

**Table S1.** GeneBank accession number of species and gene sequences to construct *LoTPS* phylogenetic tree.

Species	GeneBank Accession Number
<i>Sitophilus oryzae</i>	XP_030760030
<i>Dendroctonus ponderosae</i>	XP_019761749.1
<i>Rhynchophorus ferrugineus</i>	KAF7280304.1
<i>Tenebrio molitor</i>	KAH0815604.1
<i>Tribolium castaneum</i>	XP_975776.2
<i>Leptinotarsa decemlineata</i>	XP_023020816.1
<i>Anoplophora glabripennis</i>	XP_023311886.1
<i>Tribolium madens</i>	XP_044255908.1
<i>Diabrotica virgifera virgifera</i>	XP_028127759.1
<i>Nicrophorus vespilloides</i>	XP_017769007.1
<i>Agrilus planipennis</i>	XP_025832646.1
<i>Aethina tumida</i>	XP_019865342.1
<i>Harmonia axyridis</i>	XP_045480405.1
<i>Frankliniella occidentalis</i>	XP_026272691.1
<i>Cotesia glomerata</i>	XP_044576379.1
<i>Apis mellifera</i>	XP_026297280.1
<i>Gampsocleis gratiosa</i>	APZ77037.1
<i>Polistes dominula</i>	XP_015172546.1
<i>Harpegnathos saltator</i>	XP_011139179.1
<i>Apis laboriosa</i>	XP_043793631.1
<i>Bombus terrestris</i>	XP_020719094.1
<i>Athalia rosae</i>	XP_012252443.1
<i>Polistes fuscatus</i>	XP_043494062.1
<i>Apis florea</i>	XP_031771052.1
<i>Neodiprion lecontei</i>	XP_015522281.2
<i>Neodiprion pinetum</i>	XP_046474850.1