

Product Data Sheet

Product Name: Chiglitazar

Cat. No.: GC31552

Chemical Properties

Cas. No. 743438-45-1

SMILES O=C(C1=CC=C(F)C=C1)C(C=CC=C2)=C2N[C@H](C(O)=O)CC(C=C3)=CC=C3OCCN4C5=CC=CC=C5C6=CC=CC=C46

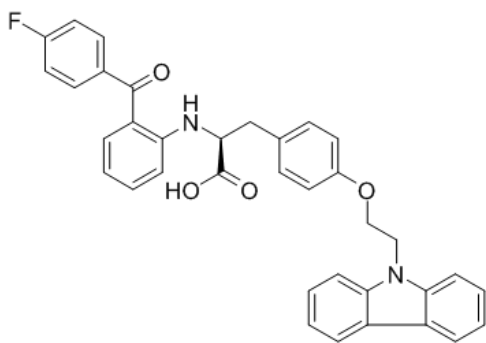
Formula $C_{36}H_{29}FN_2O_4$ M.Wt 572.62

Solubility DMSO : 100 mg/mL (174.64 mM; Need ultrasonic) Storage Store at -20°C, protect from light

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[1]MSG obese rats (6 months old) are sorted into five treatment groups (n=10 each, male and female in half) based on decreased blood glucose in the insulin tolerance test, glucose levels, blood total triglyceride (TG), total cholesterol (TCHO), and initial body weight. From the next day, MSG obese rats receive single daily oral treatment with Chiglitazar (5, 10, and 20 mg kg⁻¹ day⁻¹, respectively), rosiglitazone (5 mg kg⁻¹ day⁻¹) or vehicle (water, 0.05% Tween 80) for 40 days. Normal wistar rats (n=10) serve as a normal group are treated with vehicle[1].

References:

- [1]. Li PP, et al. The PPAR α /gamma dual agonist chiglitazar improves insulin resistance and dyslipidemia in MSG obese rats. Br J Pharmacol. 2006 Jul;148(5):610-8.
[2]. He BK, et al. In Vitro and In Vivo Characterizations of Chiglitazar, a Newly Identified PPAR Pan-Agonist. PPAR Res. 2012;2012:546548.

Background

Chiglitazar is a PPAR α /y dual agonist, with EC₅₀s of 1.2, 0.08, 1.7 μ M for PPAR α , PPARy and PPAR δ , respectively.

Comparative dose-response study of Chiglitazar is performed with rosiglitazone and pioglitazone for PPARy, and WY14643 for PPAR α . Chiglitazar shows significant activation of both the isoforms. Chiglitazar shows weaker PPARy activating activity than rosiglitazone, but stronger than pioglitazone. In terms of PPAR α activation, Chiglitazar shows more potent activity than rosiglitazone, pioglitazone, or WY14643 which is a selective PPAR α agonist[1].

After insulin injection, plasma glucose levels in the MSG rats treated with Chiglitazar or rosiglitazone are significantly reduced compared with the control group treated with vehicle at all time points. Fasting PI levels are lower in animals treated with Chiglitazar and rosiglitazone than control. The ISIs of MSG obese rats treated with chiglitazar and rosiglitazone are significantly higher than control. Furthermore, Chiglitazar ameliorates the HOMA indices. For IPGTT, at the 30 min after glucose loading, the glucose values in the 5 and 10 mg /kg Chiglitazar and rosiglitazone-treatment groups are

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significantly lower than those in the vehicle treatment group. The integrated for the glucose response during the IPGTT in the treatment groups are significantly less than those in the control groups[1].

[1]. Li PP, et al. The PPARalpha/gamma dual agonist chiglitazar improves insulin resistance and dyslipidemia in MSG obese rats. Br J Pharmacol. 2006 Jul;148(5):610-8. [2]. He BK, et al. In Vitro and In Vivo Characterizations of Chiglitazar, a Newly Identified PPAR Pan-Agonist. PPAR Res. 2012;2012:546548.

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