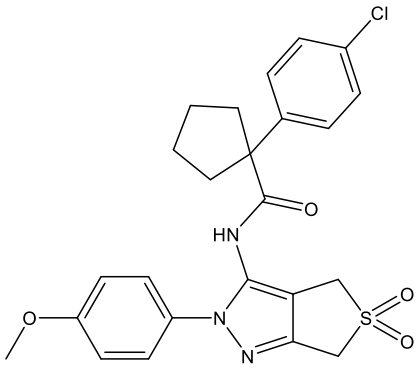
Catalog # 10-3909

TH301

CAS# 450338-32-6

1-(4-Chlorophenyl)-N-[2,6-dihydro-2-(4-methoxyphenyl)-5,5-dioxido-4H-thieno[3,4-c]pyrazol-3-yl]cyclopentanecarboxamide

Lot # FBA7056



TH301 is an isoform-selective stabilizer of the circadian clock protein CRY2. It dose-dependently lengthened the circadian period in Bmal1-dLuc and Per2-dLuc reporter cells. TH301 strongly enhanced rosiglitazone-dependent brown adipocyte differentiation revealing the importance of CRY-dependent regulation of energy metabolism and a possible new lead for anti-obesity therapeutics. TH301 displayed significant anti-cancer effects in pancreatic ductal adenocarcinoma cell lines and synergized with chloroquine and oxaliplatin.[2] It upregulated the tumor suppressor p21 in a clock- and p53-independent manner.

1) Miller *et al*. (2020), *Isoform-selective regulation of mammalian cryptochromes*; Nat. Chem. Biol. **16** 676
2) Farmakis *et al. (2025), TH301 Emerges as a Novel Anti-Oncogenic Agent for Human Pancreatic Cancer Cells: The Dispensable Roles of p53, CRY2 and BMAL1 in TH301-Induced CDKN1A/p21$^{CIP1/WAF1}$ Upregulation;* Int. J. Mol. Sci. **2025** 178

PHYSICAL DATA

Molecular Weight:	485.98
Molecular Formula:	$C_{24}H_{24}ClN_3O_4S$
Purity:	>98% by HPLC NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or may be stored at -20°C for up to 3 months.

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