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## Product Data Sheet

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Product Name: SN-38-d3

Cat. No.: GC64465

### Chemical Properties

Cas. No. 718612-49-8

Formula C<sub>22</sub>H<sub>17</sub>D<sub>3</sub>N<sub>2</sub>O<sub>5</sub> M.Wt 395.42

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

SN-38-d3 is the deuterium labeled SN-38. SN-38 (NK012) is an active metabolite of the Topoisomerase I inhibitor Irinotecan. SN-38 (NK012) inhibits DNA and RNA synthesis with IC<sub>50</sub>s of 0.077 and 1.3 μM, respectively[1][2][3][4].

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216. [2]. Wallin A, et al. Anticancer effect of SN-38 on colon cancer cell lines with different metastatic potential. *Oncol Rep.* 2008 Jun;19(6):1493-8.

[3]. Jensen NF, et al. Characterization of DNA topoisomerase I in three SN-38 resistant human colon cancer cell lines reveals a new pair of resistance-associated mutations. *J Exp Clin Cancer Res.* 2016 Mar 31;35:56.

[4]. Kawato Y, et al. Intracellular roles of SN-38, a metabolite of the camptothecin derivative CPT-11, in the antitumor effect of CPT-11. *Cancer Res.* 1991;51(16):4187-4191.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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