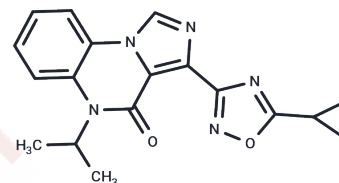


Panadiplon

Chemical Properties

CAS No. : 124423-84-3
 Formula: C₁₈H₁₇N₅O₂
 Molecular Weight: 335.36
 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	Panadiplon (FG 10571) is a selective gamma-aminobutyric acid receptor agonist and partial agonist of 5GABAA, a benzodiazepine receptor, used in the treatment of anxiety disorders. Panadiplon exhibits selectivity for 5GABAA receptors versus 1GABAA
Targets(IC50)	GABA Receptor
In vitro	Panadiplon (10 µg/ml; 48 h; under normoxic conditions; hepatocytes) reduced ATP and glycogen levels by 40% but did not cause an increase in LDH leakage. Cells treated with panadiplon, then exposed to hypoxia conditions, showed a significant level of injury compared to normoxic control cultures, and a further reduction in ATP. No additional decrease in glycogen was observed. In an attempt to prevent panadiplon-mediated injury, glycolytic substrates (dihydroxyacetone or pyruvate) were included during normoxic and hypoxic incubations. Both treatments reduced the level of LDH leakage produced by panadiplon during hypoxia. Cotreatment did not generally increase ATP or glycogen levels (compared to panadiplon treatment groups) during hypoxia, though individual experiments showed a slight increase in ATP levels. During normoxia, both cotreatments with panadiplon resulted in significantly higher glycogen levels than in panadiplon cultures alone. These results suggest that cellular glycogen and subsequently ATP levels are reduced during panadiplon exposure, metabolically predisposing hepatocytes to hypoxic injury.[2]

Solubility Information

Solubility	DMSO: 50 mg/mL (149.09 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9819 mL	14.9094 mL	29.8187 mL
5 mM	0.5964 mL	2.9819 mL	5.9637 mL
10 mM	0.2982 mL	1.4909 mL	2.9819 mL
50 mM	0.0596 mL	0.2982 mL	0.5964 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

- Platt DM, et al. Contribution of alpha 1GABAA and alpha 5GABAA receptor subtypes to the discriminative stimulus effects of ethanol in squirrel monkeys. *J Pharmacol Exp Ther.* 2005;313(2):658-667.
- Bacon JA, et al. Potentiation of hypoxic injury in cultured rabbit hepatocytes by the quinoxalinone anxiolytic, panadiplon. *Toxicology.* 1996;108(1-2):9-16.
- Rowlett JK, et al. Discriminative stimulus effects of panadiplon (U-78875), a partial agonist at the benzodiazepine site, in pentobarbital-trained rhesus monkeys. *Drug Alcohol Depend.* 2001;61(3):229-236.
- Ulrich RG, et al. Metabolic, idiosyncratic toxicity of drugs: overview of the hepatic toxicity induced by the anxiolytic, panadiplon. *Chem Biol Interact.* 2001;134(3):251-270.
- Ulrich RG, et al. Disruption of mitochondrial activities in rabbit and human hepatocytes by a quinoxalinone anxiolytic and its carboxylic acid metabolite. *Toxicology.* 1998;131(1):33-47.

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