**Supplementary Table S3** Ingroup and outgroup OTUs used for phylogenetic analysis based on the exon 2 and exon 3 regions of *the mrjp2* gene.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **OTU** | **Locations** | **Accession number** | **References** |
|  | ***Ingroup*** |  |  |  |
| 1 | H\_Am1\_Bdw | Bondowoso, East Java | LC600167 | Current Study |
| 2 | B\_Am1\_Bdw1 |  | LC600168 | Current Study |
| 3 | B\_Am1\_Bdw2 |  | LC600169 | Current Study |
| 4 | H\_Am2\_Bdw | Bondowoso, East Java | LC600170 | Current Study |
| 5 | B\_Am2\_Bdw1 |  | LC600171 | Current Study |
| 6 | B\_Am2\_Bdw2 |  | LC600172 | Current Study |
| 7 | H\_Am1\_Btl | Bantul, Yogyakarta | LC600173 | Current Study |
| 8 | B\_Am1\_Btl1 |  | LC600174 | Current Study |
| 9 | B\_Am1\_Btl2 |  | LC600175 | Current Study |
| 10 | H\_Am2\_Btl | Bantul, Yogyakarta | LC600176 | Current Study |
| 11 | B\_Am2\_Btl1 |  | LC600177 | Current Study |
| 12 | B\_Am2\_Btl2 |  | LC600178 | Current Study |
| 13 | H\_Ac1\_Bgr | Bogor, West Java | LC600179 | Current Study |
| 14 | B\_Ac1\_Bgr1 |  | LC600180 | Current Study |
| 15 | H\_Ac1\_Pti | Pati, Central Java | LC600181 | Current Study |
| 16 | B\_Ac1\_Pti1 |  | LC600182 | Current Study |
| 17 | B\_Ac1\_Pti2 |  | LC600183 | Current Study |
| 18 | H\_Ac2\_Pti | Pati, Central Java | LC600184 | Current Study |
| 19 | B\_Ac2\_Pti1 |  | LC600185 | Current Study |
| 20 | B\_Ac2\_Pti2 |  | LC600186 | Current Study |
| 21 | H\_Ac1\_GKd | Gunung Kidul, Yogyakarta | LC600187 | Current Study |
| 22 | B\_Ac1\_GKd1 |  | LC600188 | Current Study |
| 23 | B\_Ac1\_GKd2 |  | LC600189 | Current Study |
| 24 | H\_Ac2\_GKd | Gunung Kidul, Yogyakarta | LC600190 | Current Study |
| 25 | B\_Ac2\_GKd1 |  | LC600191 | Current Study |
| 26 | B\_Ac2\_GKd2 |  | LC600192 | Current Study |
| 27 | H\_Ac1\_Btl | Bantul, Yogyakarta | LC600193 | Current Study |
| 28 | B\_Ac1\_Btl1 |  | LC600194 | Current Study |
| 29 | B\_Ac1\_Btl2 |  | LC600195 | Current Study |
| 30 | H\_Ac2\_Btl | Bantul, Yogyakarta | LC600196 | Current Study |
| 31 | B\_Ac2\_Btl1 |  | LC600197 | Current Study |
| 32 | B\_Ac2\_Btl2 |  | LC600198 | Current Study |
| 33 | *Apis cerana* | Thailand | AF525777 | Imjongjirak *et al.* (2005) |
| 34 | *Apis cerana* | China | AY392758 | Su *et al.* (2005) |
| 35 | *Apis cerana* | Thailand | AY515689 | Imjongjirak *et al.* (2005) |
| 36 | *Apis cerana* | South Korea | MH551225 | Park *et al.* (2019) |
| 37 | *Apis mellifera* | US | NC\_037648.1 (Gen ID 406091) | Wallberg et al. (2019) |
| 38 | *Apis mellifera* | Germany | NM\_001011580 | Dobritzsch et al. (2019) |
| 39 | *Apis mellifera* | Germany | AF000632 | Schmitzova *et al. (*2016) |
| 40 | *Apis mellifera* | South Korea | GQ160519 | Yoon and Nguyen (2009) |
| 41 | *Apis mellifera carnica* | Germany | KX951418 | Helbing *et al. (*2017) |
|  | ***Outgroup*** |  |  |  |
| 42 | *Bombus impatiens* | North America | 100747863 | Unpublished |

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