

Table S2. The protein accession numbers of GOBP and PBP sequences used in the phylogenetic tree construction.

Protein	Accession number	Species
PsauGOBP1	MW013058.1	<i>Peridroma Saucia</i>
MsepGOBP1	AWT22240.1	<i>Mythimna separata</i>
AipsGOBP1	AFM36759.1	<i>Agrotis ipsilon</i>
AsegGOBP1	ABI24159.1	<i>Agrotis segetum</i>
HarmGOBP1	XP_021192665.1	<i>Helicoverpa armigera</i>
HvirGOBP1	PCG66043.1	<i>Heliothis viresence</i>
SexiGOBP1	ACY78412.1	<i>Spodoptera exigua</i>
SinfGOBP1	AGS36742.1	<i>Sesamia inferens</i>
SlitGOBP1	XP_022816701.1	<i>Spodoptera litura</i>
HassGOBP1	AAW65076.1	<i>Helicoverpa assulta</i>
AdisGOBP1	ALJ93806.1	<i>Athetis dissimilis</i>
MsexGOBP1	XP_030028623.1	<i>Manduca sexta</i>
CpomGOBP1	AFP66957.1	<i>Cydia pomonella</i>
CsinGOBP1	AHY86493.1	<i>Conopomorpha sinensis</i>
CresGOBP1	AXN76737.1	<i>Clostera restituta</i>
PrapGOBP1	XP_022118428.1	<i>Pieris rapae</i>
DkikGOBP1	AGJ83357.1	<i>Dendrolimus kikuchii</i>
DhouGOBP1	AGJ83358.1	<i>Dendrolimus houi</i>
AipsGOBP2	AAP57462.1	<i>Agrotis ipsilon</i>
DsupGOBP2	AGJ83351.1	<i>Dendrolimus superans</i>
HassGOBP2	AAQ54909.1	<i>Helicoverpa assulta</i>
HvirGOBP2	PCG76987.1	<i>Heliothis viresence</i>
SlitGOBP2	XP_022817877.1	<i>Spodoptera litura</i>
MsepGOBP2	AWT22242.1	<i>Mythimna separata</i>
AdisGOBP2	ALJ93807.1	<i>Athetis dissimilis</i>
DkikGOBP2	AGJ83353.1	<i>Dendrolimus kikuchii</i>
MbraGOBP2	AAC05703.2	<i>Mamestra brassicae</i>
TniGOBP2	XP_026739044.1	<i>Trichoplusia ni</i>
SnifGOBP2	AHC72380.1	<i>Sesamia inferens</i>
MsexGOBP2	XP_030025611.1	<i>Manduca sexta</i>
DtabGOBP2	AGJ71277.1	<i>Dendrolimus tabulaeformis</i>
OnubGOBP2	BBB15978.1	<i>Ostrinia nubilalis</i>
GmelGOBP2	QEI46781.1	<i>Galleria mellonella</i>
DhouGOBP2	AGJ83354.1	<i>Dendrolimus houi</i>
HarmPBP1	HQ436362.1	<i>Helicoverpa armigera</i>
HzeaPBP1	AF090191.1	<i>Helicoverpa zea</i>
SexiPBP1	AAS55551.2	<i>Spodoptera exigua</i>
HassPBP1	AAW65077.1	<i>Helicoverpa assulta</i>
MsepPBP1	BAG71416.1	<i>Mythimna separata</i>

SinfPBP1	AEX58642.1	<i>Sesamia inferens</i>
AipsPBP1	AFM36756.1	<i>Agrotis ipsilon</i>
AsegPBP1	AAD41276.1	<i>Agrotis segetum</i>
AdisPBP1	ALJ93809.1	<i>Athetis dissimilis</i>
OnubPBP1	AAD39447.1	<i>Ostrinia nubilalis</i>
HarmPBP2	AEB54583.1	<i>Helicoverpa armigera</i>
HvirPBP2	CAL48346.1	<i>Heliothis virescens</i>
HassPBP2	ABY28381.2	<i>Helicoverpa assulta</i>
AipsPBP2	AFM36757.1	<i>Agrotis ipsilon</i>
MsexPBP2	AAF16710.1	<i>Manduca sexta</i>
AsegPBP2	AAX85460.1	<i>Agrotis segetum</i>
SexiPBP2	ABK41046.1	<i>Spodoptera exigua</i>
SexiPBP3	ACY78413.1	<i>Spodoptera exigua</i>
SlitPBP3	AIS72934.1	<i>Spodoptera litura</i>
HassPBP3	ABB91374.1	<i>Helicoverpa assulta</i>
HarmPBP3	AAO16091.1	<i>Helicoverpa armigera</i>
AipsPBP3	AFM36758.1	<i>Agrotis ipsilon</i>
SinfPBP3	AEQ30020.1	<i>Sesamia inferens</i>
MsexPBP3	AAF16703.1	<i>Manduca sexta</i>