DPNB-ABT594

Cat. No.: HY-131001

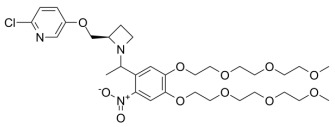
Molecular Formula: $C_{31}H_{46}ClN_3O_{11}$

Molecular Weight: 672.16

Target: nAChR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	DPNB-ABT594 is a nitrobenzyl-caged ABT594 (HY-14316A) and activates nAChRs containing the α4β2 subunits with good selectivity than the α7 subunit. DPNB-ABT594 can be used to map the distribution of nAChRs on neurons of the medial habenula (MHb) and helps to gain a deeper understanding of the nAChR‐mediated Ca^{2+} signalling in the MHb[1].
IC_{50} & Target	Target: α4β2 nAChR; α7 nAChR[1]
In Vitro	DPNB‐ABT594 (20 μM) exhibits large inward currents and Ca^{2+} transients in response to laser uncaging at 410 nm at the soma, which increases linearly with energy dosage as expected for one‐photon excitation (1 mW, 0.5-3 ms)[1]. DPNB‐ABT594 is suitable for one- or two-photon photolysis, it evokes large inward currents and Ca^{2+} transients on cell bodies and dendrites of medial habenular neurons in mouse brain slices, following exposure to 410 nm light[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Stefan Passlick, et al. Optical Probing of Acetylcholine Receptors on Neurons in the Medial Habenula With a Novel Caged Nicotine Drug Analogue.J Physiol. 2018 Nov;596(22):5307-5318.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA