | **C** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 11 | B Am (common) | **.** | **.** | **.** | **G** | **T** | **G** | **A** | **.** | **.** | **T** | **.** | **T** | **A** | **G** | **G** | **.** | **.** | **.** | **.** | | **.** | **G** | **C** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **C** | |
| 12 | H Am2 Bdw | **.** | **.** | **.** | **G** | **T** | **G** | **A** | **.** | **.** | **T** | **.** | **T** | **A** | **G** | **G** | **.** | **.** | **.** | **G** | | **.** | **G** | **C** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **C** | |
| 13 | B Am2 Bdw 2 | **.** | **.** | **.** | **.** | **T** | **G** | **A** | **.** | **.** | **T** | **.** | **T** | **A** | **G** | **G** | **.** | **.** | **.** | **.** | | **.** | **G** | **C** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **C** | |
| 14 | H Am1 Bdw | **.** | **.** | **.** | **.** | **T** | **G** | **A** | **.** | **G** | **T** | **.** | **T** | **A** | **G** | **G** | **.** | **A** | **.** | **.** | | **.** | **G** | **C** | **.** | **C** | **C** | **.** | **C** | **G** | **.** | **C** | |
| 15 | B Am1 Bdw 1 | **.** | **.** | **.** | **.** | **T** | **G** | **A** | **.** | **.** | **T** | **.** | **T** | **A** | **G** | **G** | **.** | **.** | **.** | **.** | | **.** | **G** | **C** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **C** | |
| 16 | H Am1 Btl | **A** | **.** | **.** | **.** | **T** | **G** | **A** | **C** | **.** | **T** | **.** | **T** | **A** | **G** | **.** | **.** | **.** | **.** | **.** | | **T** | **G** | **.** | **A** | **C** | **.** | **C** | **.** | **G** | **.** | **.** | |
| 17 | H Am2 Btl | **A** | **.** | **G** | **.** | **.** | **G** | **A** | **.** | **.** | **T** | **T** | **T** | **A** | **G** | **.** | **.** | **.** | **.** | **.** | | **.** | **G** | **.** | **.** | **C** | **.** | **C** | **.** | **G** | **G** | **.** | |

H=Honey, B= Bee, Am=*A.mellifera*, Ac=*A.cerana*. Location: Bdw=Bondowoso, Bgr=Bogor, Btl=Bantul, Pti=Pati, GKd=Gunung Kidul

B Ac (common allele) consists of samples from: B\_Ac1\_Bgr1, B\_Ac1\_Pti1, B\_Ac1\_Pti2, B\_Ac2\_Pti1, B\_Ac2\_Pti2, B\_Ac1\_GKd1, B\_Ac1\_GKd2, B\_Ac2\_GKd2, B\_Ac1\_Btl1, B\_Ac1\_Btl2, B\_Ac2\_Btl2

B Am (common allele) consists of samples from: B\_Am1\_Btl1, B\_Am1\_Btl2, B\_Am2\_Btl1, B\_Am2\_Btl2, B\_Am1\_Bdw2, B\_Am2\_Bdw1

**Continue**

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| **No** | **Sample ID** | **Position of nucleotide side** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Exon 2** | | | | | | | | | | | | | | | | | | | | | | **Intron 2** | | | | | | |
| **1** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** |
| **9** | **0** | **1** | **1** | **1** | **2** | **2** | **3** | **4** | **4** | **5** | **5** | **6** | **6** | **8** | **9** | **0** | **0** | **2** | **2** | **3** | **4** | **6** | **7** | **7** | **7** | **7** | **9** | **9** |
| **6** | **5** | **0** | **3** | **9** | **3** | **5** | **7** | **1** | **3** | **0** | **2** | **0** | **9** | **6** | **3** | **0** | **3** | **1** | **7** | **6** | **0** | **7** | **0** | **5** | **8** | **9** | **2** | **7** |
| 1 | H Ac2 Pti | **C** | **G** | **T** | **G** | **C** | **C** | **T** | **A** | **A** | **C** | **G** | **T** | **G** | **G** | **C** | **G** | **C** | **T** | **C** | **T** | **G** | **C** | **A** | **G** | **A** | **C** | **T** | **T** | **G** |
| 2 | H Ac1 Btl | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **A** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** |
| 3 | B Ac (common) | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **A** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** |
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| 6 | B Ac2 Btl 1 | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **A** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** |
| 7 | B Ac2 Gkd 1 | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **A** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** |
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| 12 | H Am2 Bdw | **A** | **.** | **A** | **A** | **.** | **A** | **.** | **G** | **T** | **T** | **A** | **C** | **.** | **.** | **.** | **.** | **.** | **C** | **.** | **C** | **A** | **.** | **G** | **A** | **.** | **T** | **C** | **C** | **A** |
| 13 | B Am2 Bdw 2 | **A** | **.** | **A** | **A** | **.** | **A** | **.** | **G** | **T** | **T** | **.** | **C** | **.** | **.** | **.** | **.** | **T** | **C** | **.** | **C** | **A** | **.** | **.** | **A** | **.** | **T** | **C** | **C** | **A** |
| 14 | H Am1 Bdw | **A** | **.** | **A** | **A** | **.** | **A** | **.** | **G** | **T** | **T** | **.** | **C** | **.** | **.** | **.** | **.** | **T** | **C** | **.** | **C** | **A** | **.** | **.** | **A** | **.** | **T** | **C** | **C** | **A** |
| 15 | B Am1 Bdw 1 | **A** | **.** | **A** | **A** | **.** | **A** | **.** | **G** | **T** | **T** | **.** | **C** | **.** | **.** | **.** | **.** | **T** | **C** | **.** | **C** | **A** | **.** | **.** | **A** | **.** | **T** | **C** | **C** | **A** |
| 16 | H Am1 Btl | **A** | **A** | **.** | **.** | **A** | **A** | **G** | **.** | **.** | **G** | **.** | **.** | **A** | **A** | **.** | **.** | **T** | **C** | **A** | **C** | **A** | **.** | **.** | **A** | **.** | **-** | **C** | **C** | **A** |
| 17 | H Am2 Btl | **A** | **A** | **.** | **.** | **A** | **A** | **G** | **.** | **.** | **A** | **.** | **.** | **.** | **A** | **T** | **A** | **T** | **C** | **A** | **C** | **A** | **A** | **.** | **A** | **T** | **-** | **C** | **C** | **A** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Continue** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| **No** | **Sample ID** | **Position of nucleotide side** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Intron 2** | | | | | | | | | | | | | | **Exon 3** | | | | | | | | | | | | | | | | | | | |
| **3** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **4** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | |
| **9** | **0** | **1** | **1** | **1** | **2** | **3** | **4** | **4** | **5** | **5** | **5** | **6** | **7** | **8** | **8** | **9** | **9** | **0** | **1** | **1** | **2** | **3** | **4** | **4** | **4** | **4** | **5** | **5** | **5** | **6** | **7** | **7** | |
| **8** | **7** | **4** | **7** | **8** | **0** | **4** | **3** | **9** | **1** | **3** | **6** | **6** | **1** | **4** | **7** | **8** | **9** | **1** | **7** | **8** | **5** | **8** | **0** | **2** | **4** | **5** | **1** | **4** | **7** | **8** | **0** | **3** | |
| 1 | H Ac2 Pti | **T** | **A** | **A** | **G** | **T** | **T** | **T** | **T** | **A** | **A** | **A** | **C** | **T** | **C** | **A** | **C** | **G** | **T** | **T** | **T** | **G** | **T** | **T** | **T** | **T** | **A** | **T** | **T** | **C** | **C** | **T** | **C** | **C** | |
| 2 | H Ac1 Btl | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 3 | B Ac (common) | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 4 | H Ac2 Btl | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 5 | H Ac1 Bgr | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **G** | **G** | **.** | **C** | **T** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 6 | B Ac2 Btl 1 | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **C** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 7 | B Ac2 Gkd 1 | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **C** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 8 | H Ac1 Gkd | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **C** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 9 | H Ac1 Pti | **.** | **.** | **.** | **A** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 10 | H Ac2 Gkd | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 11 | B Am (common) | **A** | **.** | **G** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **A** | **.** | **C** | **.** | **T** | **A** | **.** | **.** | **.** | **G** | **.** | **.** | **T** | **G** | **.** | **T** | **A** | |
| 12 | H Am2 Bdw | **A** | **.** | **G** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **.** | **T** | **.** | **.** | **-** | **.** | **A** | **.** | **C** | **.** | **T** | **A** | **.** | **.** | **.** | **G** | **.** | **.** | **T** | **G** | **.** | **T** | **A** | |
| 13 | B Am2 Bdw 2 | **A** | **.** | **G** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **.** | **T** | **.** | **.** | **.** | **.** | **A** | **.** | **C** | **.** | **T** | **A** | **.** | **.** | **.** | **G** | **.** | **.** | **T** | **G** | **.** | **T** | **A** | |
| 14 | H Am1 Bdw | **A** | **C** | **G** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **A** | **A** | **C** | **.** | **T** | **A** | **.** | **.** | **.** | **G** | **.** | **C** | **T** | **G** | **.** | **T** | **A** | |
| 15 | B Am1 Bdw 1 | **A** | **C** | **G** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **A** | **.** | **C** | **.** | **T** | **A** | **.** | **.** | **.** | **G** | **.** | **.** | **T** | **G** | **.** | **T** | **A** | |
| 16 | H Am1 Btl | **A** | **.** | **G** | **.** | **C** | **C** | **C** | **.** | **G** | **.** | **.** | **.** | **.** | **.** | **G** | **T** | **A** | **.** | **C** | **C** | **.** | **.** | **.** | **.** | **C** | **.** | **G** | **.** | **.** | **.** | **.** | **.** | **.** | |
| 17 | H Am2 Btl | **A** | **.** | **G** | **.** | **C** | **C** | **.** | **.** | **G** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **.** | **C** | **.** | **.** | **.** | **.** | **C** | **C** | **.** | **G** | **.** | **.** | **.** | **C** | **.** | **.** | |