

Product Name: DPNB-ABT 594

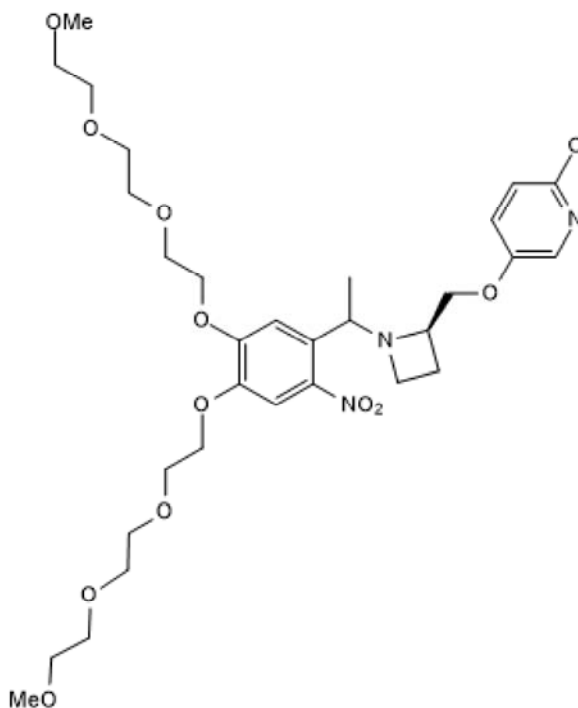
Catalog No.: 6706

Batch No.: 1

IUPAC Name: 5-(((2R)-1-(1-(4,5-Bis(2-(2-methoxyethoxy)ethoxy)ethoxy)-2-nitrophenyl)ethyl)azetidin-2-yl)methoxy)-2-chloropyridine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₁H₄₆ClN₃O₁₁
Batch Molecular Weight: 672.16
Physical Appearance: Yellow oil
Solubility: DMSO to 100 mM
 ethanol to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Nitrobenzyl-caged ABT 594 (Cat. No. 6576), a selective $\alpha 4\beta 2$ nAChR agonist. One-photon uncaging evokes large inward currents and Ca^{2+} transients on cell bodies and dendrites of medial habenular neurons in mouse brain slices. Two-photon uncaging induces fast nAChR-mediated currents. Photolyzed with high quantum yield of 0.20. Effective photolysis occurs using one- or two-photon excitation; one-photon uncaging requires illumination at 410 nm for 1.5-3 ms; two-photon uncaging requires illumination with appropriate two photon pulse laser at 710 nm for ~2 ms.

Physical and Chemical Properties:

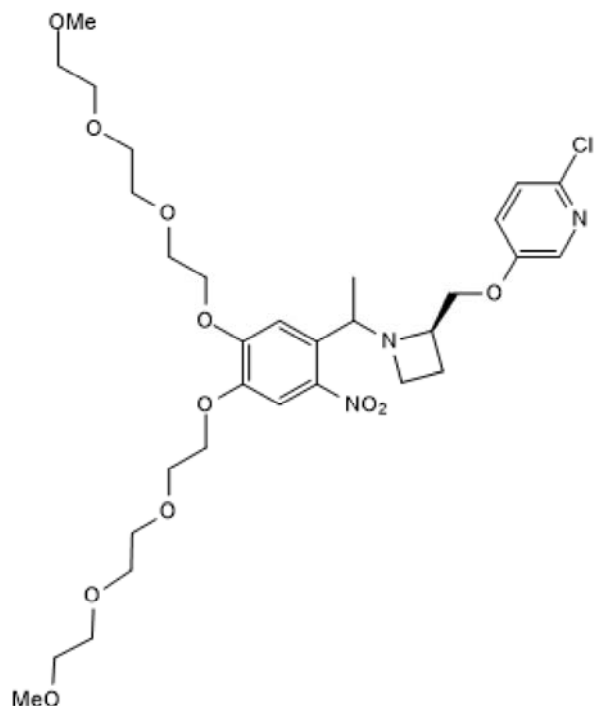
Batch Molecular Formula: $C_{31}H_{46}ClN_3O_{11}$

Batch Molecular Weight: 672.16

Physical Appearance: Yellow oil

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Passlick et al (2018) Optical probing of acetylcholine receptors on neurons in the medial habenula with a novel caged nicotine drug analogue. *J.Physiol.* **596** 5307. PMID: 30222192.

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