

Supplementary Tables and Figures

Supplementary Figures

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SecretomeP 2.0a Server - prediction results

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Non-classically secreted proteins should obtain an NN-score / SecP score exceeding the threshold, but not at the same time be predicted to contain a signal peptide.
The recommended thresholds are **0.5** for bacterial sequences and **0.6** for mammalian sequences.

```
# SecretomeP 1.0f predictions
# Name      NN-score  Odds  Weighted   Warning
#                      by prior
# =====
Sequence      0.635    1.941    0.004   -
# =====
```

[Explain](#) the output. Go [back](#).

Supplementary Figure S1 Prediction of non-classical protein secretion by the SecretomeP 2.0 server



Supplementary Figure S2 Phylogenetic tree analysis of amino acid sequences of DDTs and MIFs using the neighbor-joining method (poisson model) of MEGA 7.0

The site of Japanese sea bass DDT and MIF are marked with “♦” and “●” respectively. The values at the forks indicate the percentage of trees in which this grouping occurred after bootstrapping (1 000 replicates; shown only when >60%). The scale bar shows the number of substitutions per base. GenBank accession Nos. of sequences used are listed in Supplementary Table S1.

Supplementary Tables

Supplementary Table S1 DDT and MIF sequences used for multiple sequence alignment and phylogenetic tree analysis

GenBank No.	accession	Species	Gene
	Latin name	English name	
MH988689	<i>Lateolabrax japonicus</i>	Japanese sea bass	<i>DDT</i>
XM_010746837	<i>Larimichthys crocea</i>	large yellow croaker	<i>DDT</i>
XM_012851051	<i>Fundulus heteroclitus</i>	mummichog	<i>DDT</i>
BT075369	<i>Osmerus mordax</i>	rainbow smelt	<i>DDT</i>
BC071391	<i>Danio rerio</i>	zebrafish	<i>DDT</i>
XM_010904924	<i>Esox lucius</i>	northern pike	<i>DDT</i>
XM_003456548	<i>Oreochromis niloticus</i>	Nile tilapia	<i>DDT</i>
XM_011478667	<i>Oryzias latipes</i>	Japanese ricefish	<i>DDT</i>
BT049054	<i>Salmo salar</i>	Atlantic salmon	<i>DDT</i>
XM_020656845	<i>Labrus bergylta</i>	ballan wrasse	<i>DDT</i>
XM_020465781	<i>Oncorhynchus kisutch</i>	coho salmon	<i>DDT</i>
XM_021601787	<i>Oncorhynchus mykiss</i>	rainbow trout	<i>DDT</i>
XM_003972089	<i>Takifugu rubripes</i>	tiger puffer	<i>DDT</i>
XM_020932980	<i>Boleophthalmus pectinirostris</i>	mudskipper	<i>DDT</i>
JX443546	<i>Oplegnathus fasciatus</i>	rock bream	<i>DDT</i>
CP026250	<i>Scophthalmus maximus</i>	turbot	<i>DDT</i>
XM_007256544	<i>Astyanax mexicanus</i>	Mexican tetra	<i>DDT</i>
BC135935	<i>Xenopus tropicalis</i>	tropical clawed frog	<i>DDT</i>
NM_001093982	<i>Xenopus laevis</i>	African clawed frog	<i>DDT</i>
XM_024195522	<i>Terrapene mexicana triunguis</i>	three toed box turtle	<i>DDT</i>
NM_001030667	<i>Gallus gallus</i>	chicken	<i>DDT</i>
AF012431	<i>Mus musculus</i>	mouse	<i>DDT</i>
NM_001243557	<i>Sus scrofa</i>	pig	<i>DDT</i>
NM_001099150	<i>Bos taurus</i>	cattle	<i>DDT</i>
AH006997	<i>Homo sapiens</i>	human	<i>DDT</i>
MK000388	<i>Lateolabrax japonicus</i>	Japanese sea bass	<i>MIF</i>
FJ447490	<i>Thunnus albacares</i>	yellowfin tuna	<i>MIF</i>
FJ404723	<i>Larimichthys crocea</i>	large yellow croaker	<i>MIF</i>
FN582353	<i>Dicentrarchus labrax</i>	European sea bass	<i>MIF</i>
NM_001309981	<i>Fundulus heteroclitus</i>	mummichog	<i>MIF</i>
XM_004073247	<i>Oryzias latipes</i>	Japanese ricefish	<i>MIF</i>
BT075514	<i>Osmerus mordax</i>	rainbow smelt	<i>MIF</i>
NM_001043321	<i>Danio rerio</i>	zebrafish	<i>MIF</i>
BT080024	<i>Esox lucius</i>	northern pike	<i>MIF</i>
NM_001123609	<i>Salmo salar</i>	Atlantic salmon	<i>MIF</i>
NM_001124581	<i>Oncorhynchus mykiss</i>	rainbow trout	<i>MIF</i>
GU988719	<i>Epinephelus coioides</i>	orange spotted grouper	<i>MIF</i>
EU368584	<i>Cyprinus carpio</i>	common carp	<i>MIF</i>
KY612294	<i>Ctenopharyngodon idella</i>	grass carp	<i>MIF</i>

KF888661	<i>Ictalurus punctatus</i>	channel catfish	<i>MIF</i>
NM_001032717	<i>Takifugu rubripes</i>	tiger puffer	<i>MIF</i>
BT082851	<i>Anoplopoma fimbria</i>	sablefish	<i>MIF</i>
XM_020927268	<i>Boleophthalmus pectinirostris</i>	mudskipper	<i>MIF</i>
AY856134	<i>Tetraodon nigroviridis</i>	green-spotted pufferfish	<i>MIF</i>
JX273154	<i>Oplegnathus fasciatus</i>	rock bream	<i>MIF</i>
FJ447489	<i>Sciaenops ocellatus</i>	red drum	<i>MIF</i>
BC156031	<i>Xenopus tropicalis</i>	tropical clawed frog	<i>MIF</i>
BC097727	<i>Xenopus laevis</i>	African clawed frog	<i>MIF</i>
XM_024195529	<i>Terrapene mexicana triunguis</i>	three toed box turtle	<i>MIF</i>
NM_001305091	<i>Gallus gallus</i>	chicken	<i>MIF</i>
NM_010798	<i>Mus musculus</i>	mouse	<i>MIF</i>
NM_001077213	<i>Sus scrofa</i>	pig	<i>MIF</i>
NM_001033608	<i>Bos taurus</i>	cattle	<i>MIF</i>
CR541651	<i>Homo sapiens</i>	human	<i>MIF</i>