

医学研究

## MALDI-TOF MS快速筛选蛋白激酶抑制剂的方法初探

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摘要

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## Preliminary Study on Rapid Screening of Protein Tyrosine Kinase Inhibitors by Using MALDI-TOF Mass Spectrometry

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**Abstract** A MALDI-TOF mass spectrometric method for rapid screening of protein tyrosine kinase (PTK) inhibitors was developed. Due to the low abundance and low ionization efficiency of phosphopeptides, a separation and enrichment process was carried out by using a house-made TiO<sub>2</sub> nanoparticle-coated capillary column prior to the MS analysis. With a synthetic phosphopeptide, of which the sequence is similar to that of the substrate peptide, as the internal standard, the ratios of signal intensities of the standard to the substrate are linear to the molar ratios of the two phosphopeptides over the range of 0.3 to 3. The proposed method will be applied to screen PTK inhibitors synthesized in our laboratory.

**Key words** [MALDI-TOF](#) [MS](#) [protein](#) [tyrosine](#) [kinase](#) [inhibitor](#) [screening](#)

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