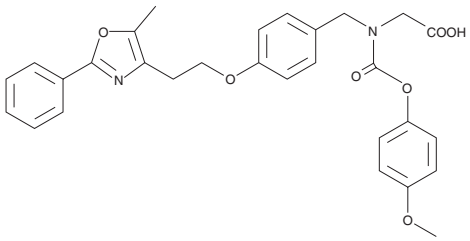
PRODUCT INFORMATION

Muraglitazar

Item No. 10007853

CAS Registry No.: 331741-94-7
Formal Name: N-[(4-methoxyphenoxy)carbonyl]-N-[[4-[2-(5-methyl-2-phenyl-4-oxazolyl)ethoxy]phenyl]methyl]-glycine
Synonym: BMS-298585
MF: $C_{29}H_{28}N_2O_7$
FW: 516.5
Purity: ≥90%
Supplied as: A crystalline powder
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Muraglitazar is supplied as a crystalline solid. A stock solution may be made by dissolving the muraglitazar in the solvent of choice, which should be purged with an inert gas. Muraglitazar is soluble in DMSO and is slightly soluble in chloroform and methanol.

Description

Muraglitazar is a dual agonist of peroxisome proliferator-activated receptor α (PPARα) and PPARγ (EC_{50}s = 0.32 and 0.11 µM, respectively).[1] It is selective for PPARα/γ over other nuclear receptors, including PPARδ, RXRα, RARs, estrogen receptor α (ERα), ERβ, androgen receptor (AR), and progesterone receptor (PR). Muraglitazar (50 µM) reduces the size of lipid droplets in oleic acid-treated HepaRG human hepatocytes.[2] It reduces plasma levels of glucose, triglycerides, free fatty acids, and insulin by 54, 33, 62, and 48%, respectively, in *db/db* mice when administered at a dose of 10 mg/kg per day.[1] Muraglitazar (10 mg/kg per day) reduces plasma levels of glucose, triglycerides, and cholesterol in diet-induced obese mice.[3] Muraglitazar also inhibits LPS-induced increases in nitric oxide (NO) production and IL-6, TNF-α, and inducible nitric oxide synthase (iNOS) protein levels in J774 murine macrophages in a concentration-dependent manner.[4] It inhibits carrageenan-induced paw edema in mice when administered at doses ranging from 12.5 to 50 mg/kg.

References

1. Devasthale, P.V., Chen, S., Jeon, Y., *et al.* Design and synthesis of N-[(4-methoxyphenoxy)carbonyl]-N-[[4-[2-(5-methyl-2-phenyl-4-oxazolyl)ethoxy]phenyl]methyl]glycine [Muraglitazar/BMS-298585], a novel peroxisome proliferator-activated receptor α/γ dual agonist with efficacious glucose and lipid-lowering activities. *J. Med. Chem.* **48(6)**, 2248-2250 (2005).
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. Harrity, T., Farrelly, D., Tieman, A., *et al.* Muraglitazar, a novel dual (α/γ) peroxisome proliferator-activated receptor activator, improves diabetes and other metabolic abnormalities and preserves β-cell function in *db/db* mice. *Diabetes* **55(1)**, 240-248 (2006).
4. Paukkeri, E.-L., Leppänen, T., Lindholm, M., *et al.* Anti-inflammatory properties of a dual PPARgamma/alpha agonist muraglitazar in *in vitro* and *in vivo* models. *Arthritis Res. Ther.* **15(2):R51** (2013).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM