

Product data sheet



MedKoo Cat#: 596290 Name: Benfluorex CAS#: 23602-78-0 Chemical Formula: C ₁₉ H ₂₀ F ₃ NO ₂ Exact Mass: 351.1446 Molecular Weight: 351.36		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.	
	In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Benfluorex, a hypolipidemic and an anorectic agent, has been considered to treat people with type 2 diabetes by improving glycemc control and decreasing insulin resistance.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.85 mL	14.23 mL	28.46 mL
5 mM	0.57 mL	2.85 mL	5.69 mL
10 mM	0.28 mL	1.42 mL	2.85 mL
50 mM	0.06 mL	0.28 mL	0.57 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Sommariva D, Blasi F, Cosentini R, Berruto M. Effects of benfluorex on sterol biosynthesis in incubated human blood mononuclear cells. *Drugs Exp Clin Res.* 1986;12(11):923-7. PMID: 3816510.

In vivo study

1. Serradas P, Blondel O, Bailbe D, Portha B. Benfluorex normalizes hyperglycemia and reverses hepatic insulin resistance in STZ-induced diabetic rats. *Diabetes.* 1993 Apr;42(4):564-70. doi: 10.2337/diab.42.4.564. PMID: 8454107.

7. Bioactivity

Biological target: Benfluorex is a hepatic nuclear factor 4 alpha (HNF4α) activator.

In vitro activity

Benfluorex had an inhibitory activity on the incorporation of 14C-acetate and of 14C-HMG-CoA into non-saponifiable lipids in human blood mononuclear cells incubated in lipid-deficient medium. The lack of effect on the incorporation of 14C-mevalonate into non-saponifiable lipids strongly suggested that the reduction of sterol biosynthesis was mainly due to the inhibition of HMG-CoA reductase activity.

Reference: *Drugs Exp Clin Res.* 1986;12(11):923-7. <https://pubmed.ncbi.nlm.nih.gov/3816510/>

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In vivo activity

The effect of chronic (20 days) oral administration of benfluorex (35 mg/kg) in a rat model of NIDDM, induced by injection of STZ 5 days after birth and characterized by frank hyperglycemia, hypoinsulinemia, and hepatic and peripheral insulin resistance, was examined. Basal blood glucose and insulin levels, glucose tolerance and glucose-induced insulin release in vivo, and basal and insulin-stimulated in vivo glucose production and glucose utilization were examined. In the benfluorex-treated diabetic rats, postabsorptive basal plasma glucose levels were decreased (8.1 +/- 0.2 mM compared with 10.5 +/- 0.5 mM in the pair-fed untreated diabetic rats and 6.1 +/- 0.2 mM in the benfluorex-treated nondiabetic rats), whereas the basal and glucose-stimulated intravenous glucose tolerance test plasma insulin levels were not improved. In the pair-fed untreated diabetic rats, the basal glucose production and overall glucose utilization were significantly increased. In the benfluorex-treated diabetic rats, the basal glucose production and basal overall glucose utilization were normalized. After hyperinsulinemia, glucose production was normally suppressed, whereas overall glucose utilization was not significantly improved.

Reference: Diabetes. 1993 Apr;42(4):564-70. <https://diabetes.diabetesjournals.org/content/42/4/564.long>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.