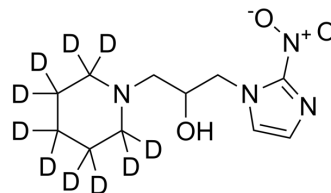


## Pimonidazole-d10

<b>Cat. No.:</b>	HY-105129AS
<b>CAS No.:</b>	2468639-37-2
<b>Molecular Formula:</b>	C <sub>11</sub> H <sub>8</sub> D <sub>10</sub> N <sub>4</sub> O <sub>3</sub>
<b>Molecular Weight:</b>	264.35
<b>Target:</b>	Isotope-Labeled Compounds
<b>Pathway:</b>	Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Pimonidazole-d10 is the deuterium labeled Pimonidazole. Pimonidazole is a novel hypoxia marker for complementary study of tumor hypoxia and cell proliferation in tumor <sup>[1]</sup> . Pimonidazole accumulates in hypoxic cells via covalent binding with macromolecules or by forming reductive metabolites after reduction of its nitro group, it can be used for qualitative and quantitative assessment of tumor hypoxia <sup>[2]</sup> .
<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

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Varia MA, et al. Pimonidazole: a novel hypoxia marker for complementary study of tumor hypoxia and cell proliferation in cervical carcinoma. *Gynecol Oncol.* 1998 Nov;71(2):270-7.
- [3]. Masaki Y, et al. Imaging Mass Spectrometry Revealed the Accumulation Characteristics of the 2-Nitroimidazole-Based Agent "Pimonidazole" in Hypoxia. *PLoS One.* 2016 Aug 31;11(8):e0161639.

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

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