

Interactions of Cu²⁺ ions with chicken prion tandem repeats.

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The potentiometric and spectroscopic (EPR, UV-Vis, CD) data have shown that the chicken prion hexa-repeat (Ac-His-Asn-Pro-Gly-Tyr-Pro-NH₂) is a very specific ligand for Cu²⁺ ions. The His imidazole is an anchoring binding site, then the adjacent amide nitrogen coordinates as a second donor. The presence of Pro at position 3 induces binding of phenolate oxygen as a third donor atom. The tridentate coordination dominates around physiological pH. Similar to human octapeptide fragments, chicken tandem repeats exhibit a cooperative effect in binding Cu²⁺ ions, although chicken peptides are much less effective in metal ion coordination.

Adres publiczny

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