

IMMUNOSENSOR ASSAY: A NOVEL METHOD TO ANALYZE PHYTOHORMONES

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Phytohormones play important roles at all stages of plant development, typically occur in extremely low concentrations in plant tissues, and are highly sensitive to environmental factors such as light, heat and oxygen. The lack of a precise assay for phytohormones is often a significant limiting factor for phytohormonal research. Traditional phytohormonal assays including bioassays, GC, HPLC, ELISA and RIA have their disadvantages. Based on radioimmunoassay and biosensor technology, immunosensor assay is a new technology for phytohormonal analysis developed in 2002 by Hunan Provincial Key Laboratory for Phytohormones and Growth Development, and State Key Laboratory of Chemo/Biosensing and Chemometrics at Hunan University. After construction of the first immunosensor for indole acetic acid (IAA), several kinds of immunosensors for additional phytohormones have been successfully developed. The construction and efficacy of these sensors will be presented.