

Phosphatase reactivity by a dicopper(II) complex of a patellamide derivative - possible biological functions of cyclic pseudopeptides.

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Supporting Information

Table S1. Data of the pH profile of the $[\text{Cu}^{\text{II}}_2(\text{H}_2\text{pat}^1)(\mu\text{-OH})(\text{H}_2\text{O})_2]^+$ -catalyzed BDNPP hydrolysis (catalyst concentration: 40 μM , BDNPP for the pH dependence: 6.25 mM, pH for the substrate dependence: 7.06, $\mu = 0.45$).

pH	V_0 [M s ⁻¹]	Δ [M s ⁻¹]
6.04	6.64×10^{-9}	2.41×10^{-9}
6.48	1.82×10^{-8}	3.88×10^{-9}
7.06	2.90×10^{-8}	3.34×10^{-9}
7.53	2.37×10^{-8}	3.99×10^{-9}
8.01	1.40×10^{-8}	1.54×10^{-9}
8.51	8.71×10^{-9}	2.08×10^{-9}
9.00	7.14×10^{-9}	1.14×10^{-9}
9.50	4.97×10^{-9}	8.70×10^{-10}
10.02	4.42×10^{-9}	2.21×10^{-9}
10.51	4.51×10^{-9}	2.02×10^{-9}
10.99	5.17×10^{-9}	3.73×10^{-9}

Table S2. Data of the BDNPP concentration dependence of the $[\text{Cu}^{\text{II}}_2(\text{H}_2\text{pat}^1)(\mu\text{-OH})(\text{H}_2\text{O})_2]^+$ -catalyzed BDNPP hydrolysis (catalyst concentration: 40 μM , pH for the substrate dependence: 7.06, $\mu = 0.45$).

BDNPP [mM]	V_0 [M s ⁻¹]	Δ [M s ⁻¹]
1.00	4.58×10^{-9}	1.37×10^{-10}
3.00	1.59×10^{-8}	4.33×10^{-9}
5.00	2.22×10^{-8}	4.03×10^{-9}
6.25	2.90×10^{-8}	3.34×10^{-9}
7.00	3.36×10^{-8}	3.85×10^{-9}
9.00	4.10×10^{-8}	2.35×10^{-9}

Table S3. Kinetic data of the [Cu^{II}₂(H₂pat¹)(μ-OH)(H₂O)₂]⁺-catalyzed BDNPP hydrolysis.

Catalyst	pH _{max}	V _{0,max}	pK _a (I)	pK _a (II)	k _{cat} [s ⁻¹] *10 ⁻³	K _M [mM]	k _{cat} /K _M [M ⁻¹ s ⁻¹]
[Cu ^{II} ₂ (H ₂ pat ¹)(μ-OH)(H ₂ O) ₂] ⁺	7.21	1.59x10 ⁻⁷ ± 3.00x10 ⁻⁹	6.91 ± 0.21	7.31 ± 0.20	3.95 ± 0.07	26.4 ± 2.20	0.15 ± 0.03