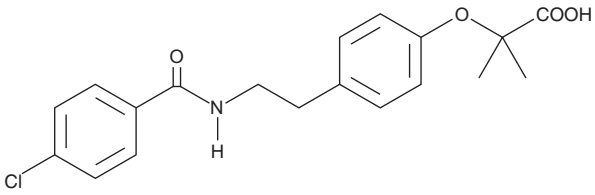
# PRODUCT INFORMATION

## 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
**MF:** $C_{19}H_{20}ClNO_4$
**FW:** 361.8
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 229 nm
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** ≥4 years




*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

Bezafibrate is supplied as a crystalline solid. A stock solution may be made by dissolving the bezafibrate in the solvent of choice, which should be 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.

### Description

Bezafibrate is a non-selective agonist of peroxisome proliferator-activated receptors (PPARs; $EC_{50}$s = 50, 60, and 20 µM for human PPARα, PPARγ, and PPARδ, respectively).[1] It reduces triglyceride levels and the size of lipid droplets in an oleic acid-induced HepaRG hepatocyte model of steatosis when used at a concentration of 25 µM.[2] Bezafibrate (10 mg/kg per day) reduces plasma VLDL and LDL mass and triglyceride and free fatty acid levels in a high-fructose plus lard diet-induced rat model of insulin resistance.[3]

### 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. Rogue, A., Anthérieu, S., Vluggens, A., *et al.* PPAR agonists reduce steatosis in oleic acid-overloaded HepaRG cells. *Toxicol. Appl. Pharmacol.* **276(1)**, 73-81 (2014).
3. Matsui, H., Okumura, K., Kawakami, K., *et al.* Improved insulin sensitivity by bezafibrate in rats: Relationship to fatty acid composition of skeletal-muscle triglycerides. *Diabetes* **46(3)**, 348-353 (1997).





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