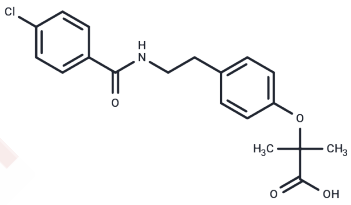
Data Sheet (Cat.No.T0841)

TargetMol

Bezafibrate

Chemical Properties



CAS No. : 41859-67-0

Formula: C19H20ClNO4

Molecular Weight: 361.82

Storage: Store at low temperature
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	Bezafibrate (BM15075) is an antilipemic agent that lowers CHOLESTEROL and TRIGLYCERIDES. It decreases LOW-DENSITY LIPOPROTEINS and increases HIGH-DENSITY LIPOPROTEINS.
Targets(IC50)	PPAR
In vitro	Bezafibrate significantly decreases plasma triglyceride and leptin levels without altering the expression of PPARγ in white adipose tissue or the ob gene. Treatment with Bezafibrate resulted in much smaller gonadal fat stores in wild-type and PPARβ-null mice (2.8 and ~2.6 times less, respectively) than in controls, while PPARα-null mice did not exhibit this effect. Bezafibrate altered the expression of mRNAs coding for lipid metabolism enzymes, such as AOX, CYP4A, LPL, ACS, and LCAD, in wild-type, PPARβ-null, and PPARα-null mice. It induced the expression of UCPs in rat epididymal white adipose tissue and altered energy balance by directly inducing aco gene expression (14.5-fold increase on day 7) and peroxisomal fatty acid beta-oxidation. Bezafibrate treatment upregulated mRNA levels of M-CPT-I (4.5-fold), fatty acid translocase (2.6-fold), and Pref-1 (5.6-fold) in rat epididymal white adipose tissue. Compared to controls, Bezafibrate significantly increased liver weight in wild-type and PPARβ-null mice, with no change observed in PPARα-null mice.
In vivo	Bezafibrate exhibits an EC50 of 5 μM when binding to xPPARβ. Additionally, Bezafibrate activates the transcription of Xenopus PPARβ with an EC50 of 1 μM.

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 15 mg/mL (41.46 mM),Sonication is recommended. DMSO: 260 mg/mL (718.59 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: 2 mg/mL (5.53 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7638 mL	13.819 mL	27.6381 mL
5 mM	0.5528 mL	2.7638 mL	5.5276 mL
10 mM	0.2764 mL	1.3819 mL	2.7638 mL
50 mM	0.0553 mL	0.2764 mL	0.5528 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

Krey G, et al. Mol Endocrinol, 1997, 11(6), 779-791.
Zeng X, Zhu S, Lu W, et al. Target identification among known drugs by deep learning from heterogeneous networks. Chemical Science. 2020, 11(7): 1775-1797.
Cabrero A, et al. Diabetes, 2001, 50(8), 1883-1890.
Peters JM, et al. Biochim Biophys Acta, 2003, 1632(1-3), 80-89.
Vázquez M, et al. Mol Cell Biochem. 2001 Jan;216(1-2):71-8.
Franko A, et al. Bezafibrate ameliorates diabetes via reduced steatosis and improved hepatic insulin sensitivity in diabetic TallyHo mice. Mol Metab. 2017 Jan 6;6(3):256-266.
Zeng X, Zhu S, Lu W, et al. Target identification among known drugs by deep learning from heterogeneous networks[J]. Chemical Science. 2020, 11(7): 1775-1797.