Azemiglitazone potassium

Cat. No.: HY-108022A

CAS No.: 1314533-27-1

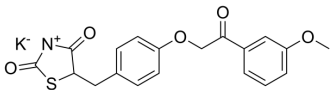
Molecular Formula: $C_{19}H_{16}KNO_5S$

Molecular Weight: 409.5

Target: Insulin Receptor; PPAR

Pathway: Protein Tyrosine Kinase/RTK; Cell Cycle/DNA Damage; Vitamin D Related/Nuclear Receptor

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 : 250 mg/mL (610.50 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4420 mL	12.2100 mL	24.4200 mL
	5 mM	0.4884 mL	2.4420 mL	4.8840 mL
	10 mM	0.2442 mL	1.2210 mL	2.4420 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Azemiglitazone potassium (MSDC-0602K), a PPARγ-sparing thiazolidinedione (Ps-TZD), binds to PPARγ with the IC_{50} of 18.25 μM[1]. Azemiglitazone potassium modulates the mitochondrial pyruvate carrier (MPC). Azemiglitazone potassium can be used for the research of fatty liver including dysfunctional lipid metabolism, inflammation, and insulin resistance[2]. Azemiglitazone potassium, an insulin sensitizer, improves insulinemia and fatty liver disease in mice, alone and in combination with Liraglutide[3].

IC_{50} & Target

PPAR-γ
18.25 μM (IC_{50})

In Vivo

Diabetic db/db and MS-NASH mice are treated with Azemiglitazone potassium by oral gavage, Liraglutide by s.c. injection, or combination Azemiglitazone potassium + Liraglutide. This combination treatment may be an effective therapeutic strategy for diabetes and non-alcoholic steatohepatitis (NASH).

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

Animal Model:	Five-week-old male db/db mice on C57BL/6J background and age/sex-matched db/+

	control mice[1]
Dosage:	30 mg/kg MSDC-0602K; 0.2 mg/kg Liraglutide (obtained from MedChemExpress; HY-P0014)
Administration:	MSDC-0602K gavage daily, Liraglutide s.c. injection every other day, or combined MSDC-0602K+ Liraglutide
Result:	MSDC-0602K corrected glycemia and reduced insulinemia when given alone, or in combination with Liraglutide. However, MSDC-0602K + Liraglutide combination more significantly improved glucose tolerance and liver histology.

REFERENCES

[1]. Zhouji Chen, et al. Insulin resistance and metabolic derangements in obese mice are ameliorated by a novel peroxisome proliferator-activated receptor γ-sparing thiazolidinedione. J Biol Chem. 2012 Jul 6;287(28):23537-48.

[2]. Jerry R Colca, et al. MSDC-0602K, a metabolic modulator directed at the core pathology of non-alcoholic steatohepatitis. Expert Opin Investig Drugs. 2018 Jul;27(7):631-636.

[3]. Dakota R Kamm, et al. Novel insulin sensitizer MSDC-0602K improves insulinemia and fatty liver disease in mice, alone and in combination with liraglutide. J Biol Chem. Jan-Jun 2021;296:100807.

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