

Additional File 2. Argonaute Protein Family synapomorphies.

Gene family	Synapomorphy	Explanation
Ago1	VF <u>D</u> EPVI	*1 st catalytic residue, exception- Drosophila
Ago2	GAD <u>D</u>	1 st catalytic residue (underlined)
Ago3	GID <u>D</u>	1 st catalytic residue (underlined)
All PIWI	GFD <u>D</u>	1 st catalytic residue (underlined), distinguishes PIWI-like proteins from Ago1, Ago2, and Ago3, but does not differentiate Ago4 group from Ago5 group
Ago4-like	ETGIQVLNLILRRAMNGLNL QLVGRNLY	agaAgo4, aa 229-255, no mismatches aaePIWI3, aa 200-226, 2 mismatches aaePIWI1-1, aa 14-31, 1 mismatch aaePIWI1-2, aa 215-242, 2 mismatches aaePIWI2, aa 222-249, 2 mismatches cpiPIWI1-3A, aa 205-232, 2 mismatches cpiPIWI1-3B, aa 223-250, 2 mismatches cpiPIWI1-1, aa 221-248, 2 mismatches cpiPIWI1-2, aa 210-237, 2 mismatches dmPIWI, aa 191-218, 8 mismatches dmAub, no matches
Ago5-like	Variable	

* See Figure 2 and Additional File 1 for sequence information.