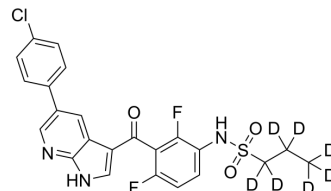


## Vemurafenib-d<sub>7</sub>

<b>Cat. No.:</b>	HY-12057S1
<b>CAS No.:</b>	1365986-73-7
<b>Molecular Formula:</b>	C <sub>23</sub> H <sub>11</sub> D <sub>7</sub> ClF <sub>2</sub> N <sub>3</sub> O <sub>3</sub> S
<b>Molecular Weight:</b>	496.97
<b>Target:</b>	Raf; Autophagy; Isotope-Labeled Compounds
<b>Pathway:</b>	MAPK/ERK Pathway; Autophagy; Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Vemurafenib-d <sub>7</sub> is deuterium labeled Vemurafenib. Vemurafenib (PLX4032) is a first-in-class, selective, potent inhibitor of B-RAF kinase, with IC <sub>50</sub> s of 31 and 48 nM for RAFV600E and c-RAF-1, respectively[1][4]. Vemurafenib induces cell autophagy[5].
<b>In Vitro</b>	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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

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- [2]. Prahallad A, et al. Unresponsiveness of colon cancer to BRAF(V600E) inhibition through feedback activation of EGFR. *Nature*, 2012, 483(7387), 100-103.
- [3]. Shelledy L, et al. Vemurafenib: First-in-Class BRAF-Mutated Inhibitor for the Treatment of Unresectable or Metastatic Melanoma. *J Adv Pract Oncol*. 2015 Jul-Aug;6(4):361-5.
- [4]. Wang W, et al. Targeting Autophagy Sensitizes BRAF-Mutant Thyroid Cancer to Vemurafenib. *J Clin Endocrinol Metab*. 2017 Feb 1;102(2):634-643.
- [5]. Yang H, et al. RG7204 (PLX4032), a selective BRAFV600E inhibitor, displays potent antitumor activity in preclinical melanoma models. *Cancer Res*, 2010, 70(13), 5518-5527.
- [6]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.

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

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