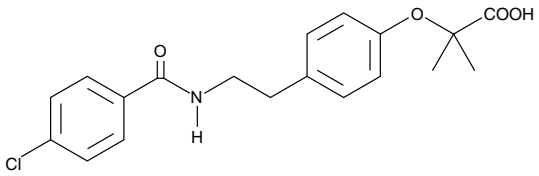
# Product Information

## Bezafibrate

*Item No. 10009145*

**CAS Registry No.:** 41859-67-0
**Formal Name:** 2-[4-[2-[(4-chlorobenzoyl)amino]ethyl] phenoxy]-2-methyl-propanoic acid
**Synonyms:** Benzofibrate, BM 15075, Bezalip, Bezatrol, Difaterol
**MF:** $C_{19}H_{20}ClNO_4$
**FW:** 361.8
**Purity:** ≥98%
**Stability:** ≥2 years at -20°C
**Supplied as:** A crystalline solid
**UV/Vis.:** $\lambda_{max}$: 229 nm




### Laboratory Procedures

For long term storage, we suggest that bezafibrate be stored as supplied at -20°C. It should be stable for at least two years.

Bezafibrate is supplied as a crystalline solid. A stock solution may be made by dissolving the bezafibrate in an organic solvent purged with an inert gas. Bezafibrate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of bezafibrate in ethanol is approximately 3 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Bezafibrate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, bezafibrate should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Bezafibrate has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Bezafibrate is a well established pan-peroxisome proliferator-activated receptor (pan-PPAR) activator. This fibrate drug has over 25 years of therapeutic use with a good safety profile. The fibrate class of drugs are generally known as PPARα agonists, but bezafibrate appears to activate PPARδ and PPARγ as well. Bezafibrate activates human PPARα, PPARδ, and PPARγ with $EC_{50}$ values of 50, 20, and 60 µM, respectively, in a cell-based transcription assay.[1] Bezafibrate is used to treat hyperlipidemia. It helps lower low-density lipoprotein cholesterol and triglycerides while raising high-density lipoprotein cholesterol levels. It also improves insulin sensitivity and reduces blood glucose levels, which in combination with the cholesterol effects significantly lowers the incidence of cardiovascular events and development of diabetes in patients with features of metabolic syndrome.[2]

### References


1. Willson, T.M., Brown, P.J., Sternbach, D.D., *et al.* The PPARs: From orphan receptors to drug discovery. *J. Med. Chem.* **43(4)**, 528-550 (2000).
2. Tenenbaum, A., Motro, M., and Fisman, E.Z. Dual and pan-peroxisome proliferator-activated receptors (PPAR) co-agonism: The bezafibrate lessons. *Cardiovascular Diabetology* **4(14)**, 1-5 (2005).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***Cayman Chemical***

**Mailing address**
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

**Phone**
(800) 364-9897
(734) 971-3335

**Fax**
(734) 971-3640

**E-Mail**
custserv@caymanchem.com

**Web**
www.caymanchem.com