Supplementary Table 3 Occurrence of AThTP and ThTP in eukaryotic organisms

	ThTP	AThTP
	pmol . g^{-1} of wet weight, mean ± SD, n = 3	
Arabidopsis thaliana		
Roots	n. d.	14 ± 4
Leaves	n. d.	n. d.
Parsley (*Petroselium crispum*)		
Roots	n. d.	33 ± 12
Leaves	n. d.	n. d.
	pmol . mg^{-1} of protein, mean ± SD, n = 3	
Yeast (*Saccharomyces cerevisiae*)	2.1 ± 0.3	0.23 ± 0.02
Rat (*Rattus norvegicus* Wistar)		
Brain	0.6 ± 0.2	< 0.02
Skeletal muscle	1.6 ± 0.5	0.03 ± 0.05*
Heart	< 0.05	0.6 ± 0.1
Liver	0.10 ± 0.03	0.5 ± 0.1
Kidney (cortex)	0.32 ± 0.05	0.4 ± 0.2
Kidney (medulla)	0.2 ± 0.1	0.55 ± 0.15
Spleen	0.4 ± 0.2	0.25 ± 0.10
Lung	0.3 ± 0.1	0.50 ± 0.05
Testis	0.8 ± 0.2	0.20 ± 0.05

Tissues (approximately 100 mg) were homogenized in 500 µl of 12% trichloroacetic acid in a glass-glass homogenizer and centrifuged (5,000 x g, 15 min). The supernatant was treated with 3 x 1.5 ml diethyl ether to remove the acid. The samples were then analyzed by HPLC[7]. AThTP was identified by spiking the samples with chemically synthesized AThTP. Controls were also made by injecting the samples without oxidation, conditions under which only naturally fluorescent compounds are observed but not thiochromes. Protein content was determined by the method of Peterson (Peterson, G.L. *Anal. Biochem.* **83**, 346-356, 1977). The use of animals was approved by the Institutional Committee for Animal Care and Use (#526).

n. d., not detected

* AThTP was found in only 1 of the 3 samples