Propranolol-d_7 hydrochloride

Cat. No.: HY-B0573S

CAS No.: 1613439-56-7

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

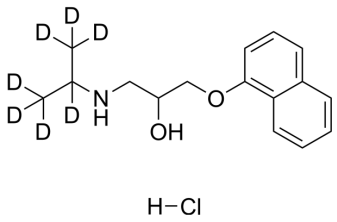
Molecular Weight: 302.85

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	Mass / Solvent / 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-d_7 (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 Ki values of 1.8 nM and 0.8 nM, respectively[1]. Propranolol hydrochloride inhibits [3H]-DHA binding to rat brain membrane preparation with an IC50 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

β adrenergic receptor

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.

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