

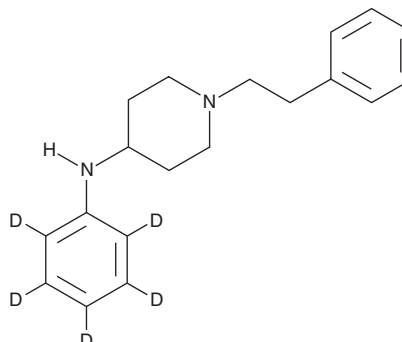
PRODUCT INFORMATION



4-ANPP-d₅ (exempt preparation)

Item No. 36781

CAS Registry No.: 1189466-15-6
Formal Name: N-phenyl-d₅-1-(2-phenylethyl)-4-piperidinamine
Synonyms: 4-Aminophenyl-1-phenethylpiperidine-d₅, 4-Anilino-N-phenethylpiperidine-d₅, Despropionyl fentanyl-d₅
MF: C₁₉H₁₉D₅N₂
FW: 285.4
Chemical Purity: ≥98% (4-ANPP)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A 1 mg/ml solution in methanol
Storage: -20°C
Stability: ≥3 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

4-ANPP-d₅ (exempt preparation) (Item No. 36781) is intended for use as an internal standard for the quantification of 4-ANPP (Item Nos. 22700 | 18810) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

4-ANPP is categorized as an opioid metabolite and a precursor in the synthesis of fentanyl (Item Nos. ISO60197 | 22659 | 14719) and other opioids.¹⁻⁵ 4-ANPP is a metabolite of acetyl fentanyl (Item Nos. ISO60128 | ISO00128), butyryl fentanyl (Item Nos. 19734 | 14728), furanyl fentanyl (Item Nos. 19633 | 18705), acrylfentanyl (Item Nos. 23060 | 19312), and fentanyl.¹⁻⁴ It has also been found as an impurity in illicit fentanyl preparations.⁶ 4-ANPP-d₅ is regulated as a Schedule II compound in the United States. 4-ANPP-d₅ (exempt preparation) (Item No. 36781) is provided as a DEA exempt preparation. This product is intended for research and forensic applications.

References

1. Watanabe, S., Vikingsson, S., Roman, M., *et al.* *In vitro* and *in vivo* metabolite identification studies for the new synthetic opioids acetylfentanyl, acrylfentanyl, furanylfentanyl, and 4-fluoro-isobutyrylfentanyl. *AAPS J.* **19**(4), 1102-1122 (2017).
2. Labroo, R.B., Paine, M.F., Thummel, K.E., *et al.* Fentanyl metabolism by human hepatic and intestinal cytochrome P450 3A4: Implications for interindividual variability in disposition, efficacy, and drug interactions. *Drug Metab. Dispos.* **25**(9), 1072-1079 (1997).
3. Melent'ev, A.B., Kataev, S.S., and Dvorskaya, O.N. Identification and analytical properties of acetyl fentanyl metabolites. *J. Anal. Chem.* **70**(2), 216-224 (2015).
4. Steuer, A.E., Williner, E., Staeheli, S.N., *et al.* Studies on the metabolism of the fentanyl-derived designer drug butyrfentanyl in human *in vitro* liver preparations and authentic human samples using liquid chromatography-high resolution mass spectrometry (LC-HRMS). *Drug Test Anal.* **9**(7), 1085-1092 (2017).
5. Pease, J.P., LePine, A.J., and Smith, C.M. Methods for preparing fentanyl and fentanyl intermediates. *Cedarburg Pharmaceuticals, Inc.* **US2013/0281702A1** (2013).
6. Lurie, I.S., Berrier, A.L., Casale, J.F., *et al.* Profiling of illicit fentanyl using UHPLC-MS/MS. *Forensic Sci. Int.* **220**(1-3), 191-196 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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