

Table S1. Organisms found to have sequences similar to Osiris proteins.^{a, b}

| [Phylum] Subphylum; Class | Superorder | Order | Number of species and list of genera |
|------------------------------|---------------------------------|------------------|--|
| [Arthropoda] | | | |
| Hexapoda; Insecta | | | |
| | Dicondylia; Pterygota; Neoptera | | |
| | Endopterygota | Diptera | 25 <i>Drosophila, Aedes, Anopheles, Culex, Cochliomyia, Glossina, Haematobia, Lucilla, Phlebotomus, Polypedilum, Simulium, Sitodiplosis, Teleopsis</i> |
| | | Lepidoptera | 16 <i>Bicyclus, Danaus, Heliconius, Choristoneura, Tineola, Papilio, Bombyx, Antheraea, Manduca, Spodoptera, Mamestra, Heliothis, Trichoplusia, Ostrinia</i> |
| | | Hymenoptera | 9 <i>Nasonia, Bombus, Apis, Megachile, Acromyrmex, Solenopsis, Camponotus, Harpegnathos</i> |
| | | Coleoptera | 5 <i>Callosobruchus, Dendroctonus, Tribolium, Diabrotica, Onthophagus</i> |
| | Paraneoptera | Hemiptera | 11 <i>Acyrtosiphon, Adelphocoris, Aphis, Diaphorina, Homalodisca, Myzus, Maconellicoccus, Nilaparvata, Peregrinus, Rhopalosiphum, Toxoptera</i> |
| | | Phthiraptera | 1 <i>Pediculus</i> |
| | Dictyoptera | Blattodea | 1 <i>Blattella</i> |
| | | Isoptera | 2 <i>Reticulitermes, Coptotermes</i> |
| | Orthopterida | Orthoptera | 3 <i>Schistocerca, Locusta, Gryllus</i> |
| | Monocondylia | Archaeognatha | 1 <i>Lepismachilis</i> |
| Hexapoda; Entognatha | | | |
| Collembola | | Entomobryomorpha | 1 <i>Folsomia^c</i> |
| Crustacea | | | |
| Malacostraca | | Decapoda | 2 <i>Penaeus^c, Homarus^c</i> |
| Branchiopoda | | Cladocera | 2 <i>Daphnia^c</i> |
| [Platyhelminthes] | | | 1 <i>Clonorchis^d</i> |

^aSearch was done using blastp and tblastn using each of *D. melanogaster* Osiris protein sequences as queries against the non-redundant protein and EST databases at NCBI. The E-value threshold is 0.01.

^bHighly similar sequences were identified from several plant EST and cDNA sequences. However, these sequences are not included in this table. Such similarities are not found from any complete plant genomic sequences suggesting insect contamination of plant materials. Examples of these cases include: CX523685.1 (an EST from *Medicago truncatula*) with higher than 95% protein similarity ($E \sim 10^{-66}$) against *Drosophila* Osi7, and BT086177.1 (a complete cDNA from *Zea mays*) with 64% protein similarity ($E \sim 10^{-69}$) against aphid Osi6.

^cWeakly similar EST sequences were found from Collembola ($E \sim 10^{-4}$) and Crustacea ($E = 10^{-18} \sim 10^{-4}$). Reciprocal blast search indicated possible homologous relationships with *Drosophila* Osi17 and Osi24.

^dOne Platyhelminthes EST sequence (FS162944) had high protein similarities against *Drosophila* Osi7 (84%, $E \sim 10^{-46}$).