

Compounds For Visualization And Quantification Of Albumin, Method For Preparation And Use Thereof

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ABSTRACT

The present invention provides novel NIR (Near Infra-red) compounds and their use as albumin quantification tools with increased efficacy/accuracy. These NIR-based albumin sensors have the potential to overcome the pitfall of the present-day albumin detection methods and accelerate the detection process with relatively lower costs without compromising the accuracy of detection. Furthermore, NIR dye with dual targeting and imaging properties can be exploited for the detection and treatment of liver diseases. The present invention provide method of preparation as well.

KEY APPLICATION AREAS

- 1.Clinical diagnostics.
- 2.Molecular & biomedical imaging.
- 3.Liver disease diagnosis and monitoring.
- 4.Biomedical research.
- 5.Diagnostic kit development.
- 6.Drug delivery & theranostics.

POTENTIAL USE CASES

- 1.Quantification of albumin in blood, serum, and urine.
- 2.Early diagnosis of albumin-related disorders (e.g., liver disease, diabetes, kidney disorders).
- 3.Non-invasive in vivo, ex vivo, and cellular albumin imaging.
- 4.Selective liver imaging and monitoring.
- 5.Development of rapid, high-sensitivity albumin diagnostic kits.
- 6.Monitoring targeted drug delivery and image-guided therapy.