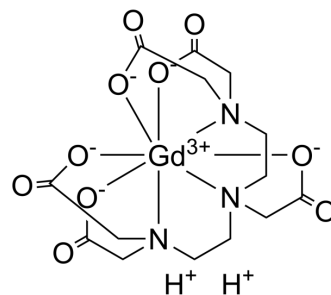


## Gadopentetic acid

<b>Cat. No.:</b>	HY-107353
<b>CAS No.:</b>	80529-93-7
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>20</sub> GdN <sub>3</sub> O <sub>10</sub>
<b>Molecular Weight:</b>	547.57
<b>Target:</b>	Biochemical Assay Reagents
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 100 mg/mL (182.63 mM; Need ultrasonic)				
	DMSO : < 1 mg/mL (insoluble or slightly soluble)				
		Solvent Concentration	Mass		
	<b>Preparing Stock Solutions</b>			1 mg	5 mg
	1 mM		1.8263 mL	9.1313 mL	18.2625 mL
	5 mM		0.3653 mL	1.8263 mL	3.6525 mL
	10 mM		0.1826 mL	0.9131 mL	1.8263 mL
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (182.63 mM); Clear solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Gadopentetic acid (Gd-DTPA) is a paramagnetic contrast agent. Gadopentetic acid commonly implemented by a bolus intravenous injection in Dynamic contrast-enhanced MRI (DCE-MRI) studies. Gadopentetic acid also can be used for the research of nephrogenic systemic fibrosis (NSF) <sup>[1][2]</sup> .	
<b>In Vivo</b>	Gadopentetic acid (Gd-DTPA) (tail vein injection; 2 and 5mmol/kg; single) shows systematic metabolic responses involving changes in lipid metabolism, glucose metabolism, TCA cycle, amino acid metabolism and gut microbiota functions in rats <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	<b>Animal Model:</b>	rats <sup>[1]</sup>
	<b>Dosage:</b>	2 and 5mmol/kg

Administration:	tail vein injection, single
Result:	Observed urinary and serum metabonomic recovery but the metabolic effects of high-dosed (5mmol/kg) lasted long. Observed hyperlipidemia after Gd-DTPA injection.

## CUSTOMER VALIDATION

- Adv Sci (Weinh). 2022 Oct;9(30):e2202993.
- Metallomics. 2022 Oct 22;mfac085.

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## REFERENCES

- [1]. Wan C, et al. Gd-DTPA-induced dynamic metabonomic changes in rat biofluids. Magn Reson Imaging. 2017 Dec;44:15-25.
- [2]. Taheri S, et al. Analysis of pharmacokinetics of Gd-DTPA for dynamic contrast-enhanced magnetic resonance imaging. Magn Reson Imaging. 2016 Sep;34(7):1034-40.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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