

MSDC-0602K

Chemical Properties

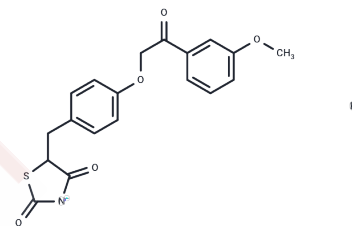
CAS No. : 1314533-27-1

Formula: C19H16KNO5S

Molecular Weight: 409.5

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	MSDC-0602K (Azemiglitazone potassium) (Azemiglitazone potassium) is a PPAR γ -sparing thiazolidinedione (Ps-TZD) compound that binds to PPAR γ with an IC ₅₀ of 18.25 μ M. It also modulates the mitochondrial pyruvate carrier (MPC). This compound, MSDC-0602K, has potential applications in researching fatty liver conditions, including dysfunctional lipid metabolism, inflammation, and insulin resistance. MSDC-0602K acts as an insulin sensitizer, improving insulinemia and fatty liver disease in mice both individually and in combination with Liraglutide.
Targets(IC50)	IGF-1R,PPAR
In vivo	Diabetic db/db and MS-NASH mice are treated with MSDC-0602K via oral gavage, Liraglutide via s.c. injection, or a combination of MSDC-0602K + Liraglutide. This combination treatment may be an effective therapeutic strategy for diabetes and non-alcoholic steatohepatitis. 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 and 0.2 mg/kg Liraglutide. Administration: MSDC-0602K gavage daily, Liraglutide s.c. every other day, or combined MSDC-0602K + Liraglutide. Result: MSDC-0602K alone corrected glycemia and reduced insulinemia, while the combination with Liraglutide significantly improved glucose tolerance and liver histology[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (122.1 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.442 mL	12.210 mL	24.420 mL
5 mM	0.4884 mL	2.442 mL	4.884 mL
10 mM	0.2442 mL	1.221 mL	2.442 mL
50 mM	0.0488 mL	0.2442 mL	0.4884 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- 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.
- 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.
- 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.

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