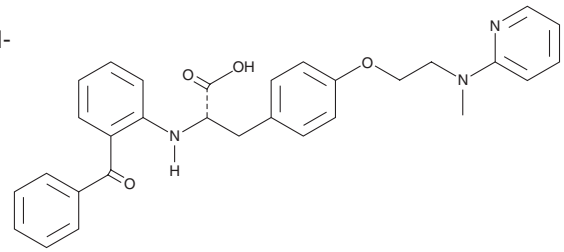
PRODUCT INFORMATION

GW 1929

Item No. 13689

CAS Registry No.:	196808-24-9
Formal Name:	N-(2-benzoylphenyl)-O-[2-(methyl-2-pyridinylamino)ethyl]-L-tyrosine
MF:	$C_{30}H_{29}N_3O_4$
FW:	495.6
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

GW 1929 is supplied as a crystalline solid. A stock solution may be made by dissolving the GW 1929 in the solvent of choice. GW 1929 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of GW 1929 in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

GW 1929 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GW 1929 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. GW 1929 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

Peroxisome proliferator-activated receptor (PPAR) γ is a nuclear receptor that, when activated, regulates fatty acid storage and glucose metabolism.[1] The best known class of PPARγ ligands are the thiazolidinediones, including troglitazone (Item No. 71750) and rosiglitazone (Item No. 71740).[2] GW 1929 is a non-thiazolidinedione activator of PPARγ that binds with a K_i value of 1.4 nM, with greater than 1,000-fold selectivity over other PPAR subtypes.[3] It has anti-hyperglycemic and anti-hyperlipidemic activity when given orally in mouse and rat models of type 2 diabetes.[3,4] Both *in vitro* and *in vivo* effects of GW 1929 on PPARγ greatly exceed those produced by troglitazone.[3,4] In addition, GW 1929 has neuroprotective effects in global cerebral ischemic-reperfusion injury that are related to reduced inflammation and apoptotic DNA fragmentation.[5]

References

1. Yang, Q. and Li, Y. Roles of PPARs on regulating myocardial energy and lipid homeostasis. *J. Mol. Biol.* **85**, 697-706 (2007).
2. Lehmann, J.M., Moore, L.B., Smith-Oliver, T.A., *et al.* An antidiabetic thiazolidinedione is a high affinity ligand for peroxisome proliferator-activated receptor γ (PPARγ). *J. Biol. Chem.* **270**, 12953-12956 (1995).
3. Henke, B.R., Blanchard, S.G., Brackeen, M.F., *et al.* N-(2-Benzoylphenyl)-L-tyrosine PPARγ agonists. 1. Discovery of a novel series of potent antihyperglycemic and antihyperlipidemic agents. *J. Med. Chem.* **41(25)**, 5020-5036 (1998).
4. Brown, K.K., Henke, B.R., Blanchard, S.G., *et al.* A novel N-aryl tyrosine activator of peroxisome proliferator-activated receptor-γ reverses the diabetic phenotype of the Zucker diabetic fatty rat. *Diabetes* **48(7)**, 1415-1424 (1999).
5. Kaundal, R.K. and Sharma, S.S. GW1929: A nonthiazolidinedione PPARγ agonist, ameliorates neurological damage in global cerebral ischemic-reperfusion injury through reduction in inflammation and DNA fragmentation. *Behav. Brain Res.* **216(2)**, 606-612 (2011).

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