

Product Data Sheet

Product Name: WAY 200070

Cat. No.: GC13309

Chemical Properties

Cas. No. 440122-66-7

Chemical Name 4-(7-bromo-5-hydroxybenzo[d]oxazol-2(3H)-ylidene)cyclohexa-2,5-dienone

SMILES BrC1=C2O/C(NC2=CC(O)=C1)=C(C=C3)\C=CC3=O

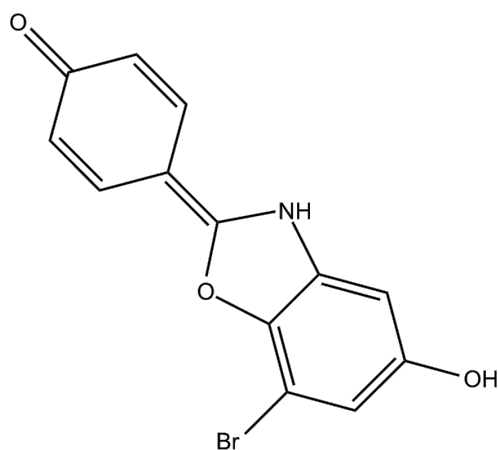
Formula $C_{13}H_8BrNO_3$ M.Wt 306.11

Solubility DMF: 33 mg/ml, DMSO: 20 mg/ml, Ethanol: 33 mg/ml, Ethanol: PBS (pH 7.2) (1:20): 0.04 mg/ml
Storage Store at RT

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



Protocol

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

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Animal experiment: Rats: Beginning 1 wk after ovariectomy, animals are given a single daily sc injection of hydroxypropyl betacyclodextran [vehicle; 27% (wt/vol) in saline; DPN (2.0 mg/kg), S-DPN (2.0 mg/kg), R-DPN (2.0 mg/kg), WAY-200070-3 (2.0 mg/kg), or PPT (1.0 mg/kg) in a total volume of 0.2 mL. Three hours after the daily treatment injection on d 4-7, animals undergo behavioral testing[4]. Mice: WAY-200070 is dissolved in a 10% ethanol/90% miglyol solution. WAY-200070 or vehicle is injected subcutaneously at a volume of 10 mL/kg body weight. Male ER β KO, ER α KO (both in C57BL/6 background) and WT C57BL/6 mice are injected with vehicle or WAY-200070 (30 mg/kg s.c.). After 15 min, the animals are sacrificed and the striatum is dissected and quickly frozen in liquid nitrogen and stored at -70°C for subsequent assay[1].

References:

- [1]. Hughes ZA, et al. WAY-200070, a selective agonist of estrogen receptor beta as a potential novel anxiolytic/antidepressant agent. *Neuropharmacology*. 2008 Jun;54(7):1136-42.
- [2]. Clipperton Allen AE, et al. Agonistic behavior in males and females: effects of an estrogen receptor beta agonist in gonadectomized and gonadally intact mice. *Psychoneuroendocrinology*. 2010 Aug;35(7):1008-22.
- [3]. Clipperton AE, et al. Differential effects of estrogen receptor alpha and beta specific agonists on social learning of food preferences in female mice. *Neuropsychopharmacology*. 2008 Sep;33(10):2362-75.
- [4]. Weiser MJ, et al. Estrogen receptor-beta agonist diarylpropionitrile: biological activities of R- and S-enantiomers on behavior and hormonal response to stress. *Endocrinology*. 2009 Apr;150(4):1817-25.

Background

WAY-200070 is a selective estrogen receptor β (ERR β) agonist with an IC₅₀ of 2.3 nM.

Administration of WAY-200070 (30 mg/kg s.c.) causes nuclear translocation of ERR β receptors in WT mice. Administration of WAY-200070 (30 mg/kg s.c.) produces a delayed 50% increase in dopamine in the striatum of wild type mice. WAY-200070 (30 mg/kg s.c.) reduces immobility time in

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the mouse tail suspension test indicating an antidepressant-like effect[1]. In gonadally intact male and female mice WAY-200070 increases agonistic behaviors such as pushing down and aggressive grooming, while leaving attacks unaffected[2]. Ovariectomized (ovx) mice treated with PPT fail to learn the socially acquired preference, while WAY-200070-treated ovx mice shows a two-fold prolonged preference for the food eaten by their demonstrator[3]. WAY-200070, shows significantly decreased anxiety-like behaviors in both the open-field and elevated plus maze and significantly less depressive-like behaviors in the forced swim test[4].

References:

- [1]. Hughes ZA, et al. WAY-200070, a selective agonist of estrogen receptor beta as a potential novel anxiolytic/antidepressant agent. *Neuropharmacology*. 2008 Jun;54(7):1136-42.
- [2]. Clipperton Allen AE, et al. Agonistic behavior in males and females: effects of an estrogen receptor beta agonist in gonadectomized and gonadally intact mice. *Psychoneuroendocrinology*. 2010 Aug;35(7):1008-22.
- [3]. Clipperton AE, et al. Differential effects of estrogen receptor alpha and beta specific agonists on social learning of food preferences in female mice. *Neuropsychopharmacology*. 2008 Sep;33(10):2362-75.
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