

**Table S11.** Identities and homologies of several age-related genes of *P. anserina* (*P.a.*) in *S. macrospora* (*S.m.*).

<i>S. m.</i>	<i>P. a.</i>	UniProt acc. no.	function	id. [%] <sup>1</sup>	e-value
<b>protein quality control</b>					
SMAC_01730	<i>PaLon</i> Pa_3_4170	B2AZ54	ATP-dependent peptidase activity, mitochondrial protein quality	47	0.0
SMAC_2747	<i>PaClpP</i> Pa_2_3900	B2B591	ATP-dependent Clp protease, proteolytic subunit	64	3e-92
SMAC_04074	<i>Palap</i> Pa_3_6030	B2B020	ATP-dependent peptidase activity, mitochondrial protein quality	70	0.0
SMAC_07050	<i>PaMap</i> Pa_2_5010	B2B5L3	ATP-dependent peptidase activity, mitochondrial protein quality	59	5e-68
<b>programmed cell death</b>					
-----	<i>PaAif1</i> Pa_1_22770	B2AS95	apoptosis-inducing factor 1	-----	-----
SMAC_09295	<i>PaAif2</i> Pa_4_460	B2AD94	apoptosis-inducing factor 2	78	0.0
SMAC_07439	<i>PaAmid1</i> Pa_5_4750	Q875G2	apoptosis-inducing factor (AIF)-like mitochondrion-associated inducer of death 1	70	e-167
-----	<i>PaAmid2</i> Pa_7_150	B2AP81	apoptosis-inducing factor (AIF)-like mitochondrion-associated inducer of death 2	-----	-----
SMAC_06729	<i>PaCypD</i> Pa_3_8900	B2AAR4	apoptosis regulation	62	3e-58
SMAC_08290	<i>PaMca1</i> Pa_5_5940	Q874X7	metacaspase, protein degradation	78	0.0
SMAC_00281	<i>PaMca2</i> Pa_1_690	B2A9D3	metacaspase, protein degradation	66	3e-158
SMAC_08654	<i>PaPrg3</i> Pa_5_4850	Q875F3	Aif-homolog	50	e-100
<b>DNA repair</b>					
SMAC_07943	<i>PaParp</i> Pa_0_940	B2ABS3	protein amino acid ADP-ribosylation	55	0.0
SMAC_08070	<i>PaUdg1</i> Pa_1_8860	B2AXU4	base-excision repair, uracil DNA N-glycosylase activity	65	4e-130
SMAC_06555	<i>PaNtg1</i> Pa_2_2170	B2B4R3	nuclear and mitochondrial base-excision repair	58	6e-147
<b>ROS scavenging</b>					
SMAC_05035	<i>PaSod1</i> Pa_1_17400	Q711T9	cytoplasmic copper/zinc antioxidant oxidoreductase	84	2e-77
SMAC_05700	<i>PaSod2</i> Pa_5_1740	B2AER6	cytoplasmic manganese antioxidant oxidoreductase	76	9e-108
SMAC_03915 <sup>2</sup>	<i>PaSod3</i> Pa_2_4460	B2B5F1	mitochondrial manganese antioxidant oxidoreductase	76	8e-91
SMAC_05911	<i>PaPrx1</i> Pa_5_8240	B2AKR1	oxidoreductase activity, ROS-scavenging	61	2e-64
-----	<i>PaMth1</i> Pa_2_7880	Q9HGR1	SAM-dependent O-methyltransferase	-----	-----
<b>mitochondrial dynamics</b>					
SMAC_08468	<i>PaDnm1</i> Pa_1_12670	Q2WCN9	dynamamin-related protein, mitochondrial fission	87	0.0
SMAC_01677	<i>PaFis1</i> Pa_3_3970	B2AZ34	mitochondrial fission	88	4e-82
SMAC_01873	<i>PaFzo1</i> Pa_7_6400	B2AW95	mitochondrial fission	69	0.0
SMAC_03955	<i>PaMgm1</i> Pa_2_2290	B2B4S5	dynamamin-related protein, mitochondrial fusion	71	0.0
SMAC_04795	<i>PaMdv1</i> Pa_6_1780	B2B2X5	mitochondrial fission	77	0.0
<b>respiration</b>					
SMAC_08566	<i>PaAOX</i> Pa_3_1710	Q9C206	alternative oxidase, mitochondrial	69	2e-143
SMAC_05943	<i>PaCox17</i> Pa_1_8580	Q70J60	protein copper chaperone for respiratory chain complex IV	87	9e-26
<b>other</b>					
SMAC_03408	<i>grisea</i> Pa_4_8950	B2AR17	copper-regulated transcription factor	27	6e-31

<sup>1</sup>amino acid identity

<sup>2</sup>does not have a mitochondrial targeting sequence