

Copper(II) binding to Cap43 protein fragments.

Autorzy

Maria Antonietta Zoroddu
Teresa Kowalik-Jankowska
Serenella Medici
Massimiliano Peana
Henryk Kozłowski

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Streszczenie

The C-terminal 20 and 30 amino acid sequences of Cap43 protein were chosen as models to study their interactions with Cu(II) ions. The behaviour of the 20 amino acid Ac-TRSRSH₆TSEG-TRSRSH₁₆TSEG and 30 amino acid Ac-TRSRSH₆TSEG-TRSRSH₁₆TSEG-TRSRSH₂₆TSEG peptides towards Cu(II) ions at different pH values and different ligand-to-metal molar ratios, was examined. Spectroscopic (EPR, UV-Vis) and potentiometric techniques were performed to understand the details of metal binding to the peptides. The study showed that, starting from pH 4.0, each 10 amino acid fragment T₁R₂S₃R₄S₅H₆T₇S₈E₉G₁₀ was able to independently coordinate a single Cu(II) ion. The coordination mode involved the imidazole nitrogen of histidine H₆ residue, and three amidic nitrogens from histidine H₆, serine S₅, and arginine R₄ residues, respectively.

Adres publiczny

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