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Zuschläge

- Mindermengenzuschlag
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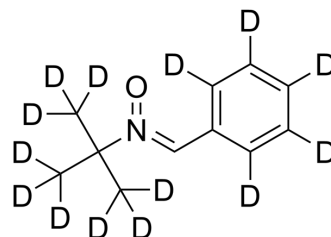
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N-tert-Butyl- α -phenylnitrone-d₁₄

Cat. No.:	HY-128463S
CAS No.:	119391-92-3
Molecular Formula:	C ₁₁ HD ₁₄ NO
Molecular Weight:	191.33
Target:	COX; Reactive Oxygen Species
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF- κ B
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	N-tert-Butyl- α -phenylnitrone-d ₁₄ is the deuterium labeled N-tert-Butyl- α -phenylnitrone[1]. N-tert-Butyl- α -phenylnitrone is a nitrone-based free radical scavenger that forms nitroxide spin adducts. N-tert-Butyl- α -phenylnitrone inhibits COX2 catalytic activity. N-tert-Butyl- α -phenylnitrone has potent ROS scavenging, anti-inflammatory, neuroprotective, anti-aging and anti-diabetic activities, and can penetrate the blood-brain barrier[2][3][4][5].
In Vitro	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 ^[1] . 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 Feb;53(2):211-216.
- [2]. Zhenggang Zhou, et al. PBN Protects NP Cells From AAPH-induced Degenerative Changes by Inhibiting the ERK1/2 Pathway. *Connect Tissue Res*. 2020 Mar 30;1-10.
- [3]. Lei Zhao, et al. Reactive Oxygen Species Contribute to Lipopolysaccharide-Induced Teratogenesis in Mice. *Toxicol Sci*. 2008 May103(1):149-57.
- [4]. Y Kotake, et al. Inhibition of NF-kappaB, iNOS mRNA, COX2 mRNA, and COX Catalytic Activity by phenyl-N-tert-butyl nitrone (PBN). *Biochim Biophys Acta*. 1998 Nov 191448(1):77-84.
- [5]. RA Floyd. Antioxidants, Oxidative Stress, and Degenerative Neurological Disorders. *Proc Soc Exp Biol Med*. 1999 Dec222(3):236-45.

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

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