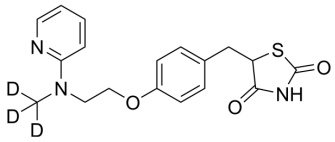
Rosiglitazone-d_3

Cat. No.:	HY-17386S
CAS No.:	1132641-22-5
Molecular Formula:	$C_{18}H_{16}D_3N_3O_3S$
Molecular Weight:	360.45
Target:	PPAR; TRP Channel; Autophagy; Ferroptosis; Isotope-Labeled Compounds
Pathway:	Cell Cycle/DNA Damage; Vitamin D Related/Nuclear Receptor; Membrane Transporter/Ion Channel; Neuronal Signaling; Autophagy; Apoptosis; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Rosiglitazone-d_3 is the deuterium labeled Rosiglitazone. Rosiglitazone (BRL 49653) is a selective, orally active PPARγ agonist with EC50s of 30 nM, 100 nM and 60 nM for PPARγ1, PPARγ2, and PPARγ, respectively. Rosiglitazone binds to PPARγ with a Kd of approximately 40 nM. Rosiglitazone is also an activator of TRPC5 (EC50=~30 μM) and an inhibitor of TRPM3[1][2][3][4].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Lehmann JM, et al. An antidiabetic thiazolidinedione is a high affinity ligand for peroxisome proliferator-activated receptor gamma (PPAR gamma). J Biol Chem. 1995 Jun 2;270(22):12953-6.

[3]. Willson TM, et al. The structure-activity relationship between peroxisome proliferator-activated receptor gamma agonism and the antihyperglycemic activity of thiazolidinediones. J Med Chem. 1996 Feb 2;39(3):665-8.

[4]. Thouennon E, et al. Rosiglitazone-activated PPARγ induces neurotrophic factor-α1 transcription contributing to neuroprotection. J Neurochem. 2015 Aug;134(3):463-70.

[5]. Majeed Y, et al. Rapid and contrasting effects of rosiglitazone on transient receptor potential TRPM3 and TRPC5 channels. Mol Pharmacol. 2011 Jun;79(6):1023-30.

[6]. Ateyya H, et al. Beneficial effects of rosiglitazone and losartan combination in diabetic rats. Can J Physiol Pharmacol. 2018 Mar;96(3):215-220.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA