Propranolol-d7 hydrochloride

Cat. No.: HY-B0573S

CAS No.: 1613439-56-7

Molecular Formula: $C_{16}H_{15}D_7ClNO_2$

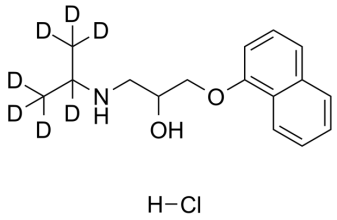
Molecular Weight: 302.85

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (330.20 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.3020 mL	16.5098 mL	33.0196 mL
5 mM	0.6604 mL	3.3020 mL	6.6039 mL
10 mM	0.3302 mL	1.6510 mL	3.3020 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Propranolol D7 hydrochloride is a deuterium labeled Propranolol hydrochloride. Propranolol hydrochloride is a nonselective β-adrenergic receptor (βAR) antagonist, has high affinity for the β1AR and β2AR with K_i values of 1.8 nM and 0.8 nM, respectively[1]. Propranolol hydrochloride inhibits [^{3}H]-DHA binding to rat brain membrane preparation with an IC_{50} of 12 nM[2]. Propranolol hydrochloride is used for the study of hypertension, pheochromocytoma, myocardial infarction, cardiac arrhythmias, angina pectoris, and hypertrophic cardiomyopathy[3].

IC_{50} & Target

IC50: 12 nM (βAR)[1]

REFERENCES

[1]. Galandrin S, et al. Distinct signaling profiles of beta1 and beta2 adrenergic receptor ligands toward adenylyl cyclase and mitogen-activated protein kinase reveals the pluridimensionality of efficacy. Mol Pharmacol. 2006 Nov;70(5):1575-84.

[2]. Briley M, et al. Evidence against beta-adrenoceptor blocking activity of diltiazem, a drug with calcium antagonist properties. Br J Pharmacol. 1980 Aug;69(4):669-73.

[3]. Al-Majed AA, et al. Propranolol. Profiles Drug Subst Excip Relat Methodol. 2017;42:287-338.

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