

Product Data Sheet

Product Name: GW9508

Cat. No.: GC12401

Chemical Properties

Cas. No. 885101-89-3

Chemical Name 3-[4-[(3-phenoxyphenyl)methylamino]phenyl]propanoic acid

SMILES C1=CC=C(C=C1)OC2=CC=CC(=C2)CNC3=CC=C(C=C3)CCC(=O)O

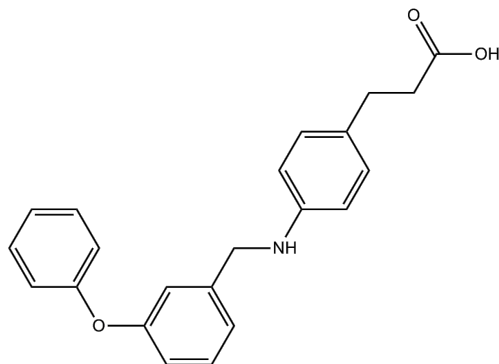
Formula C22H21NO3 M.Wt 347.41

Solubility $\geq 16.05\text{mg/mL}$ in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

GW9508 is a selective agonist of GPR40 and 120 with pEC_{50} value of 7.32 ± 0.03 and 5.46 ± 0.09 , respectively [1].

GPR40/120 belongs to G protein-coupled receptors (GPCRs) family and is activated by free fatty acids. Mucosal inflammation induced the overexpression of GPR40, GPR120, and several inflammatory cytokines, with correlations between ileal concentrations of tumor necrosis factor (TNF)- α and GPR expression levels [2] [3].

GW9508 is a GPR40/120 agonist and is different from the reported GPR40/120 agonist GW1100.

Caution: Product has not been fully validated for medical applications. For research use only.

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When tested with HEK-293 (human embryonic kidney) cells expressing GPR40 or GPR120, GW9508 treatment increased intracellular Ca^{2+} concentration via activating GPR40/120 in a dose-dependent manner [1]. In rat pancreatic β -cells, GW9508 treatment activated KATP channels which inhibited GSIS through agonist of GPR40 and GPR120 [4]. When tested with TNF- α treated rat L cells, administration of GW9508 increased the expression of GLP-2 via activating GPR40 and 120 [2].

References:

- [1].Briscoe, C.P., et al., *Pharmacological regulation of insulin secretion in MIN6 cells through the fatty acid receptor GPR40: identification of agonist and antagonist small molecules*. *Br J Pharmacol*, 2006. 148(5): p. 619-28.
- [2].Tsukahara, T., et al., *Tumor necrosis factor alpha decreases glucagon-like peptide-2 expression by up-regulating G-protein-coupled receptor 120 in Crohn disease*. *Am J Pathol*, 2015. 185(1): p. 185-96.
- [3].Habib, A.M., et al., *Co-localisation and secretion of glucagon-like peptide 1 and peptide YY from primary cultured human L cells*. *Diabetologia*, 2013. 56(6): p. 1413-6.
- [4].Zhao, Y.F., et al., *GW9508 inhibits insulin secretion by activating ATP-sensitive potassium channels in rat pancreatic beta-cells*. *J Mol Endocrinol*, 2013. 51(1): p. 69-77.

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