Irbesartan hydrochloride

Cat. No.: HY-B0202A

CAS No.: 329055-23-4

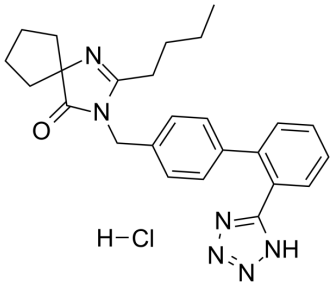
Molecular Formula: $C_{25}H_{29}ClN_6O$

Molecular Weight: 464.99

Target: Angiotensin Receptor; Apoptosis

Pathway: GPCR/G Protein; Apoptosis

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



BIOLOGICAL ACTIVITY

Description

Irbesartan (SR-47436) hydrochloride is an orally active Ang II type 1 (AT1) receptor blocker (ARB). Irbesartan hydrochloride can relax the blood vessels, low blood pressure and increase the supply of blood and oxygen to the heart. Irbesartan hydrochloride can be used for the research of high blood pressure, heart failure, and diabetic kidney disease[1].

In Vitro

Irbesartan hydrochloride (20 μM, 3 h) reduces Th22 cells chemotaxis in vitro[1].
Irbesartan hydrochloride (0 μM, 20 μM, 40 μM and 60 μM) suppresses Th22 cells differentiation in vitro[1].
Irbesartan hydrochloride (20 μM) inhibits Th22 cells related proinflammatory response of TECs in vitro[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	$CD4^+$ T cells
Concentration:	0, 20, 40 and 60 μM
Incubation Time:	48 h
Result:	Exerted no obvious effect on viability of $CD4^+$T cells.

In Vivo

Irbesartan hydrochloride (oral gavage; 50 mg/kg/d; once daily) reduces Th22 lymphocytosis and serum IL-22 level in Ang II-infused mice[1].
Irbesartan hydrochloride (oral gavage; 50 mg/kg/d; once daily) exerts obvious renoprotective effects[1].
Irbesartan hydrochloride (oral gavage; 50 mg/kg/d; once daily) relieves systemic inflammation and renal fibrosis in hypertension mice induced by Ang II[1].
Irbesartan hydrochloride (20 μM; for 3 h) can attenuate Th22 cells recruitment and IL-22 secretion, which might be through inhibiting chemotaxis in hypertensive renal injury mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6 mice[1]
Dosage:	50 mg/kg
Administration:	oral gavage; 50 mg/kg/d; once daily

Result:	Displayed low Th22 cells and IL-22, exerted similar inhibitory effect on Th1 cell proportion and displayed decreased IL-22 level in kidney. Prevented BP elevation markedly and decreased urinary albumin/creatinine ratio, BUN and Scr. Repressed the expression of IL-1β, IL-6, TNF-α, α-SMA, FN and Col I and diminished the extent of fibrosis.

Animal Model:	C57BL/6 mice[1]
Dosage:	20 μM
Administration:	20 μM; for 3 h
Result:	Downregulated renal CCL20, CCL22 and CCL27 concentrations.

CUSTOMER VALIDATION

- Biomedicines. 2021, 9(12), 1820.
- Atherosclerosis. 2019 Jul 23;288:124-136.
- Saudi Pharm J. 13 January 2022.

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REFERENCES

[1]. Yong Zhong, et al. Irbesartan may relieve renal injury by suppressing Th22 cells chemotaxis and infiltration in Ang II-induced hypertension. Int Immunopharmacol

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