

Development and validation of a liquid chromatography–tandem mass spectrometry for the determination of Kendine 91, a novel histone deacetylase inhibitor, in mice plasma and tissues: Application to a pharmacokinetic study

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Article history:

A liquid chromatography–tandem mass spectrometric method (LC–MS/MS) has been developed and validated to determine the concentration of Kendine 91 in mice plasma and tissues. Simvastatin was employed as the internal standard. Separation was performed on a C8 column, with a mobile phase consisting of methanol and aqueous 10 mM formic acid (73:27 v/v). Both analyte and internal standard were determined using electrospray ionization and the MS data acquisition was via multiple-reaction monitoring (MRM) in positive scanning mode. Quantification was performed using the transitions m/z 444 \rightarrow 169 and 441 \rightarrow 325 for Kendine 91 and simvastatin, respectively. The method was validated with respect to linearity, accuracy, precision, recovery and stability. This assay has been successfully applied to a pharmacokinetic study after intravenous injection of Kendine 91 in mice in a dose of 10 mg/kg.