
Product Data Sheet

Product Name: Tulobuterol-D9 hydrochloride

Cat. No.: GC63349

Chemical Properties

Cas. No. 1325559-14-5

Formula $C_{12}H_{10}D_9Cl_2NO$

M.Wt

273.25

Solubility

Storage

Store at -20°C

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**

Tulobuterol-D9 hydrochloride (C-78-D9) is the deuterium labeled Tulobuterol. Tulobuterol (C-78 free base) is a long-acting β 2-adrenoceptor agonist, which reduces the frequency of exacerbations of chronic obstructive pulmonary disease and bronchial asthma. Tulobuterol is also a sympathomimetic agent used as a transdermal patch, and increases normal diaphragm muscle strength[1].

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].

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216. [2]. Yamaya M, et al. Tulobuterol inhibits rhinovirus infection in primary cultures of human tracheal epithelial cells. *Physiol Rep.* 2013 Aug;1(3):e00041.; Shindoh C, et al. Tulobuterol patch maintains diaphragm muscle contractility for over twenty-four hours in a mouse model of sepsis. *Tohoku J Exp Med.* 2009 Aug;218(4):271-8.

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

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