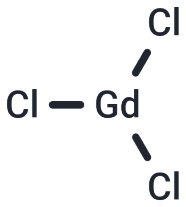
Data Sheet (Cat.No.T22795)

TargetMol

Gadolinium chloride

Chemical Properties



CAS No. : 10138-52-0

Formula: Cl3Gd

Molecular Weight: 263.61

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	Gadolinium chloride is a calcium-sensing receptor (CaSR) agonist
Targets(IC50)	CaSR
In vitro	Gadolinium chloride (GdCl) , a well-known Kupffer/foam cell inhibitor, at late stages of NPC liver disease and compared it with NPC1 genetic rescue in hepatocytes in vivo.?GdCl treatment successfully blocked the endocytic capacity of hepatic Kupffer/foam measured by India ink endocytosis, decreased the levels CD68-A marker of Kupffer cells in the liver-and normalized the transaminase levels in serum of NPC mice to a similar extent to those obtained by genetic Npc1 rescue of liver cells.?Gadolinium salts are widely used as magnetic resonance imaging (MRI) contrasts.?This study opens the possibility of targeting foam cells with gadolinium or by other means for improving NPC liver disease.?Synopsis: Gadolinium chloride can effectively rescue some parameters of liver dysfunction in NPC mice and its potential use in patients should be carefully evaluated.

Solubility Information

Solubility	DMSO: 7.5 mg/mL (28.45 mM),Sonication is recommended. H2O: 9.85 mg/mL (37.37 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	Saline: >10 mg/mL,Solution. *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	3.7935 mL	18.9674 mL	37.9348 mL
5 mM	0.7587 mL	3.7935 mL	7.587 mL
10 mM	0.3793 mL	1.8967 mL	3.7935 mL
50 mM	0.0759 mL	0.3793 mL	0.7587 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

Klein A D , JE Oyarzún, Cortez C , et al. Gadolinium Chloride Rescues Niemann-Pick Type C Liver Damage[J]. International Journal of Molecular Sciences, 2018, 19(11):3599.

Zhao T, Zhong G, Wang Y, et al.Pregnane X Receptor Activation in Liver Macrophages Protects against Endotoxin-Induced Liver Injury.Advanced Science.2024: 2308771.