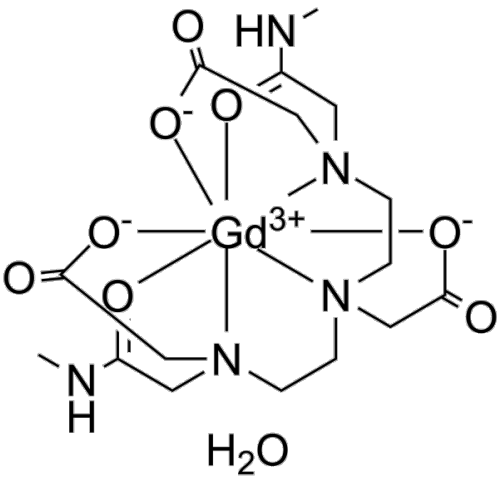
Product Data Sheet

Product Name: Gadodiamide hydrate
Cat. No.: GC17611

Chemical Properties

Cas. No.	122795-43-1		
Chemical Name	2-[bis[2-[carboxylatomethyl-[2-(methylamino)-2-oxoethyl]amino]ethyl]amino]acetate;gadolinium(3+);hydrate		
SMILES	CNC(=O)CN(CCN(CCN(CC(=O)NC)CC(=O)[O-])CC(=O)[O-])CC(=O)[O-].O.[Gd+3]		
Formula	C16H28GdN5O9	M.Wt	591.67
Solubility	≥ 29.2mg/mL in Water	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Protocol

Animal experiment [1]:

Animal models Rats or monkeys

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Dosage form	0.25 ~ 10 mmol/kg; i.v
Applications	In rats, a single dose of Gadodiamide at a greater than 0.5 mmol/kg induced vacuolization of the proximal tubular cells in kidneys, without affecting renal function. At a dose up to 10 mmol/kg, the vacuolization was only at the moderate degree, and was shown to regress partially during the 7 days after administration. In monkeys, administration of 0.25 mmol/kg Gadodiamide (q.d.; for 28 days) exhibited no effect on the kidneys.
Other notes	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

References:

[1]. Harpur ES, Worah D, Hals PA, Holtz E, Furuhama K, Nomura H. Preclinical safety assessment and pharmacokinetics of gadodiamide injection, a new magnetic resonance imaging contrast agent. Invest Radiol. 1993 Mar;28 Suppl 1:S28-43.

Background

Gadodiamide hydrate is a gadolinium-based contrast agent used in MR imaging procedures to assist in the visualization of blood vessels. Target: OthersGadodiamide hydrate is a gadolinium-based contrast agent used in MR imaging procedures to assist in the visualization of blood vessels. Gadodiamide hydrate is a contrast medium for cranial and spinal magnetic resonance imaging (MRI) and for general MRI of the body after intravenous administration. The product provides contrast enhancement and facilitates visualisation of abnormal structures or lesions in various parts of the body including the central nervous system (CNS). A recent review takes the question of toxicity caused by loss of gadolinium from the complex. "The challenge for nephrologists includes (a) evidence of transmetallation, such as gadolinium deposits in bone, increased urinary zinc excretion, iron-transferrin dissociation or 'spurious hypocalcemia' in exposed people" [1].

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References:

[1]. Canavese, C., et al., Gadolinium-associated nephrogenic systemic fibrosis: the need for nephrologists' awareness. J Nephrol, 2008. 21(3): p. 324-36.