Minalrestat

Cat. No.: HY-106877

CAS No.: 129688-50-2

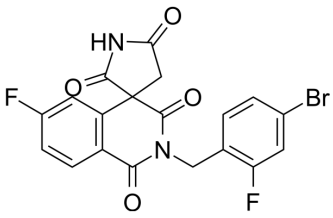
Molecular Formula: $C_{19}H_{11}BrF_2N_2O_4$

Molecular Weight: 449.2

Target: Aldose Reductase

Pathway: Metabolic Enzyme/Protease

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



BIOLOGICAL ACTIVITY

Description

Minalrestat (ARI-509) is a potent and orally active aldose reductase inhibitor. Minalrestat can be used in the research of diabetes[1].

In Vitro

Minalrestat (100 μM) decreased intracellular sorbitol without affecting intracellular glucose in primary cultured rat mesangial cells[3].

Minalrestat (100 μM, 48 h) causes accumulation of PKC-α and -β2 in primary cultured rat mesangial cells[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[3]

Cell Line:	Primary cultured rat mesangial cells
Concentration:	100 μM
Incubation Time:	48 h
Result:	Increased accumulation of PKC-α and -β2.

In Vivo

Minalrestat (Oral gavage, 10 mg/kg/day, for 30 days) corrects the decreased microvascular reactivity in diabetic rats[1].

Minalrestat (Oral gavage, 10 mg/kg) restores the reduced number of leukocytes adhered and migrated leukocytes in postcapillary venules in diabetic rats[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Alloxan (40 mg/kg i.v.)-induced diabetic rats[1]
Dosage:	10 mg/kg/day
Administration:	Oral gavage, for 30 days.
Result:	Restored the decreased microvascular reactivity.

REFERENCES

[1]. Akamine EH, et al. Minalrestat, an aldose reductase inhibitor, corrects the impaired microvascular reactivity in diabetes. J Pharmacol Exp Ther. 2003 Mar;304(3):1236-42.

[2]. Cruz JW, et al. Minalrestat and leukocyte migration in diabetes mellitus. Diabetes Metab Res Rev. 2003 May-Jun;19(3):223-31.

[3]. Kapor-Drezgic J, et al. Effect of high glucose on mesangial cell protein kinase C-delta and -epsilon is polyol pathway-dependent. J Am Soc Nephrol. 1999 Jun;10(6):1193-203.

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