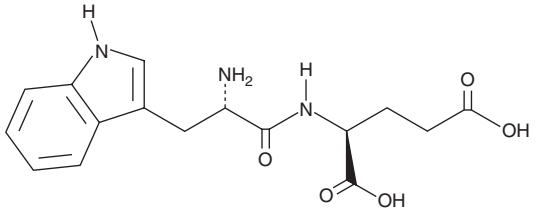
PRODUCT INFORMATION

G3335

Item No. 17593

CAS Registry No.:	36099-95-3
Formal Name:	L-tryptophyl-L-glutamic acid
MF:	$C_{16}H_{19}N_3O_5$
FW:	333.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 218, 278, 288 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

G3335 is supplied as a crystalline solid. A stock solution may be made by dissolving the G3335 in the solvent of choice, which should be purged with an inert gas. G3335 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of G3335 in these solvents is approximately 5 and 1 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of G3335 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of G3335 in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Peroxisome proliferator-activated receptor γ (PPARγ) is a nuclear receptor with key roles in adipocyte differentiation and glucose homeostasis.[1,2] G3335 is a cell-permeable dipeptide that potently antagonizes PPARγ (K_d = 8.34 µM).[3] It reversibly and competitively blocks activation of PPARγ by rosiglitazone (IC_{50} = 8-32 µM).[3] G3335 is active *in vivo*, abolishing the protective effects of rosiglitazone in experimental spinal cord injury in rats.[4] G3335 has also been used to evaluate the role of PPARγ in neurotoxicity studies.[5,6]

References

1. Heikkinen, S., Auwerx, J., and Argmann, C.A. PPARγ in human and mouse physiology. *Biochim. Biophys. Acta* **1771(8)**, 999-1013 (2007).
2. Michalik, L., Auwerx, J., Berger, J.P., *et al.* International union of pharmacology. LXI. Peroxisome proliferator-activated receptors. *Pharmacol. Rev.* **58**, 726-741 (2006).
3. Ye, F., Zhang, Z.S., Luo, H.B., *et al.* The dipeptide H-Trp-Glu-OH shows highly antagonistic activity against PPARγ: Bioassay with molecular modeling simulation. *ChemBioChem* **7**, 74-82 (2006).
4. Meng, Q.Q., Liang, X.J., Wang, P., *et al.* Rosiglitazone enhances the proliferation of neural progenitor cells and inhibits inflammation response after spinal cord injury. *Neurosci. Lett.* **503**, 191-195 (2011).
5. Di Cesare Mannelli, L., Zanardelli, M., Micheli, L., *et al.* PPAR-γ impairment alters peroxisome functionality in primary astrocyte cell cultures. *Biomed. Res. Int.* **2014**, 1-12 (2014).
6. Zanardelli, M., Micheli, L., Cinci, L., *et al.* Oxaliplatin neurotoxicity involves peroxisome alterations. PPARγ agonism as preventive pharmacological approach. *PLoS One* **9(7)**, 1-15 (2014).

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