

عنوان مقاله:

Protein structures of phospholipase D₁ and PLD₂ in Hemiscorpius lepturus scorpion

محل انتشار:

اولین کنگره بین المللی علوم، مهندسی و فن آوری های نو (سال: 1401)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Fatemeh Salabi - Razi Vaccine and Serum Research Institute, Ahvaz, Agricultural Research, Education and Extension Organization (AREEO), Iran

Masoumeh Baradaran - Toxicology Research Center, Medical Basic Sciences Research Institute, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

خلاصه مقاله:

Scorpions are a venomous group of arthropods with strong fossil evidence dating back to the Earth's Silurian Period. Scorpion's venom consists of complex mixtures of different biologically active compounds, including toxic peptides, enzymes, carbohydrates, lipids free amino acids, and other metabolites. One of the ubiquitous enzymes that have been discovered in scorpion venom is phospholipase D (PLD). In this study, we used deep RNA-seq technology to identify the PLD sequences of Hemiscorpius lepturus scorpions. The PLD sequences were also analyzed to predict the structure of the scorpion's phospholipase D proteins. We found that scorpions of H. lepturus encode two genes of phospholipase D: PLD₁ and PLD₂, which named PLD alpha and beta respectively. The Ramachandran plot analysis report of H. lepturus isoforms showed that more than 93%, of the dihedral angles of the PLD protein residues from those isoforms were detected in the allowable zone and the maximum allowable zone, indicating that they have a stable spatial conformation.

کلمات کلیدی:

Scorpion, Hemiscorpius lepturus, Phospholipase D, Ramachandran plot

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1591289>

