Gadobutrol

Cat. No.: HY-16217

CAS No.: 770691-21-9

Molecular Formula: $C_{18}H_{31}GdN_4O_9$

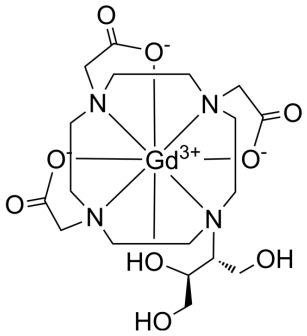
Molecular Weight: 604.71

Target: Biochemical Assay Reagents

Pathway: Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 20 mg/mL (33.07 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6537 mL	8.2684 mL	16.5369 mL
	5 mM	0.3307 mL	1.6537 mL	3.3074 mL
	10 mM	0.1654 mL	0.8268 mL	1.6537 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 50 mg/mL (82.68 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Gadobutrol (Gd-DO3A-butrol; ZK 135079) is a nonionic paramagnetic macrocyclic gadolinium-based contrast agent that can be used for magnetic resonance imaging (MRI)[1].

In Vitro

Gadobutrol leads to a gradual decrease in cell density with increasing concentration under neutron irradiation[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	Human melanoma cell line Sk-Mel-28
Concentration:	0-30 mM
Incubation Time:	1 hour

Result:	Showed a decrease in cell density to 26% at 30 mM while to 80% with no gadobutrol under neutron irradiation.

In Vivo

Gadobutrol (intravenous injection, 200 mM, once, a week) can significantly enhance intracerebroventricular cell signaling in female C57BL/6 N mice[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female C57BL/6 N mice, 11-13 weeks, 21-23 g)[2]
Dosage:	200 mM
Administration:	Intravenous injection; once; a week
Result:	Enhanced cells signal in the habenula, hippocampal formation, and locus coeruleus.

CUSTOMER VALIDATION

- Molecules. 2021 Aug 24;26(17):5115.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. B Hofmann, et al. Gadolinium neutron capture therapy (GdNCT) of melanoma cells and solid tumors with the magnetic resonance imaging contrast agent Gadobutrol. Invest Radiol. 1999 Feb;34(2):126-33.

[2]. Takashi Watanabe, et al. Gadobutrol enhances T1-weighted MRI of nerve cells. Toxicol Lett. 2019 Jun 15;308:17-23.

[3]. Cheng KT. Gadobutrol. Molecular Imaging and Contrast Agent Database (MICAD)

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA