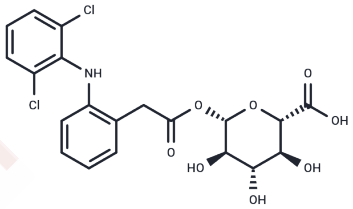
Data Sheet (Cat.No.T27167)

TargetMol

Diclofenac Acyl Glucuronide

Chemical Properties



CAS No. : 64118-81-6

Formula: C20H19Cl2NO8

Molecular Weight: 472.27

Storage: Store at low temperature
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	Diclofenac Acyl Glucuronide (Diclofenac glucuronide) is an intestinal metabolite that accelerates intestinal ulcers.
Targets(IC50)	Others,Endogenous Metabolite,Drug Metabolite
In vitro	Cytotoxicity and the intracellular accumulation of diclofenac acyl glucuronide were evaluated in the absence or presence of cilastatin using hOAT1/3-transfected cells. After incubation of diclofenac acyl glucuronide for 24 hr, the survival rate of hOAT1/3-HEK293 cells was significantly lower than that in mock-HEK293 cells, and the IC50 values of diclofenac acyl glucuronide in hOAT1/3-HEK293 cells were only approximately half of that in mock-HEK293 cells[1].
In vivo	Cilastatin increased the plasma concentration and decreased the renal distribution of diclofenac acyl glucuronide in mice. Diclofenac (200 mg·kg−1) was orally administered to mice. The AUC(0–12 hr) of diclofenac acyl glucuronide in plasma was increased by 46.7%, while the AUC(0–12 hr) in the kidney. [1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1174 mL	10.5872 mL	21.1743 mL
5 mM	0.4235 mL	2.1174 mL	4.2349 mL
10 mM	0.2117 mL	1.0587 mL	2.1174 mL
50 mM	0.0423 mL	0.2117 mL	0.4235 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

Huo X, et al. Protective effect of cilastatin against diclofenac-induced nephrotoxicity through interaction with diclofenac acyl glucuronide via organic anion transporters. Br J Pharmacol. 2020 May;177(9):1933-1948.
Scialis RJ, Manautou JE. Elucidation of the Mechanisms through Which the Reactive Metabolite Diclofenac Acyl Glucuronide Can Mediate Toxicity. J Pharmacol Exp Ther. 2016 Apr;357(1):167-76. doi: 10.1124/jpet.115.230755. Epub 2016 Feb 11. PubMed PMID: 26869668; PubMed Central PMCID: PMC4809317.
Syed M, Skonberg C, Hansen SH. Mitochondrial toxicity of diclofenac and its metabolites via inhibition of oxidative phosphorylation (ATP synthesis) in rat liver mitochondria: Possible role in drug induced liver injury (DILI). Toxicol In Vitro. 2016 Mar;31:93-102. doi: 10.1016/j.tiv.2015.11.020. Epub 2015 Nov 25. PubMed PMID: 26627130.
Scialis RJ, Csanaky IL, Goedken MJ, Manautou JE. Multidrug Resistance-Associated Protein 3 Plays an Important Role in Protection against Acute Toxicity of Diclofenac. Drug Metab Dispos. 2015 Jul;43(7):944-50. doi: 10.1124/dmd.114.061705. Epub 2015 Apr 20. PubMed PMID: 25897176; PubMed Central PMCID: PMC4468432.

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