

عنوان مقاله:

Purification and characterization of lysozyme in Persian sturgeon, *Acipenser persicus* (Borodin, ۱۸۹۷) from the Southwest Caspian Sea

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خلاصه مقاله:

Lysozyme (N-acetylmuramide glyconohydrolase, (EC ۳.۲.۱.۱۷)) is a unique enzyme which cleaves the β -۱,۴ linkages of N-acetylmuramic and N-acetylglucosamine of the peptidoglycan, which leads to the lysis of the bacterial cell wall. Lysozyme, as a self-defense enzyme, is produced in many organs of vertebrates. The present study describes purification and characterization of lysozyme from *Acipenser persicus* (Borodin, ۱۸۹۷). After the extraction process, ion exchange chromatography was utilized to purify the enzyme. The SDS-PAGE analysis confirmed that the molecular weight was about ۱۴ kDa. Moreover, some of the biochemical properties such as optimum temperature, pH and the effect of metal ions on the activity of purified enzyme were investigated. Based on the results the optimum activity and pH were obtained at ۵۰ °C and ۶.۵ respectively. The purified lysozyme was active in the presence of different salts including NaCl (۰.۰۱۲۵ M), KCl (۰.۰۷۵-۰.۱۲۵ M), MgCl₂, and CaCl₂ (۰.۰۰۵ M). Kinetic parameters were also calculated

کلمات کلیدی:

Lysozyme, *Acipenser persicus*, Ion exchange chromatography, Metal ions, Optimum temperature, Catalytic efficiency

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