
Product Data Sheet

Product Name: Nortriptyline

Cat. No.: GC64076

Chemical Properties

Cas. No. 72-69-5

Formula C₁₉H₂₁N M.Wt 263.38

Solubility Storage 4°C, protect from light

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

Nortriptyline hydrochloride (Desitriptyline, ELF-101, EN-7048, Desmethylamitriptyline) is the hydrochloride salt form of nortriptyline, a tricyclic antidepressant agent used for short-term treatment of various forms of depression.

Nortriptyline inhibits the vascular Kv channels in a concentration-dependent and state-independent manner independently of serotonin reuptake inhibition[1]. It is a tricyclic antidepressant. At the cellular level, nortriptyline is inhibitory to many proteins and responses such as astroglial inwardly rectifying Kir4.1 channels, human neutrophil phagocytosis and oxidative burst, human cytochrome P-450 enzymes, opioid receptors, Ca²⁺-activated K⁺ channels, and priming of human neutrophils. Nortriptyline induces a significant [Ca²⁺]_i rise and decreases viability in PC3 cells, MG63 human osteosarcoma, and renal tubular cells[2]. Nortriptyline also exhibits anticancer activity in several different types of cells. For example, in human cutaneous melanoma cells, NTP has a half maximal inhibitory concentration (IC₅₀) of 9 μM compared with 27 μM and 33 μM for clomipramine and amitriptyline, respectively. Nortriptyline induces cell cycle arrest and apoptosis in TCCSUP and MBT-2 cells[3].

Nortriptyline inhibits tumor growth in mice inoculated with MBT-2 cells. Low concentrations of NTP (0.1-5 μM) confer neuroprotective effects, downregulate cytosolic

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

phospholipase A2, and prevent mitochondrial depolarization with minimal toxicity in both astrocytes and mice. In contrast, higher concentrations of NTP (10-50 μ M) have anti-tumor effects on human osteosarcoma and cutaneous melanoma cells[3].

[1] Shin SE, et al. Korean J Physiol Pharmacol. 2017, 21(2):225-232. [2] Chih-Chuan Pan, et al. Drug Development Research. 2010, 71:323-330. [3] Yuan SY, et al. Eur J Pharmacol. 2015, 761:309-20.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA