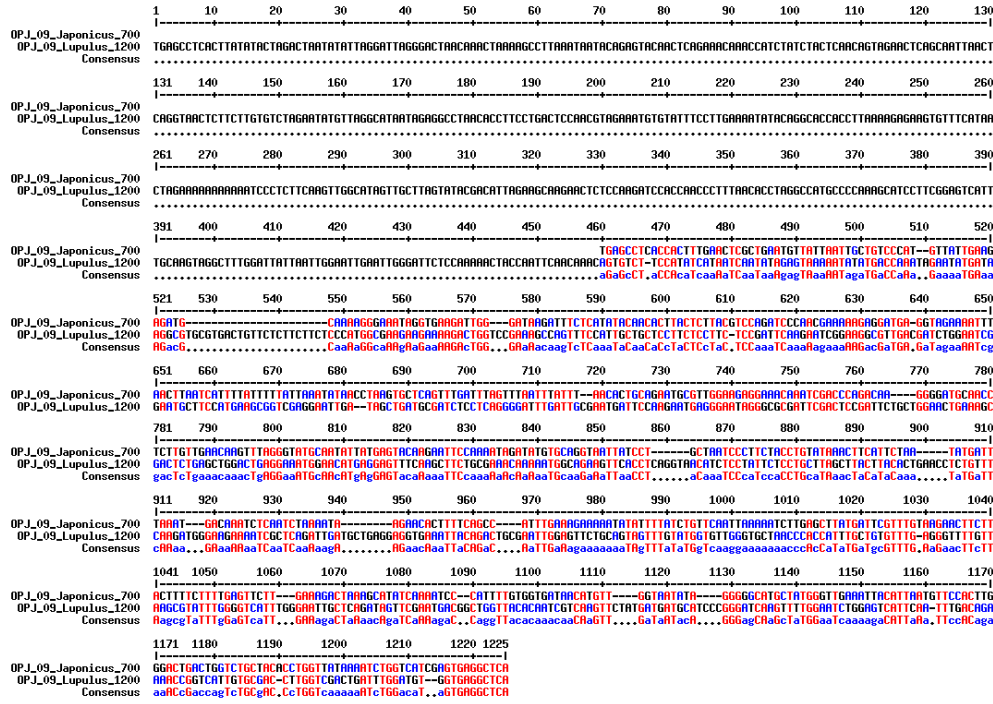


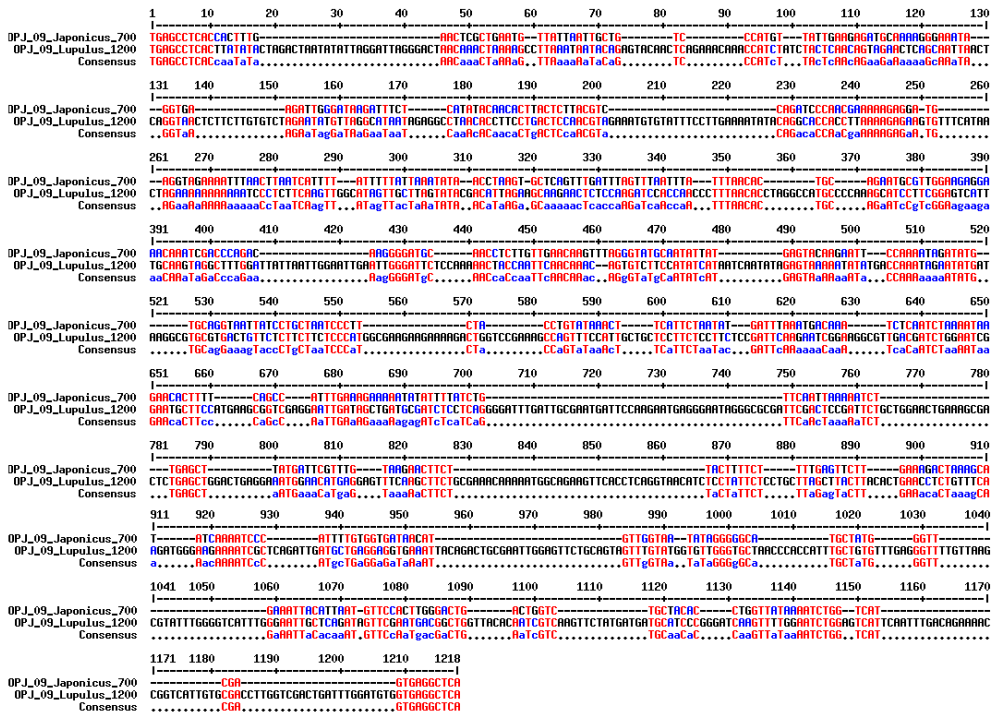
Figure S1. Nucleotide-sequence alignment of the sequences amplified by OPJ-09 in H. japonicus and H. lupulus.

(a) 700 bp sequence of H. japonicus and 1200 bp sequence of H. lupulus

Best match:



After taking into account of primers location:



(b) 1600bp sequence of *H. japonicus* and 1200 bp sequence of *H. lupulus*

Best match:

Table with columns for sequence position (1-130, 131-260, 261-390, etc.) and rows for OPJ\_09\_Japonicus1600 and OPJ\_09\_Lupulus1200 Consensus sequences. The table shows a highly similar DNA sequence alignment between the two species, with minor variations in some regions.

After taking into account of primers location:

Table with 16 columns (1-130) and 16 rows. Each row contains DNA sequence data for OPJ\_09\_Japonicus1600 and OPJ\_09\_Lupulus\_1200, with a 'Consensus' line below each pair. The sequences are aligned across the columns, showing variations between the two species. The table is divided into sections by column ranges: 1-130, 131-260, 261-390, 391-520, 521-650, 651-780, 781-910, 911-1040, 1041-1170, 1171-1300, 1301-1430, 1431-1560, 1561-1690, 1691-1820, and 1821-1888.