Identyfication of tryptic podocin peptide in the feline urine sediments using LC-MS/MRM method.

Autorzy

Remigiusz Bąchor

Barbara Szczepankiewicz

Urszula Pasławska

Karolina Mojsa

Piotr Stefanowicz

Zbigniew Szewczuk

Rok wydania

2019

Czasopismo

International Journal of Mass Spectrometry

Numer woluminu

444

Strony

116174/1-116174/6

DOI

10.1016/j.ijms.2019.116174

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Chronic kidney disease (CKD) as one of the major public health problem itself and also strongly associated with cardiovascular diseases is a major mortality factor in humans, as well as in dogs and cats. Recently, urinary podocin has been identified as potential CKD biomarker. However, still the sensitive and straightforward method of urinary podocin detection and identification is needed. Here we report our investigations on the applicability of liquid chromatography coupled with tandem mass spectrometry in the analysis of feline urinary podocytes, based on the identification of podocin tryptic peptide with the ^{222}AVQFLVQTTMK^{235} sequence. This peptide was chosen due to the best response of all of the model podocin tryptic peptides in a feline urine sediment tryptic digest as analyzed by LC-MS/MS. Performed study revealed the presence of the model podocin tryptic peptide in the analyzed feline urine sediments with confirmed chronic kidney disease. The obtained results clearly confirmed the applicability of the proposed methodology in the analysis of podocin in feline urine sediments.

Słowa kluczowe

LC-MS, Multiple reaction monitoring, Podocin, Chronic kidney diseases, Proteinuria

Adres publiczny

http://dx.doi.org/10.1016/j.ijms.2019.116174

Strona internetowa wydawcy

http://www.elsevier.com