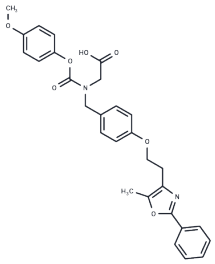
Data Sheet (Cat.No.T21587)

TargetMol

Muraglitazar

Chemical Properties



CAS No. : 331741-94-7

Formula: C29H28N2O7

Molecular Weight: 516.54

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	Muraglitazar (BMS-298585) is a dual agonist of PPARα/γ that exerts metabolic regulatory effects including lipid modulation, glucose reduction, improvement of insulin resistance, and weight loss. It is indicated for the treatment of type 2 diabetes and associated dyslipidemia. Muraglitazar exhibits potent in vitro activity against human PPARα (EC50 = 320 nM) and PPARγ (EC50 = 110 nM).
Targets(IC50)	PPAR
In vitro	**Methods**: Steatotic HepaRG cells were treated with 50 μM Muraglitazar for 24 hours or 14 days. After incubation with [^{14}C]-palmitic acid, β-oxidation products were detected to assess fatty acid oxidation (FAO) activity, and mRNA expression of lipid metabolism and nuclear receptor-related genes was analyzed by RT-qPCR. **Results**: Short-term treatment with Muraglitazar had no effect on FAO. After 14 days of treatment, Muraglitazar significantly increased FAO activity, downregulated de novo lipogenesis genes, and persistently upregulated FAO-related genes. Additionally, Muraglitazar upregulated the expression of FXR and CAR nuclear receptors, further inhibiting lipid synthesis.[4]

Solubility Information

Solubility	DMSO: 128.8 mg/mL (249.35 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (6.39 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.936 mL	9.6798 mL	19.3596 mL
5 mM	0.3872 mL	1.936 mL	3.8719 mL
10 mM	0.1936 mL	0.968 mL	1.936 mL
50 mM	0.0387 mL	0.1936 mL	0.3872 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

Buse JB, Rubin CJ, Frederich R, et al. Muraglitazar, a dual (alpha/gamma) PPAR activator: a randomized, double-blind, placebo-controlled, 24-week monotherapy trial in adult patients with type 2 diabetes. Clin Ther. 2005;27(8):1181-1195.

Cox SL. Muraglitazar: an agent for the treatment of type 2 diabetes and associated dyslipidemia. Drugs Today (Barc). 2005;41(9):579-587.

Balakumar P, Mahadevan N, Sambathkumar R. A Contemporary Overview of PPARα/γ Dual Agonists for the Management of Diabetic Dyslipidemia. Curr Mol Pharmacol. 2019;12(3):195-201.

Rogue A, Anthérieu S, Vluggens A, et al. PPAR agonists reduce steatosis in oleic acid-overloaded HepaRG cells. Toxicol Appl Pharmacol. 2014;276(1):73-81.