Novel short-chain analogues of somatostatin as ligands for Cu(II) ions. Role of the metal ion binding on the spatial structure of the ligand.

Autorzy

Aleksandra Marciniak

Marek Cebrat

Żaneta Czyżnikowska

Justyna Brasuń

Rok wydania

2012

Czasopismo

Journal of Inorganic Biochemistry

Numer woluminu

117

Strony

10-17

DOI

10.1016/j.jinorgbio.2012.08.023

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

In this paper we present the studies on coordination abilities of two short-chain analogues of somatostatin with free N-terminal and protected amino group towards copper (II) ions. The octreotide is the most popular analogue of the somatostatin (peptide hormone) used in medicine. Somatostatin analogues are used in diagnosis and treatment of the neuroendocrine tumors. Both analyzed analogues are characterized by the presence of two His instead of Cys residues in characteristic fragment of native peptide. We characterize coordination abilities of the ligands using potentiometric and spectroscopic methods. His-analogues of somatostatin are effective ligands for copper (II) ions. Both peptides are able to form the complexes with the cyclic structure.

Słowa kluczowe

Somatostatin, copper(II) complexes, histidine, Potentiometric measurements, spectroscopic studies, Coordination

Adres publiczny

http://dx.doi.org/10.1016/j.jinorgbio.2012.08.023

Strona internetowa wydawcy

http://www.elsevier.com