Mabuterol hydrochloride

Cat. No.: HY-W755295

CAS No.: 54240-36-7

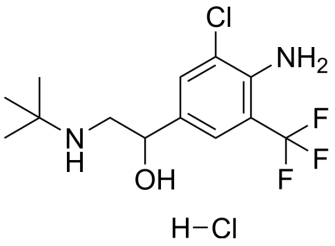
Molecular Formula: $C_{13}H_{19}Cl_2F_3N_2O$

Molecular Weight: 347.2

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Mabuterol hydrochloride is a selective and orally active beta-2 adrenergic receptor (ADRB2) agonist. Mabuterol hydrochloride inhibits the proliferation and suppresses the increase of intracellular Ca2+ induced by PDGF-BB. Mabuterol hydrochloride suppresses the protein expressions of Drp-1, cyclinD1 and PCNA and enhanced the expression of Mfn-2 induced by PDGF-BB[1][2].
IC_{50} & Target	Beta-2 adrenergic receptor
In Vitro	Mabuterol hydrochloride (10-60 μM; 48 h) inhibits the proliferation of ASMCs induced by PDGF-BB[2]. Mabuterol hydrochloride (50 μM; 1h) suppresses the increase of intracellular Ca2+ induced by PDGF-BB (25 ng/ml)[2]. Mabuterol hydrochloride (50 μM; 48 h) significantly suppresses the protein expressions of Drp-1, cyclinD1 and PCNA and enhanced the expression of Mfn-2 induced by PDGF-BB[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[2]

Cell Line:	rat ASMCs
Concentration:	10, 20, 30, 40, 50, 60 μM
Incubation Time:	24, 48 h
Result:	Inhibited the proliferation of ASMCs induced by PDGF-BB (25 ng/ml) in a dose-dependent maner at 48 h.

REFERENCES

[1]. Yamamoto I, et al. Enzyme immunoassay for mabuterol, a selective beta 2-adrenergic stimulant in the trachea. J Immunoassay. 1985;6(3):261-76.

[2]. Yaru Gu, et al. Inhibitory effect of mabuterol on proliferation of rat ASMCs induced by PDGF-BB via regulating [Ca2+]i and mitochondrial fission/fusion. Interactions, 2019, 307: 63-72.

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

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