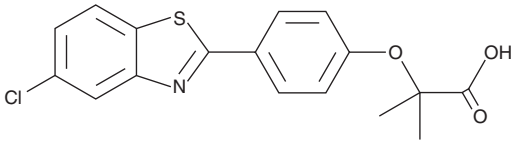
PRODUCT INFORMATION

MHY908

Item No. 18293

CAS Registry No.:	1393371-39-5
Formal Name:	2-[4-(5-chloro-2-benzothiazolyl) phenoxy]-2-methyl-propanoic acid
MF:	$C_{17}H_{14}ClNO_3S$
FW:	347.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 217, 310, 324 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

MHY908 is supplied as a crystalline solid. A stock solution may be made by dissolving the MHY908 in the solvent of choice, which should be purged with an inert gas. MHY908 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MHY908 in these solvents is approximately 1, 10, and 25 mg/ml, respectively.

MHY908 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MHY908 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MHY908 has a solubility of approximately 0.1 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MHY908 is a dual agonist of peroxisome proliferator-activated receptor α (PPARα) and PPARγ that increases transcriptional activity of PPARα and PPARγ in a luciferase reporter assay in AC2F rat liver cells when used at a concentration of 5 µM.[1] *In vivo*, MHY908 (3 mg/kg per day) reduces serum glucose, triglyceride, and insulin levels and improves hepatic steatosis by reducing hepatic triglyceride levels and lipid droplet accumulation in *db/db* mice and 20-month-old rats.[1,2] It reduces peroxynitrite and COX-2 levels, reactive oxygen species (ROS) production, and Akt phosphorylation in isolated kidney from 20-month-old rats when administered at a dose of 3 mg/kg.[2] MHY908 inhibits mushroom tyrosinase (IC_{50} = 8.19 µM).[3] It also inhibits increases in melanin content in α-melanocyte stimulating hormone-induced B16/F10 murine melanoma cells when used at a concentration of 10 µM.

References

1. Park, M.H., Park, J.Y., Lee, H.J., *et al.* Potent anti-diabetic effects of MHY908, a newly synthesized PPARα/γ dual agonist in *db/db* mice. *PLoS One* **8(11)**, e78815 (2013).
2. Park, M.H., Kim, D.H., Kim, M.J., *et al.* Effects of MHY908, a new synthetic PPARα/γ dual agonist, on inflammatory responses and insulin resistance in aged rats. *J. Gerontol. A Biol. Sci. Med. Sci.* **71(3)**, 300-309 (2016).
3. Park, M.H., Kim, S.J., Jeong, H.O., *et al.* Inhibition of melanogenesis by 2-[4-(5-chlorobenzo[d]thiazol-2-yl) phenoxy]-2-methylpropanoic acid (MHY908). *Arch. Pharm. Res.* **38(4)**, 505-511 (2015).

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