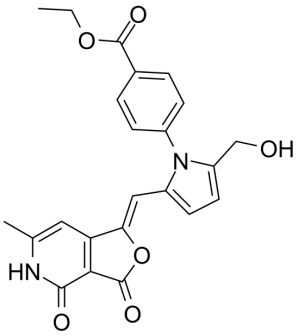
α-Glucosidase-IN-11

Cat. No.:	HY-150560
CAS No.:	2411744-76-6
Molecular Formula:	$C_{23}H_{20}N_2O_6$
Molecular Weight:	420.41
Target:	Glucosidase
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

α-Glucosidase-IN-11 is a highly permeable competitive α-glucosidase inhibitor with the IC_{50} value of 0.56 μM. α-Glucosidase-IN-11 binds to Trp residues in α-glucosidase and regulates protein folding. α-Glucosidase-IN-11 can be used to regulate blood glucose levels[1].

In Vitro

α-Glucosidase-IN-11 (compound 3k) inhibits α-glucosidase, α-fucosidase and α-mannosidase with the IC_{50} value of 0.56 μM, 30.4 μM and 41.2 μM, respectively[1].

α-Glucosidase-IN-11 (compound 3k) (0.1-100 μM, 24 hours) can induce β-cell proliferation at lower concentration[1].

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

Cell Proliferation Assay[1]

Cell Line:	BRIN-BD11 cells (rat beta cell line)
Concentration:	0.1-100 μM
Incubation Time:	24 hours
Result:	Showed cell proliferation at low concentration of 1 μM and minor cytotoxic effect at higher concentration greater than 10 μM.

In Vivo

α-Glucosidase-IN-11 (compound 3k) (gastric gavage, 60 mg/kg, everyday, 4 weeks) can improve blood glucose levels during fasting[1].

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

Animal Model:	Male Sprague Dawley rats (250e320g)[1]
Dosage:	60 mg/kg
Administration:	Gastric gavage; everyday; 4 weeks
Result:	Caused a significant drop in fasting blood glucose during the first and second weeks but did not cause a decrease in non-fasting blood glucose for up to four weeks.

REFERENCES

[1]. Tania Luthra, et al. Discovery of novel pyrido-pyrrolidine hybrid compounds as alpha-glucosidase inhibitors and alternative agent for control of type 1 diabetes. Eur J Med Chem. 2020 Feb 15;188:112034.

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