

Białka uczestniczące w transporcie jonów żelaza(II) w bakteriach gram-ujemnych = Proteins involved in the ferrous ions transport in gram-negative bacteria.

Autorzy

Karolina Kierpiec

Kamila Stokowa-Sołtys

Rok wydania

2021

Czasopismo

Wiadomości Chemiczne

Numer woluminu

75

Strony

375-394

Kolekcja

Naukowa

Język

Polski

Typ publikacji

Artykuł

Streszczenie

Continuous increase in the number of multidrug-resistant strains forces us to look for drugs with completely new mode of action. One of the bacterial property determining the pathogenicity of these microorganisms is their ability to obtain iron. Because in the living environment of these single-celled individuals, its concentration is much lower than this necessary for their growth. For this reason, bacteria created various type of iron aquisition systems, including the Feo system, which mechanism of Fe^{2+} ion uptake is not fully understood, and protein from the Hmu family belonging to ABC transporters. The Feo transport system is one of the most common systems that is exclusively responsible for importing Fe^{2+} ions. It consists of three proteins: FeoA, FeoB and FeoC. FeoB is a transmembrane protein that is believed to play a key role in the mechanism of Fe^{2+} ion uptake. The other two components are cytoplasmic proteins. Both, FeoA and FeoC, are cytoplasmic proteins resembling the construction of transcription regulators. ABC transporters play an equally important role in maintaining iron homeostasis. These include proteins from Hmu family. HmuUV complex catalyses the import of these ions in hem iron form. The structure of this complex consists of TMD dimer (HmuU) and NBD dimer (HmuV). The HmuU is considered to be a permease - just like the FeoB described earlier while HmuV is the ATP binding protein

Słowa kluczowe

ferrous ions transport, gram-negative bacteria, Feo, Hmu
transport jonów żelaza(II), bakterie gram-ujemne, Feo, Hmu

Licencja otwartego dostępu

OTHER

Pełny tekst licencji:

Adres publiczny

https://ptchem.pl/storage/pages/April2021/3_4_2021.pdf

Plik został wygenerowany dnia 2026-10-10 03:50:46

Adres w repozytorium <https://old.chem.uni.wroc.pl/pl/repozytorium/pOmzVg5>.