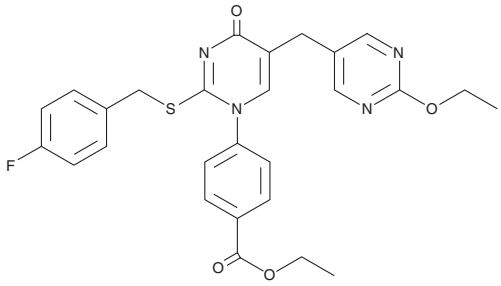
PRODUCT INFORMATION

GW 1100

Item No. 10008908

CAS Registry No.:	306974-70-9
Formal Name:	4-[5-[(2-ethoxy-5-pyrimidinyl) methyl]-2-[[(4-fluorophenyl)methyl] thio]-4-oxo-1(4H)-pyrimidinyl]-benzoic acid, ethyl ester
MF:	$C_{27}H_{25}FN_4O_4S$
FW:	520.6
Purity:	≥95%
UV/Vis.:	λ_{max}: 243 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

GW 1100 is supplied as a crystalline solid. A stock solution may be made by dissolving the GW 1100 in the solvent of choice, which should be purged with an inert gas. GW 1100 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of GW 1100 in these solvents is approximately 2 and 5 mg/ml, respectively.

GW 1100 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GW 1100 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. GW 1100 has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

GPR40 (free fatty acid receptor 1; FFAR1) is a G protein-coupled receptor (GPCR) that is activated by saturated and unsaturated long chain fatty acids. It is thought to play a role in the potentiation of insulin secretion by fatty acids in a glucose-sensitive manner. GW 1100 is a selective antagonist of GPR40-mediated Ca^{2+} elevations in HEK293 cells stimulated by GW 9508 (an agonist of both GPR40 and GPR120 (FFAR4), another GPCR activated by long chain fatty acids) or linoleic acid with a pIC_{50} value equal to 5.99. However at concentrations up to 10 µM, GW 1100 has no effect on GPR120-mediated stimulation of intracellular Ca^{2+} release induced by either GW 9508 or linoleic acid.[1] In the MIN6 mouse insulinoma cell line, 1 µM GW 1100 inhibits the potentiating effects of GW 9508 and linoleic acid on glucose-stimulated insulin secretion.[1]

Reference

1. Briscoe, C.P., Peat, A.J., McKeown, S.C., *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.* **148(5)**, 619-628 (2006).

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