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Development and validation of an LC-MS/MS method for quantitative determination of GS87, a novel antineoplastic agent, in mouse plasma

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Highlights

- A simple, selective and sensitive LC-MS/MS method was developed for the quantitative measurement of GS87, a GSK3 inhibitor, in mouse plasma.
- It uses liquid-liquid extraction for sample preparation.
- The method was validated in accordance with the US-FDA guidelines for bioanalytical method validation.
- This method had been tested by samples from an animal study.

Abstract

GS87 is a novel, highly specific GSK3 inhibitor, which has shown to induce extensive differentiation of acute myeloid leukemia (AML) cells in early mouse studies and has great potential for therapeutic advancement. This work described the development and validation of an LC-MS/MS method for quantitative determination of GS87 in mouse plasma. In this method, GS87 and T6447952 (a structural analog used as internal standard) were extracted from plasma using hexane as extraction solvent, and separated isocratically on a Waters XTerra® MS C8 column