Mini review

Recent Developments in Electrochemical, Electrochemiluminescent, Photoelectrochemical Methods for the Detection of Caspase-3 Activity

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Caspase-3 plays an important role in the apoptotic process and has drawn fast growing interests in cancer research, clinical detection and apoptosis-targeted drug discovery. Increasing demands for simple, low-cost and high-performance clinical diagnosis have already promoted the rapid progress in analysis of caspase-3. During plenty of novel methods for caspase-3 determination, electrochemistry-based methods, have been worldily recognized as the most promising technologies because of their simplicity, high sensitivity and specificity. This review aims to briefly summary the recent developments of electrochemical, electrochemiluminescent, photoelectrochemical methods, and provide insights into the incorporation of electroactive molecules or nanomaterials.

Keywords: caspase-3; electrochemistry; electrochemiluminescence; photoelectrochemistry; signal amplification

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