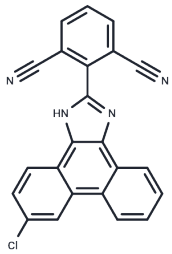
Data Sheet (Cat.No.T16070)

TargetMol

MF63

Chemical Properties



CAS No. :	892549-43-8
Formula:	C23H11ClN4
Molecular Weight:	378.81
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	MF63 is a selective mPGES-1 inhibitor (IC50: 0.9 nM and 1.3 nM for pig mPGES-1 and human mPGES-1 enzyme, respectively).
Targets(IC50)	Others,PGE Synthase
In vitro	MF63 strongly inhibited guinea pig mPGES-1 but not the mouse or rat enzyme, in rodent species. mPGES-1 MF63 potently inhibited the human mPGES-1 enzyme with a high degree (>1000-fold) of selectivity over other prostanoid synthases. The compound selectively inhibited the synthesis of PGE(2) when tested in the guinea pig and a knock-in (KI) mouse expressing human mPGES-1, but not other prostaglandins inhibitable by nonsteroidal anti-inflammatory drugs (NSAIDs), yet retained NSAID-like efficacy at inhibiting lipopolysaccharide-induced pyresis, hyperalgesia, and iodoacetate-induced osteoarthritic pain.

Solubility Information

Solubility	DMSO: 43 mg/mL (113.51 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.28 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6398 mL	13.1992 mL	26.3985 mL
5 mM	0.528 mL	2.6398 mL	5.2797 mL
10 mM	0.264 mL	1.3199 mL	2.6398 mL
50 mM	0.0528 mL	0.264 mL	0.528 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Xu D et al. MF63 [2-(6-chloro-1H-phenanthro[9,10-d]imidazol-2-yl)-isophthalonitrile], a selective microsomal prostaglandin E synthase-1 inhibitor, relieves pyresis and pain in preclinical models of inflammation. J Pharmacol Exp Ther. 2008 Sep;326(3):754-6

Coté B et al. Substituted phenanthrene imidazoles as potent, selective, and orally active mPGES-1 inhibitors. Bioorg Med Chem Lett. 2007 Dec 15;17(24):6816-20.

Baragatti B, Coceani F.,Dual, constrictor-to-dilator, response of the mouse ductus arteriosus to the microsomal prostaglandin E synthase-1 inhibitor, 2-(6-chloro-1H-phenanthro[9,10d]imidazole- 2-yl)isophthalonitrile., Neonatology. 2011;100(2):139-46. Epub

Giroux A, et al. Discovery of disubstituted phenanthrene imidazoles as potent, selective and orally active mPGES-1 inhibitors.,Bioorg Med Chem Lett. 2009 Oct 15;19(20):5837-41. Epub 2009 Aug 28.

Xu D, L,et al. MF63 [2-(6-chloro-1H-phenanthro[9,10-d]imidazol-2-yl)-isophthalonitrile], a selective microsomal prostaglandin E synthase-1 inhibitor, relieves pyresis and pain in preclinical models of inflammation.,J Pharmacol Exp Ther. 2008 Sep;326(3):75