

## Product Data Sheet

Product Name: Lenvatinib-d4

Cat. No.: GC45754

### Chemical Properties

Cas. No. 2264050-65-7

SMILES COC(C(C(N)=O)=C1)=CC2=C1C(OC3=CC(Cl)=C(NC(NC4C([2H])([2H])C4([2H])([2H])=O)C=C3)=CC=N2

Formula C<sub>21</sub>H<sub>15</sub>D<sub>4</sub>ClN<sub>4</sub>O<sub>4</sub>

M.Wt 430.9

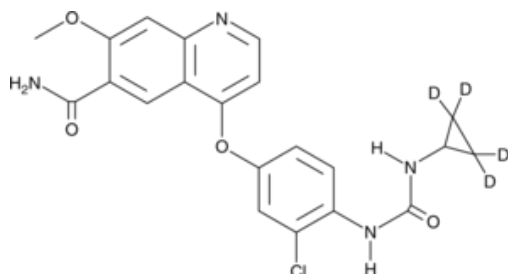
Solubility DMF: soluble, DMSO: soluble, Methanol: soluble

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

Lenvatinib-d4 is intended for use as an internal standard for the quantification of lenvatinib by GC- or LC-MS. Lenvatinib is an inhibitor of the receptor tyrosine kinases VEGF receptor 2 (VEGFR2) and VEGFR3 (IC<sub>50</sub>s = 4.0 and 5.2 nM, respectively).<sup>1,2</sup> It is slightly less potent against the related kinases VEGFR1, FGFR1, PDGFRα, PDGFRβ, and Kit (IC<sub>50</sub>s = 22, 46, 51, 39, and 100 nM, respectively).<sup>1</sup> Lenvatinib (30 mg/kg, twice per day) reduces tumor growth in an H146 small cell lung cancer mouse xenograft model and induces tumor regression when administered at a dose of 100 mg/kg twice per day. Formulations containing lenvatinib have been used in the treatment of differentiated thyroid cancer, renal cell carcinoma, and hepatocellular carcinoma.

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

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|1. Matsui, J., Yamamaoto, Y., Funahashi, Y., et al. E7080, a novel inhibitor that targets multiple kinases, has potent antitumor activities against stem cell factor producing human small cell lung cancer H146, based on angiogenesis inhibition. Int. J. Cancer 122(3), 664-671 (2008).|2. Matsui, J., Funahashi, Y., Uenaka, T., et al. Multi-kinase inhibitor E7080 suppresses lymph node and lung metastases of human mammary breast tumor MDA-MB-231 via inhibition of vascular endothelial growth factor-receptor (VEGF-R) 2 and VEGF-R3 kinase. Clin. Cancer Res. 14(17), 5459-5465 (2008).

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